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Welfare to Temporary Work: Implications for Labor Market Outcomes

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Prepared for presentation at the First IZA/SOLE Transatlantic Meeting, June 2002.

This work was supported by a grant from the Rockefeller/Russell Sage Future of Work program. Chao Gu and Andrew Dyke provided excellent research assistance. Any errors are our own.

I. Introduction

Throughout the 1990s, the U.S. welfare system has been evolving from a system primarily focused on getting qualified individuals registered for cash assistance to one that aims to help disadvantaged individuals obtain self-sufficiency through employment. Case workers are accordingly going from being largely concerned with documenting an individual's eligibility for assistance to providing employment counseling and placing welfare recipients into jobs. As this has occurred, state and local welfare agencies and individuals in need of assistance have increasingly turned toward labor market intermediaries, including temporary help service firms and other public and private employment agencies, as one way of connecting people with jobs (Pavetti et al., 2000). In a number of states, temporary help service firms are registered providers of welfare-to-work services.

Concerns are being raised, however, about the increased use of temporary help service firms for placing welfare recipients and other disadvantaged individuals into jobs. Jobs with temporary help service firms frequently offer less job stability, fewer fringe benefits, and, for many low skilled workers, substantially lower wages than jobs in traditional ("end-user") firms. Blank (1998) estimates that between 40 percent and 70 percent of temporary help service workers are in what she refers to as "problem" jobs—jobs which both pay low wages and are relatively less stable. At least one study finds that a majority of such workers state that they would prefer traditional employment arrangements (Cohany, 1998).

On the other hand, for many low-skilled workers, employment through labor market intermediaries may provide a path to permanent and stable employment. By limiting the extent of employer commitment, such jobs may provide access to informal training and screening for

workers who might otherwise be excluded from such opportunities. While a variety of studies present a picture of the kinds of workers in such positions, little is presently known about the role that temporary help service employment plays in the career trajectories of welfare recipients.¹

To further examine the effect that temporary help services firms have on the labor market experiences and outcomes of welfare recipients, we address two main questions: Who among these welfare recipients goes to work for temporary help service firms, and what are the implications of temporary employment for their labor market outcomes, compared to those welfare recipients who become employed in permanent jobs?² We address these questions using administrative data on all welfare recipients in Missouri and North Carolina and employment covered by unemployment insurance in these two states. Our data on welfare recipients and employment begin in 1990 in Missouri and 1995 in North Carolina. These data include standard demographic information about individuals, such as age, race, sex and education, as well as total earnings in a quarter and the industry of the employer. Using these data, we examine changes in the characteristics of welfare recipients over the 1990s, focusing particularly on those welfare recipients who go to work for temporary help service firms. In addition, in multivariate analyses, we predict the probability of temporary employment for welfare recipients and analyze their earnings, employment transitions, and welfare exits, comparing those employed by temporary

¹In addition to papers by Blank and Cohany referenced above, see Laird and Williams (1996), Howe (1986), and a series of articles in the October 1996 *Monthly Labor Review*.

²Nollen (1996) defines 2 types of temporary workers: (1) employees of staffing/temporary help service firms who take short-term assignments at other client companies, and (2) direct-hire employees of the company where they work who have fixed-term contracts for temporary work. Our empirical analyses focus on jobs or employees in the temporary help service industry (SIC=7363), since that is the data we have available. Many of the issues we address are relevant for other temporary workers.

help service firms with those employed by end-user firms, while controlling for their individual characteristics.

The paper is organized as follows. In the next section we review the relevant literature and discuss theories for why firms might want to employ temporary help workers and why individuals might want to work for temporary help service firms. We describe our data in section III. In sections IV and V we present the results from our analysis. We summarize our results and present our conclusions in section VI.

II. Review of Previous Literature

Characteristics of temporary help services work and those who choose temporary jobs

Blank's (1998) findings on the low pay and instability associated with temporary work are corroborated in a number of studies that describe the characteristics of temporary work. Segal and Sullivan (1997a), for example, found that temporary workers were more likely to be underemployed, to work fewer hours, and to have greater variability in their work schedules and less attachment to the labor force. Using data from the Current Population Survey (CPS), they also reported that temporary workers received 28 percent lower wages than permanent workers. The earnings gap between these groups was even larger factoring in temporary workers' lower work hours. Nollen (1996) shows that the average wage of temporary employees in 1994 (\$7.74 per hour) was just slightly higher than those of temporary help service firm employees in 1989 (\$7.59 per hour) and estimated that they were 35 percent lower than workers in other occupations. Houseman and Polivka (1999) likewise find that workers in temporary arrangements were considerably more likely than regular part-time workers to change employers

or to lose their jobs and leave the labor force, even when they say they would prefer to work. In addition, Cohany (1998) highlighted the significant disparities in health insurance coverage between temporary workers (7%) and permanent (or “traditional”) workers (61%).

A case study of temporary workers reports that these workers cite a number of “problems” with these jobs, including: uncertainty about income, work hours, and travel costs; a resulting inability to plan, invest, get credit, or make child care arrangements; money paid up front for work clothes or safety equipment that might not be used more than a day; unfairly withheld wages and equipment charges; a lack of job skills training or useful feedback on job performance; marginal social interactions in the workplace and exploitative actions by temporary employers; fear that assignments might be withheld if workers’ refused assignments, complained, or filed a workers’ compensation or unemployment insurance claim; and powerlessness in controlling working conditions (McAllister, 1998). Welfare recipients frequently struggle harder with employment barriers related to child care, transportation, and limited personal and financial resources for coping with some of these contingencies (Berg, Olson and Conrad, 1991; Pavetti and Acs, 2001). It is possible that the problems frequently associated with temporary jobs may be compounded for welfare recipients, generating special obstacles to self-sufficiency.

An alternative view of temporary work is that workers may optimally choose these jobs because temporary help jobs best match their preferences or skills. For example, some workers, such as mothers with young children, may prefer jobs with flexible work schedules. In addition, the nature of temporary work may also be beneficial for workers who want or need to take extended periods out of the labor force, or who value nonmarket time highly but are indifferent to its exact timing. For these people, the instability or uncertainty of temporary work may not be

important disadvantages. This group might include some welfare recipients with young children or other family care responsibilities, and, among temporary workers, there may be a substantial proportion who fit this profile. Cohany (1998) and Morris and Vekker (2001) find that 1 in 3 temporary workers preferred their arrangement to a traditional job. Among married women with children, Morris and Vekker reported that 25 percent indicated that they wanted a temporary job for flexibility, shorter hours, to facilitate child care arrangements, or for other family reasons.

In terms of individual characteristics, Segal and Sullivan (1997a) find that a large portion of the temporary/permanent wage gap can be explained by standard work characteristics known to be related to wages, or to unmeasured permanent differences in earnings-related characteristics. In addition, in explaining the disproportionate representation of African-Americans among temporary workers, Carre (1992) observes that the group of occupations in which African-American workers are concentrated in temporary employment corresponds to the occupations in which African-American workers are concentrated in all industries. Nollen (1996) likewise reports that the overall lower wages of temporary employees was a result of their concentration in relatively low-wage occupations (administrative, clerical, and laborer jobs). Thus, the higher concentration of welfare recipients (and other lower-skilled, less educated workers) in temporary jobs may in fact reflect a matching process between workers with fewer productive characteristics and firms or jobs requiring less specific human capital, for which the firms do not wish to establish long-term contracts.

Furthermore, for those workers with less desirable characteristics, the ability to enter into a contract where the employer has no long-term obligation may facilitate their access to the labor market and work experience. As Nollen (1996:575) explains, according to this view, “temporary

work gives opportunities to begin the process of practical human capital development.” These temporary jobs, in firms that might not otherwise hire temporary workers, could also allow workers a chance to show that they are productive and possibly lead to permanent jobs with the same employers. Based on their analysis of the frequency of transitions from temporary to permanent employment, Segal and Sullivan (1997a) find that the size of any “permanent ‘underclass’ of temporary workers” is likely small. In evaluating this argument, however, it is important to consider whether these temporary jobs represent new growth and work opportunities for lower-skilled, disadvantaged workers, or if they are displacing or reducing growth in opportunities for permanent employment and/or delaying workers’ movement into permanent jobs.

The demand for temporary workers: firms that choose the temporary employment contract

As Segal (1996) and Autor (2001) note, the temporary help services industry grew at a pace five times faster than overall (non-farm) employment between 1979 and 1995. Several alternative explanations of the rapid growth of this industry have been proposed in the literature. One common explanation is that firms have found it necessary to adapt their human resource strategies in response to heightened global competition and fluctuating product demand (Laird and Williams, 1996; Nollen, 1996; Segal and Sullivan, 1997a). This strategy has been described by some as a “core-periphery” human resource strategy, in which employers use temporary work arrangements, which are less encumbered by laws or employee contracts covering dismissals and work rules, to increase their control over the duration of employment. Wages for work tasks specified in these arrangements are made more flexible, corresponding more closely to a simple

spot market. Under this interpretation, work is relocated outside of the technical core (primary labor markets) and into competitive markets (Gonos, 1998). Segal and Sullivan (1997a) find temporary services employment to be very sensitive to the business cycle during the last quarter century, exhibiting declines during recessions of between 8 and 30 percent, in contrast to 2 to 5 percent for employment in general.

Other researchers, however, downplay the role of global economic factors and point to changing legal policies governing employment contracts. Early in the period of temporary help services employment growth, Ricca (1982) argues that the primary objective of temporary work arrangements was to relieve client firms of the legal obligations associated with employer status. Gonos (1998) claims that the limited duration of work assignments was not a defining characteristic of temporary work but rather a “byproduct” this arrangement. As Gonos explains, temporary help service firms “claim the status of sole ‘employer’” of temporary workers, and the traditional employer-employee relationship between workers and user firms (on whose premises they work) is severed. The end-user firm utilizes temporary labor without taking on the “specific social, legal, and contractual obligations that have been increasingly attached to employer status since the New Deal.” (p. 173).

Recent studies suggest that temporary help service firms’ exemption from legal protections against unjust dismissal of workers has abetted the growth of temporary jobs (Miles, 2000; Autor, 2001). Between 1973 and 1995, Autor notes that 46 state courts upheld exceptions to the common law doctrine of employment at will, thereby limiting an employer’s ability to terminate workers without showing cause. In response to the higher costs associated with dismissing workers, Autor predicted that employers will “outsource” jobs that require less firm-

specific capital. Using Census and CPS data he finds that changes to the employment-at-will doctrine explain about 20 percent of the growth in the temporary help services industry between 1973 and 1995. As both Autor and Miles show, these changes have no significant effect on employment growth in other industries, suggesting that it is the temporary help service firms' exemption from these new employment protections that has spurred their growth relative to other industries.

Morris and Vekker (2001) show that while the number of temporary workers employed by temporary help services firms continues to increase, direct-hire forms of temporary employment are declining. While there is little direct evidence, there are some indications of a rise in "permatemps," that is, an increasing number of employees who work as if they are part of a company's permanent workforce but are employed by a temporary help service firm. Jorgenson and Riemer (2000) argue that employees in these arrangements lack a clear identification of their employer, and without a legal obligation to provide assignments, temporary help service firms can terminate placements without firing workers. In other words, this suggests additional evidence that employers choose temporary help service arrangements to avoid responsibilities associated with traditional employment contracts (including the provision of employee benefits).

Other research suggests that end-user firms might use temporary help services firms to screen workers for permanent positions, again reducing hiring costs. Autor, Levy, and Murnane (2001) find that temporary help services firms make training available to selected applicants (e.g., those who have completed high school or who have relevant prior work experiences and specific skills training), which aids in the screening process for their client firms. While this is a

potential advantage of temporary employment arrangements — the certification of workers' skills — Autor, Levy, and Murnane also observe that training at temporary help services firms is not only infrequent but typically brief: 7 hours on average for industrial/blue collar workers and 23 hours on average for technical workers.

Previous research has a number of implications related to our analysis of the characteristics of welfare recipients who become temporary workers and the effects of temporary help jobs on their labor market experiences. First, to the extent that jobs in temporary help service firms have attributes that better match the preferences and/or skills of welfare recipients, workers in temporary help jobs will tend to be younger, less educated and more likely to be nonwhite. Also, we would expect that workers in temporary help jobs are more likely to have young children.

We also expect that workers in temporary help jobs will tend to have lower initial wages relative to workers in other industries. Insofar as temporary help jobs facilitate matches between workers and firms that lead to stable, long-term employment relationships, we expect earnings for these workers to increase faster than for others.

On the other hand, it may be that temporary help jobs, along with low-wage jobs in general, provide poor future prospects. Bartik's (1997) analysis of employed, female welfare recipients shows that higher-wage jobs are positively associated with employment continuity, while he and Houseman and Polivka (1999) find that temporary workers are more likely to lose unstable employment than workers in other industries. If those welfare recipients who go to work in permanent positions stay on the job longer, benefitting from more work experience and opportunities for general or firm-specific skills training, we might expect to see this reflected in

higher subsequent earnings and earnings growth rates, compared to those who take temporary jobs.

In addition, it may be that welfare recipients are being forced to accept jobs in temporary help, and that these jobs lack the attributes that previous research suggests are crucial to their successful transition off of welfare and into stable employment — health insurance benefits, paid time off from work, stable income, and supportive relationships with co-workers and supervisors (Blank, 1998; Cohany, 1998; Jorgenson and Riemer, 2000; Morris and Vekker, 2001). Workers in temporary help jobs will then be less likely to leave welfare in the future than workers in other industries, and they may have earnings that are persistently below the earnings of workers in other industries. Nonetheless, relative to those not working, welfare recipients who work in temporary help jobs may have a greater chance of moving off of welfare in subsequent periods.

III. Data

Our analysis examines cash recipients in the Aid to Families with Dependent Children (AFDC) or Temporary Assistance for Needy Families (TANF) programs over the decade of the 1990s in the states of Missouri or North Carolina. Our data come from records maintained to administer the states' welfare programs, providing basic demographic and family information on recipient households. We focus on female payees, age 18 but less than 65 years, in single parent households and exclude “child only” cases.³ In most of our analyses, we use quarters as our time

³The payee in a child only case is not a parent and receives payment on behalf of the children. Such payees normally do not face work or training requirements, and their income does not count in the calculation of the benefits.

unit, so that an individual who receives AFDC or TANF cash payments at any point during a given quarter is considered a welfare recipient.

Our examination of employment for welfare recipients relies on earnings data collected by the states in support of their unemployment insurance programs. Employers report total earnings for each individual in covered employment during each quarter, and we merge this information with records of welfare recipients. In addition to earnings, employer industry and several other employer characteristics are available. While these data omit self-employment, illegal or informal employment, and a small number of jobs not covered by unemployment insurance, the overwhelming majority of employment within the state is included. For welfare recipients in Missouri, we use employment data collected by the states of Missouri and Kansas, ensuring employment coverage for welfare recipients in Kansas City, Missouri, who often work in Kansas.⁴ For welfare recipients in North Carolina, we use that state's employment data. Of course, employment will be understated for individuals who move out of state after leaving welfare.⁵

Table 1 provides information on the sample of welfare recipients who serve as the basis for our analysis. In Missouri, our sample consists of all welfare recipients during 1993, 1995, 1997 and 1999. The sample in North Carolina is for the same years, except that 1993 is not

⁴Approximately one in seven jobs held by welfare recipients in Jackson County (the central county in the Kansas City metropolitan area) is in Kansas. In St. Louis, the proportion of individuals holding jobs in Illinois is much lower, reflecting the relatively poor economy in East St. Louis.

⁵Kornfeld and Bloom (1997) compare experimental (job-training program) earnings impact estimates calculated using unemployment insurance (UI) data with those based on other more costly earnings data sources and conclude that UI wage data provide valid estimates for all low income persons except a small subgroup of male youth with past arrests.

available, and information from 1995 is more limited, since we do not know recipients' work or welfare experiences prior to that year. While we have current information for 1999 welfare recipients in both states, analyses that focus on this cohort's experiences in subsequent years omit 1999 observations. The sampling frame is quarters of welfare receipt, so individuals appear once for each quarter during each year in which they received welfare. This approach assures that the measures are representative of the average caseload during the year.

Among the standard demographic measures, race shows the greatest differences over time and between states. The proportion of nonwhite welfare recipients is nearly 20 percentage points higher in North Carolina than in Missouri. Over the six years covered by our data in Missouri, the proportion nonwhite grows by 10 percentage points, while over the six years covered by the North Carolina data, it grows by nearly 6 percent. More of the Missouri recipients are high school dropouts than are recipients in North Carolina. In both states, the number increases over the period 1997-1999. Missouri welfare recipients are slightly older, have slightly more children, and their children are older, but these differences are generally small.

Among the most important differences between states is the settlement density. Over 50 percent of Missouri's welfare recipients live in the central counties of large metropolitan areas (St. Louis and Kansas City), whereas in North Carolina, less than 15 percent live in Charlotte, the state's only large metropolitan area. Approximately half of North Carolina's caseload is in small metropolitan areas, in contrast to less than 15 percent for Missouri.⁶ Reflecting settlement

⁶The observed difference is due to the category breaks in conjunction with the fact that there are more moderately large metropolitan centers in North Carolina. According to 2000 Census statistics, two of the metropolitan areas classified as "small" in North Carolina have total populations greater than 1 million (Greensboro--Winston-Salem--High Point and Raleigh-Durham-Chapel Hill). In contrast, none of the metropolitan areas classified as small in Missouri

patterns in the south, North Carolina has a larger proportion living outside any metropolitan area — nearly 40 percent, in contrast to approximately 25 percent in Missouri.

In both states, the caseload is shifting toward recipients with less prior experience on welfare. In Missouri in 1995, 38 percent had been recipients continuously for two years, while the proportion declined to 25 percent by 1999. In North Carolina, the caseload contained fewer long term recipients at points where comparison is possible, but it also exhibited a substantial decline between 1997 and 1999.⁷

IV. Employment, Earnings, and Welfare Exit of Welfare Recipients

Characteristics of welfare recipients by type of job

We begin our analysis of the effect that temporary help services firms have on the labor market experience of welfare workers by looking at how the characteristics of welfare recipients vary by type of job. Throughout this analysis we divide workers into three main groups based on their employment: (1) those with no job, (2) those with one job in a quarter, and (3) those with multiple jobs in a quarter.⁸ We further divide those workers with one job into the following

has a population over 400,000. Our classification is based on the system developed by the USDA Economic Research Service.

⁷ We are able to measure the time on welfare for Missouri welfare recipients because the data from Missouri are available beginning in 1990. Unfortunately, reciprocity information is not available before 1995 for North Carolina, so our measure of time on welfare, which requires two years of retrospective data, cannot be constructed for welfare recipients in North Carolina prior to 1997.

⁸ Our wage record data allow us identify the earnings that an individual receives from each employer in a quarter. However, for individuals with earnings from multiple employers, we do not know whether employment was simultaneous or sequential. Recipients are classified as not having a job if they do not appear in the earnings data.

subgroups: a job in temporary help, a job in manufacturing, a job in retail trade, a job in services, and a job in any other sector.⁹ Finally, we divide workers with more than one job in a quarter into those who have at least one job in the temporary help sector, and those who do not have a job in the temporary help sector. In Table 2, we present the characteristics of Missouri and North Carolina welfare recipients separately by type of job, with 1993, 1995, 1997, and 1999 data for Missouri and 1995, 1997 and 1999 data for North Carolina.

Comparing recipients with no job to those with one job in the temporary help sector, we see that welfare recipients who do not have a job are less educated, are more likely to be white, have longer spells on welfare, and work a smaller percentage of time in the previous eight quarters. These differences are similar for welfare recipients in both Missouri and North Carolina. The large racial differences between these recipients in part reflects the fact that almost all of the jobs in the temporary help sector are located in cities where a larger percentage of welfare recipients are nonwhite.

Comparing welfare recipients with one job in temporary help with other employed welfare recipients, we see that recipients working in temporary help are again much more likely to be nonwhite. In addition, temporary help workers have slightly longer spells on welfare and work a smaller percentage of time in the previous eight quarters. However, the differences in characteristics between recipients working in temporary help jobs and recipients working in other

⁹ This division is based on the SIC code of the employer. The temporary help sector is SIC code 7363. Manufacturing includes SIC codes 20-39, retail trade includes SIC codes 52-59, and services includes SIC codes 70-89. Workers in all other industries are included in the “other” category.

sectors is much smaller than the differences in characteristics between those with a job and those without a job.

Earnings of Welfare Recipients by Job Type

Table 3 presents the mean earnings of welfare recipients by type of employment. Since workers with no job have zero earnings by definition, we have excluded them from this table. Comparing the earnings of welfare recipients working in temporary help jobs with recipients working in other industries, we see that the mean earnings of workers in temporary help jobs is substantially below the mean earnings of workers in other sectors. In Missouri in 1995, welfare recipients working in the temporary help sector average almost 50 percent lower earnings than workers in manufacturing, while in North Carolina in this same year, workers in the temporary help sector have average earnings that are one-third lower than workers in manufacturing. While the differences tend to be smaller when comparing the average earnings of temporary help workers with the average earnings of workers in other industries, the difference is always at least \$100, which translates into at least 10 percent lower average earnings for welfare recipients working in the temporary help sector.

One other interesting comparison in Table 3 is between recipients who hold multiple jobs, one of which is in the temporary help sectors, and recipient who hold multiple jobs, none of which are in the temporary help sector. Although those with jobs in temporary help have lower earnings, the difference is generally less than 10 percent. One hypothesis that might account for this fact—that recipients with just one job in the temporary help sector have substantially lower average earnings relative to other employed recipients, while workers with multiple jobs, at least one of which is in the temporary help sector, have earnings that are similar to other workers with

multiple jobs—is that this latter group takes a job in the temporary help sector because of the flexibility associated with these jobs. Some of these workers will have multiple jobs simultaneously, and the flexibility of a temporary help job may lower the costs of having more than one job. In contrast, recipients with just one job in the temporary help industry appear to have lower skills, and they may be more likely to take a job in the temporary help industry because temporary jobs better match their skills.

Table 4 presents statistics on welfare reciprocity over the next two years, again broken out by the type of job held (or no job) in the current quarter and year of observation. In both Missouri and North Carolina, we see that a larger percentage of recipients with no job are still on welfare in two years as compared with those holding any job, and recipients with no job receive welfare payments in more quarters over the next two years. When we compare recipients with only one job in temporary help to other employed recipients, we see that recipients working in temporary help are also more likely to be on welfare in two years and to receive welfare payments in more quarters over the next two years. Welfare recipients who have one job in the temporary help sector are less likely to leave welfare than recipients who have a job in another sector or who have multiple jobs. For all industry groups, the percent on welfare two years later is declining over time, and these declines are as large as differences between those with different kinds of jobs at a given point in time.

Table 5 presents employment and earnings information over the next two years for welfare recipients separately by type of current job. In both Missouri and North Carolina, we see that recipients with no current job have substantially lower earnings over the next two years and have fewer quarters in which they have positive earnings than any class of workers. We also see

that, relative to recipients working in other sectors, recipients with one job in the temporary help sector tend to have lower earnings over the next two years. However, it is important to note that the difference in the sum of earnings between workers in the temporary help sector and workers in other sectors is much smaller than the difference in current earnings reported in Table 3. The average sum of earnings over the next two years for welfare recipients in Missouri in 1995 whose sole job is in the temporary help sector is 25 percent less than welfare recipients whose sole job is in manufacturing. In contrast, we saw in Table 3 that the average current earnings of recipients in the temporary help sector was 50 percent lower than average current earnings of recipients working in manufacturing. This implies that, over the next two years, recipients working in the temporary help sector have much higher rates of earnings growth than recipients in the manufacturing sector. We see a similar pattern when we compare temporary help to in other industries.

Equally notable, we see that among individuals who are observed initially to have jobs in multiple industries, those with a temporary help job actually have higher earnings than others in the subsequent two years, in contrast to their current earnings, which are lower. The finding that welfare recipients working in the temporary help sector have lower current earnings but faster earnings growth relative to recipients working in other sectors is consistent with the hypothesis that the reason workers accept jobs in the temporary help sector is because these jobs allow workers to demonstrate to employers that they are productive, which then helps these workers obtain more stable, higher paying jobs.

In summary, Tables 2-5 suggest that recipients with any job, including those with jobs in temporary help services, tend to be more skilled, have been on welfare for less time, and are

more likely to move off of welfare in the future than those with no jobs. However, relative to recipients working in other sectors, recipients whose sole job is in temporary help tend to be less skilled, are less likely to leave welfare, have lower current earnings, but experience faster growth in earnings in the next two years. These findings are all consistent with the hypothesis that welfare recipients obtain opportunities for future advancement by working in the temporary help sector. Of course, up to this point, we have not controlled for other characteristics of workers that might affect their earnings and employment and welfare patterns in our analysis. It is this more in-depth analysis that we turn to next.

V. Determinants of Employment, Earnings and Welfare Receipt

Determinants of Job Type

We begin by examining the relationship between individual characteristics and the type of job held by welfare recipients. To allow for the possibility that the characteristics of welfare recipients differentially affect the type of job they hold (or do not hold), we estimate a multinomial logit model, where the types of jobs an individual can have are: no job; a job in the temporary help sector only (“Job in Temp Help”); a job both in the temporary help sector and in another industry (“Job in Temp Help and Other Industry”); a job in another industry but no job in the temporary help sector (“Job, but none in Temp Help”). No job is the excluded category in this analysis, so all of the effects are relative to not having a job.

We estimate the multinomial logit model controlling for the set of demographic characteristics discussed previously (age, education, nonwhite, number of children and age of the youngest child) as well as measures of past welfare experience, previous work experience, and

prior earnings.¹⁰ We also control for the quarter of the year from which the observation comes and a variety of characteristics of the county where an individual lives. In addition to the county's metropolitan status, we control for the county's sanction rate and welfare departure rate. County-specific measures of the economy include the county's employment level, the share of employment in nine primary industries and the average earnings in each.

The results from our multinomial logit analysis are presented in Table 6. Looking at the coefficients in this table, we see that, with a few notable exceptions, the effects of individual characteristics are very similar across the three types of jobs, relative to not having a job. Perhaps the most striking exception, however, is the large difference in probabilities by race across job types. The probability that a welfare recipient has a job in the temporary help sector is substantially higher for nonwhites than for whites, while there is relatively little difference by race in the likelihood of obtaining other jobs. In addition, contrary to our expectations, older workers are more likely to have a job in the temporary help sector than a job in another industry, although these differences are smaller in the most recent period.¹¹ Other than these noteworthy effects, there is little difference in the individual level determinants of temporary help sector employment relative to employment in other sectors.

As expected, there are important differences by geographical location. Here we see that living in a metropolitan area significantly increases the probability that a recipient has any type of

¹⁰Previous studies indicate that controls for past work experience and earnings are particularly important, as they correlate strongly with unobserved characteristics related to future employment and earnings (Houseman and Polivka, 1999; Segal and Sullivan, 1997b; Heckman, Ichimura, Smith and Todd, 1997).

¹¹We examine the impact of age at the sample mean, based on the coefficients for the linear and squared terms.

temporary help job relative to not having a job or to having a job in another industry. (This relationship is somewhat more pronounced in Missouri than in North Carolina.) This effect is in addition to the strong impacts of measures reflecting the local economy. As might be expected, greater levels of overall employment imply higher levels of temporary employment—especially where temporary employment is combined with other kinds of employment. We see that high levels of construction, manufacturing, wholesale trade and resale trade employment increase the likelihood of a temporary help job. Earnings by industry also have statistically significant impacts, although effects are difficult to summarize. As might be expected, higher earnings in the industries listed above do not generally increase the likelihood of a temporary help job, suggesting that lower-paying firms in these industries are more likely to hire temporary help workers.

It is worthwhile to note that these results fail to support the view that women with more demanding family responsibilities are more likely to take temporary help jobs. It appears that individuals with more children or with younger children are no more likely to be in temporary help jobs than other jobs.

Determinants of Earnings

The analyses above (Tables 3 and 5) show that those with jobs in temporary help service firms have earnings that are appreciably below those with jobs in most other major industry categories and that their earnings remain lower than others over the following years. Several problems arise in attempting to identify whether this relationship is causal. The first problem is that individuals who take temporary help jobs may have different characteristics than other workers, and this difference may partly explain their lower earnings. We know that temporary

help workers are much more likely to be nonwhite, although in other respects they do not appear to be markedly different from other welfare recipients. Such differences can be controlled using a simple regression structure.

The more serious problem is that individuals in temporary help jobs may differ in unmeasured ways from others. Insofar as individuals have choices among alternative kinds of jobs, the conscious choice of a temporary help job may select individuals whose opportunities in other jobs are different from observationally identical individuals in those jobs. In addition, since job type is partly determined by an employer decisions, employer selection on unmeasured characteristics overlays self-selection. Although almost any selection configuration is possible, we suspect that women who have particular difficulty obtaining other employment may seek temporary help positions, which implies that their low earnings are partly due to unmeasured characteristics.

To address these problems, we fit earnings models separately for our four classes of workers controlling both for individual characteristics and for unmeasured factors that influence selection into the job. Following a method proposed by Lee (1982), the selection correction uses probabilities obtained in the multinomial logit selection model to construct an inverse Mills ratio which is entered as a control variable (“Lambda” in our tables). The standard errors in these regressions are corrected to account for estimation error in the inverse Mills ratio.¹²

When the selection equation contains the same variables as the earnings equations, the selection effect is identified by the distributional assumptions underlying the construction of the inverse Mills ratio and by the functional form of the two equations. Since in applications such as

¹²See Gyourko and Tracy (1988) for an explication of the method.

ours, theory provides little basis for choosing functional form, further identification restrictions are necessary to obtain meaningful results. In our analysis, we have assumed that our measures of county employment, county sanction and welfare departure rate, industrial structure and industry-specific earnings enter into the selection equation but not into the equation predicting earnings. In essence, this approach assumes that these county measures of the economy and welfare policy influence individual earnings exclusively through current employment and observed job type. While this assumption may be violated, these measures have the advantage that they will be largely independent of unmeasured individual characteristics that undoubtedly influence job choice and earnings. They therefore avoid the problems due to self-selection into jobs based on individual-specific earnings opportunities, which we expect to impose the most severe biases on results.

Table A-1 presents equations that predict current earnings for individuals holding jobs in the three classes identified by the multinomial logit: (1) job only in temporary help, (2) job in temporary help and another industry, (3) job, but no job in temporary help. Since individuals without jobs have no earnings by definition, they are omitted in this analysis. Results are quite conventional, although, as might be expected in an analysis that controls for type of employment, variables are frequently not statistically significant. Perhaps of greatest interest is that in none of the regression equations is the coefficient on Lambda statistically significant, implying that selection effects are not very great.

Tables A-2 and A-3 presents results for selection-corrected models predicting the sum of total inflation-adjusted earnings over the eight quarters subsequent to the reference quarter, as well as earnings in just the eighth quarter. Since individuals with no jobs during the reference

quarters may obtain jobs in the following quarters, we include those with no job as a fourth employment class. In all samples, self-selection is of importance for those not working during the reference quarter, but it is not generally important for the other classes.

Table 7 presents statistics addressing the issue of how job category influences earnings based on these models. Panel A examines current earnings, panel B total earnings over eight quarters, and panel C eighth quarter earnings. Under each panel, the first line indicates mean earnings, while the second uses estimated coefficients to predict the earnings of an individual with characteristics at the grand mean for that sample. Since the selection term is included among these characteristics, this predicted value allows for unmeasured differences that influence job choice to also impact earnings. It answer the question of what the earnings would be of an individual whose measured characteristics corresponded to the grand mean but *who chose that job class*. If self-selection plays any role, predicted earnings differences across job classes may, in part, reflect unmeasured factors that cause individuals to make different job choices.

The third line in each panel predicts what the earnings would be for an individual whose measured and unmeasured characteristics are at the grand mean. These are the predicted earnings that an average person would obtain if she were assigned to the specified job class. The difference between the second and third line is that in the third line the coefficient on Lambda is set to zero, simulating the case where no selection effects occur. If that coefficient is not statistically significant, then the difference between lines 2 and 3 is not statistically significant.

If we focus first on current earnings (panel A), we see that those in temporary help jobs earn between 60 and 74 percent of the earnings of those in other jobs. Controls for measured characteristics increase this proportion slightly (up to five percentage points). Those who have

both a temporary help job and a job in another industry earn about 10 percent more than those with jobs only in other industries, and controlling for measured characteristics has very little impact on this difference. The third line shows that not only is sample selection not statistically significant, but it is not very accurately estimated. Standard errors are so large that comparisons across groups is meaningless.

Panel B includes those with no job in the reference quarter, and it is not surprising that their earnings over the subsequent eight quarters are less than half of those who have jobs, although between 1993 and 1997 in Missouri, we observe an increase in relative earnings from about 30 percent of those with jobs (and not in a temporary help job) to about 40 percent. In all analyses, we see that controlling for measured characteristics raises predicted earnings for those with no job in the reference quarter by about 20 percent, causing the gap between those with jobs and others to close. Line 3 does not provide any evidence that selection into nonemployment explains any of the remaining gap, since, in all three samples, that gap is actually larger when sample selection is taken into account. All of the estimates reported in line 3 display very large sampling error, however, so we do not wish to place much emphasis on this result.

Over the following eight quarters, workers with only temporary help jobs earn between 84 and 93 percent of earnings for those with other initial jobs, and the gap declines by 3 or 4 percentage points when measured characteristics are controlled. Temporary help workers' relative subsequent earnings are therefore much higher than their current earnings, reported in panel A. This underscores our observation that the low earnings obtained in temporary help jobs do not appear to provide a permanent handicap. Interestingly, the relative increment for those with a temporary help job as well as another job, about 10 percent, as indicated above, does not

decline over the subsequent period, as reflected in the eight quarter total. Corrections for self-selection (line 3) produce estimates that have such large standard errors that there is little possibility of interpretation.

Panel C, which lists predictions of earnings in the eighth quarter after the reference quarter, underscores the basic pattern reported in panel B. Earnings of those initially only in temporary help jobs are, by this time, between 93 and 99 percent of those with other jobs, and much of this small remaining gap is due to measured characteristics. The bottom line from Table 7 is that, while temporary help workers earn lower wages initially, they also have faster subsequent wage growth, so that by eight quarters later workers who initially held temporary help jobs have earnings that are close to workers who had jobs in other industries.

Perhaps most surprising is the fact that the role of temporary help has changed relatively little in Missouri over the period we observe it. Between 1993 and 1997, the proportion of welfare recipients with any kind of temporary help job more than doubled, and among employed welfare recipients, the proportion increased by 50 percent. This period also corresponds with changes in the welfare system, in which there was growing pressure for recipients to seek employment, accompanied by dramatic declines in the welfare caseload. If recipients were being forced into temporary help jobs in this period, we might expect that the those employed in these jobs would fare worse than in earlier years, in contrast to our findings.

Mobility Between Jobs

Of course, we expect that one of the primary ways that those in temporary help jobs improve their position is by moving into other positions. Table 8 provides some indication of the job mobility of temporary help workers and others. For ease of presentation, an employed

individual is classified by the job from which she received the most earnings in the quarter. We recognize that many of the temporary help workers that “move” to other industries were actually working in those other industries while they were employed by temporary help firms. However, for those workers, such a move may nonetheless identify an important change in status.

Each row in Table 8 indicates how individuals in a given type of job are distributed across jobs a year later. We see, for example, that in 1993, 38.6 percent of temporary help workers were working in service jobs one year later. The patterns are quite similar across years and states, and in each case they indicate that mobility from temporary help positions to other industries is substantial. Whereas over 50 percent of workers in service industries (not temporary help) remain in service and temporary help, only about 40 percent of temporary help workers are still in service and temporary help one year later. In each of our sites, the proportion of temporary help workers who have moved to manufacturing, although modest, is greater than for any of the other industries, aside from manufacturing itself. Temporary help workers are also very likely to move into the “other” category.

While the movements are not striking, they nonetheless give some indication of the kind of mobility that temporary help workers may be experiencing. Furthermore, it is worthwhile to note that the proportion of workers who do not have a job one year later is also similar across industries, suggesting that temporary workers are not significantly more likely to be without a job a year later than those who go to work in other industries.

Movement Off of Welfare

Next we estimate the probability that an individual is on welfare eight quarters later, controlling for measured characteristics and the type of job an individual has in the current

quarter. In this analysis, we return to using the same classification system for job type that we used in the previous sub-section, (i.e., no job, a single job in one of the five major industry categories, multiple jobs with at least one temporary help job, or multiple jobs with no temporary help job). The results from this analysis (both the coefficient and the marginal effect for each variable) are presented in Table 9.¹³

The estimated impacts of individual characteristics are consistent with prior research. Differences over time and between states are small. We see that after controlling for other characteristics, welfare recipients holding jobs are significantly more likely to be off of welfare in two years, but there have been modest declines in this effect over time. In Missouri, in 1993, job holders are between 9 and 16 percent more likely to have left welfare two years later, while in 1997 the impact declines for all employment categories, with the effect ranging from 7 to 13 percent. In North Carolina, our analysis is limited to 1997, for which the impact of a job ranges from 4 to 7 percent. While the apparent declines in the effect of holding a job are notable, it is worth recognizing that the chance that any individual leaves welfare has increased dramatically over this period. It appears that, at least in part, the decline in the impact on welfare receipt of holding a job is due to an increase in the chance that an individual leaves welfare without a job.

Welfare recipients whose sole job is in the temporary help sector are less likely to be off welfare in two years than recipients with jobs in other sectors or multiple jobs, although the

¹³The analysis here does not take account of selection into jobs. Since the results reported in Table 7 suggest that selection is relatively unimportant in explaining earnings differences, we expect that selection bias will not play an important role here, but we intend to undertake parallel analyses to those reported above to examine this.

differences are small. Perhaps most important, those who hold any kind of job are substantially more likely than those who do not hold a job to leave welfare.

VI. Summary and Conclusion

Our results confirm the view that welfare recipients in temporary help jobs receive lower earnings and have less promising prospects for movement from welfare than those who have jobs in other industries. However, what is perhaps of greatest interest is that these differences are small when individual characteristics are controlled. Earnings in subsequent years for temporary help workers are increasing faster than those in other industries, in part because they are more likely to move into higher paying industries. Overall, it is clear that those in temporary help jobs have appreciably better future prospects than those who are not holding jobs, even after controlling for all of the characteristics that we can observe.

Whether temporary help jobs are, on net, beneficial to welfare recipients depends on whether they supplant jobs that provide better pay and benefits and greater levels of stability. There is no question that a welfare recipient with a job in a manufacturing firm faces better prospects than a worker in temporary help services. But we suspect that for many welfare recipients, attractive jobs are not available, and that their skills and observable characteristics make employers unwilling to hire them into the stable and high-paying jobs, such as those in manufacturing. If temporary help jobs provide employment for at least some welfare recipients who would not otherwise have employment, these analyses show that the impact will be positive.

There is very little evidence to suggest that over the long run temporary help jobs significantly hurt the workers who work in these jobs. Our analyses suggest that for some

welfare recipients, temporary help jobs provide a path for them to move into other industries with higher pay and greater stability. Others benefit from being able to combine work in temporary help services with other employment. Undoubtedly, some of those with temporary help jobs find themselves trapped in employment with low earnings and perennial instability, but we do not find evidence that, among welfare recipients, such problems are worse for temporary help workers than for those in most other jobs. Those who take temporary positions are not more likely than those taking jobs in other industries to be without a job a year later. And despite the growth in the number of recipients with temporary help jobs, there is no indication that the circumstances of these workers has deteriorated over time.

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Table 1: Sample Characteristics of Welfare Recipients

	Missouri				North Carolina		
	1993	1995	1997	1999	1995	1997	1999
Age	29.11 (7.51)	29.38 (7.56)	29.37 (7.66)	29.10 (7.79)	28.73 (7.63)	28.95 (7.66)	28.37 (7.43)
Age squared	903.77 (492.43)	920.14 (496.72)	921.06 (503.38)	907.63 (510.74)	883.62 (497.72)	896.90 (501.19)	860.68 (477.62)
Percent with education lower than 12 years	44.8	44.4	45.7	48.6	40.7	37.8	42.8
Percent nonwhite	46.9	47.5	51.0	56.8	66.5	69.1	73.5
Number of children	2.05 (1.18)	2.05 (1.19)	2.07 (1.21)	2.11 (1.24)	1.81 (.99)	1.82 (1.01)	1.75 (.98)
Age of the youngest child	4.89 (4.47)	5.07 (4.44)	5.04 (4.41)	4.84 (4.46)	4.56 (4.39)	4.93 (4.30)	4.84 (4.20)
Percent on welfare less than 6 months in prior 2 years	21.6	20.1	20.2	25.5	n.a.	24.6	32.3
Percent on welfare 7-12 months in prior 2 years	12.9	12.7	12.9	15.3	n.a.	15.1	17.5
Percent on welfare 13-23 months in prior 2 years	28.6	28.3	32.4	34.0	n.a.	33.3	32.7
Percent on welfare 24 months in prior 2 years	37.0	38.3	34.6	25.2	n.a.	27.0	17.4
Percent of previous 8 quarters working	27.45 (31.40)	33.45 (33.34)	37.71 (34.00)	43.13 (33.85)	n.a.	43.39 (35.16)	51.48 (34.93)
Percent working all of previous 8 qtrs	4.9	6.8	8.1	9.2	n.a.	11.3	15.6
Percent not work in any of previous 8qtrs	40.8	33.5	28.1	21.4	n.a.	23.1	16.0
Total annual earnings in the prior year	1397 (2916)	1884 (3389)	2074 (3463)	2450 (3765)	n.a.	2549 (3764)	3251 (4488)
Total annual earnings two years prior	1785 (3655)	2011 (3864)	2252 (3916)	2772 (4347)	n.a.	2735 (4321)	3434 (4744)
Percent in St. Louis County and St. Louis City	36.4	36.6	39.1	43.5	n.a.	n.a.	n.a.
Percent in Kansas City central area (Jackson County)	16.7	17.3	17.5	17.5	n.a.	n.a.	n.a.
Percent in Charlotte central (Mecklenburg County) ¹	n.a.	n.a.	n.a.	n.a.	11.0	11.3	13.4
Percent in suburban areas ¹	9.7	9.3	8.4	7.2	3.6	3.5	3.5
Percent in small metro	9.5	9.7	9.0	8.2	46.7	46.9	46.6
Percent outside metro	27.8	27.1	26.0	23.7	38.7	38.4	36.5
Quarter 1	24.8	25.6	27.3	26.6	n.a.	26.5	27.7
Quarter 2	24.8	25.1	25.3	24.9	33.9	25.5	25.5
Quarter 3	25.2	25.0	24.3	24.3	33.8	24.8	24.2
Quarter 4	25.3	24.3	23.2	24.2	32.3	23.2	22.6
Number of observation	289,160	285,891	219,442	151,430	284,695	293,276	159,842

Note: Standard deviations of continuous variables are in parentheses. Sample includes females aged at least 18 and less than 65 in single parent families, not in child only cases. Sampling frame is quarter by welfare recipient. For continuous variables standard deviation is in parenthesis. Earnings are adjusted for inflation to real dollars for the fourth quarter of 1997.

¹Suburban areas include the noncentral counties in the St. Louis, Kansas City, and Charlotte metropolitan areas.

Table 2: Sample Characteristics of Welfare Recipients by Industry Combinations

Variables		Only One Job					Multiple Jobs		
		No Job	Temp Help	Manufacturing	Retail trade	Services	Other	Temp Help and Any Other	Any Industry Not Temp Help
		<i>Panel A. Missouri</i>							
Age (mean)	1993	29.63	28.28	28.40	26.22	28.78	28.58	27.73	26.81
	1995	30.17	28.57	29.12	26.52	29.01	28.80	27.65	27.11
	1997	30.10	28.74	29.65	26.79	29.22	29.08	27.92	27.47
	1999	29.92	28.51	29.01	26.81	28.92	28.69	27.92	27.16
Percent with education less than 12 years	1993	47.5	35.8	43.9	41.7	36.3	30.0	31.4	36.6
	1995	47.0	40.3	42.7	44.2	38.2	31.6	38.0	39.0
	1997	48.0	41.9	45.9	47.0	41.3	34.3	39.1	41.9
	1999	50.0	46.1	48.0	51.6	45.6	37.5	45.1	47.8
Percent nonwhite	1993	44.7	74.8	30.9	46.6	56.2	56.5	69.2	45.6
	1995	42.2	74.5	32.7	50.0	59.8	60.7	71.5	51.5
	1997	45.0	73.2	34.9	50.8	63.0	63.3	71.9	54.5
	1999	50.6	74.4	40.6	55.6	69.2	66.6	74.0	60.2
Number of children	1993	2.10 (1.22)	2.02 (1.16)	1.88 (1.00)	1.81 (1.00)	1.97 (1.11)	1.88 (1.06)	1.88 (1.06)	1.78 (.96)
	1995	2.11 (1.23)	2.04 (1.17)	1.94 (1.04)	1.87 (1.06)	2.00 (1.14)	1.92 (1.07)	1.92 (1.09)	1.83 (1.01)
	1997	2.10 (1.25)	2.07 (1.19)	2.00 (1.11)	1.92 (1.11)	2.08 (1.19)	2.01 (1.15)	2.01 (1.14)	1.93 (1.09)
	1999	2.12 (1.26)	2.16 (1.26)	2.02 (1.11)	2.00 (1.17)	2.17 (1.28)	2.03 (1.17)	2.08 (1.19)	2.01 (1.15)
Age of youngest child under 18	1993	4.99 (4.53)	4.90 (4.40)	5.05 (4.45)	3.88 (3.91)	5.06 (4.42)	4.92 (4.32)	4.95 (4.40)	4.39 (4.13)
	1995	5.22 (4.54)	5.12 (4.46)	5.27 (4.36)	4.10 (3.95)	5.21 (4.40)	5.10 (4.32)	4.92 (4.26)	4.64 (4.13)
	1997	5.13 (4.54)	5.08 (4.33)	5.33 (4.46)	4.27 (3.98)	5.26 (4.33)	5.15 (4.27)	4.88 (4.12)	4.70 (4.02)
	1999	4.99 (4.61)	4.84 (4.38)	4.96 (4.61)	4.06 (4.00)	4.98 (4.33)	4.79 (4.29)	4.86 (4.21)	4.44 (4.09)
Number of months on welfare in previous 2 years	1993	16.66 (8.56)	15.89 (8.46)	12.20 (8.99)	13.50 (8.88)	14.47 (8.72)	14.06 (8.72)	14.05 (8.64)	12.70 (8.73)
	1995	16.84 (8.52)	16.68 (8.23)	13.23 (8.81)	14.82 (8.74)	15.72 (8.54)	15.17 (8.61)	15.26 (8.43)	14.23 (8.60)
	1997	16.60 (8.49)	16.36 (8.26)	13.15 (8.65)	14.85 (8.62)	16.13 (8.35)	15.83 (8.38)	15.23 (8.30)	14.20 (8.55)
	1999	14.92 (8.75)	14.57 (8.38)	11.26 (8.48)	13.28 (8.63)	14.52 (8.54)	13.59 (8.71)	13.78 (8.24)	12.66 (8.45)
Percent of previous 8 quarters employed	1993	18.71 (26.00)	44.71 (31.06)	47.14 (33.47)	49.73 (32.62)	50.05 (33.17)	50.15 (33.04)	58.90 (30.68)	57.48 (31.56)
	1995	21.72 (27.70)	49.91 (31.06)	49.61 (33.16)	52.10 (32.16)	53.02 (33.01)	54.96 (33.19)	64.22 (29.77)	61.72 (30.54)
	1997	25.01 (28.94)	54.54 (31.62)	49.39 (32.88)	53.64 (32.08)	54.47 (32.83)	55.41 (32.98)	67.08 (29.63)	64.22 (30.40)
	1999	30.83 (30.63)	56.41 (30.86)	54.68 (32.26)	56.08 (30.80)	57.06 (31.82)	58.63 (32.67)	68.55 (28.40)	65.04 (29.61)

Table 2: Continued

Variables	Only One Job						Multiple Jobs		
	No Job	Temp Help	Manufacturing	Retail trade	Services	Other	Temp Help and Any Other	Any Industry Not Temp Help	
<i>Panel B. North Carolina</i>									
Age (mean)	1995	29.61	27.05	28.05	26.41	26.41	29.33	26.87	27.11
	1997	29.65	27.59	28.69	26.95	29.61	29.58	27.64	27.84
	1999	28.24	28.25	29.11	27.68	29.61	29.78	28.08	28.36
Percent with education less than 12 years	1995	43.4	36.6	45.0	38.4	33.4	33.4	36.3	37.1
	1997	41.6	33.8	41.2	36.2	28.8	28.9	31.4	31.9
	1999	52.3	45.4	50.2	50.6	40.0	38.9	43.9	44.9
Percent nonwhite	1995	63.9	80.7	68.4	61.5	75.0	65.8	79.6	67.3
	1997	66.9	81.1	68.7	64.3	77.1	66.6	78.5	68.4
	1999	70.7	86.6	74.0	71.1	83.9	75.8	84.6	76.3
Number of children	1995	1.84 (1.03)	1.80 (.96)	1.83 (.98)	1.70 (.91)	1.83 (.98)	1.77 (.96)	1.75 (.91)	1.73 (.93)
	1997	1.85 (1.04)	1.82 (.96)	1.85 (.99)	1.73 (.94)	1.86 (1.00)	1.78 (.96)	1.79 (.96)	1.77 (.95)
	1999	1.69 (.97)	1.86 (.98)	1.87 (.98)	1.81 (.96)	1.91 (1.01)	1.83 (1.03)	1.85 (.97)	1.85 (.98)
Age of youngest child under 18	1995	4.75 (4.55)	4.07 (4.05)	4.41 (4.25)	3.75 (3.92)	5.03 (4.41)	4.94 (4.42)	4.06 (3.93)	4.24 (4.06)
	1997	4.98 (4.43)	4.59 (3.94)	5.06 (4.27)	4.35 (3.94)	5.41 (4.31)	5.35 (4.37)	4.79 (3.98)	4.91 (4.11)
	1999	4.57 (4.31)	5.29 (3.81)	5.56 (4.08)	5.01 (3.78)	5.74 (4.05)	5.74 (4.14)	5.26 (3.77)	5.33 (3.84)
Number of months on welfare in previous 2 years	1995	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	1997	15.47 (8.70)	14.26 (8.30)	12.34 (8.58)	13.92 (8.49)	14.73 (8.40)	13.63 (8.68)	13.00 (8.22)	12.88 (8.42)
	1999	11.86 (8.87)	14.50 (7.81)	12.07 (8.30)	14.46 (7.84)	14.16 (8.03)	13.15 (8.27)	13.29 (7.85)	13.29 (8.03)
Percent of last 8 quarters employed	1995	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	1997	28.01 (30.49)	57.07 (31.31)	60.12 (32.77)	58.24 (31.68)	59.52 (32.48)	57.34 (32.84)	70.52 (28.89)	68.47 (29.75)
	1999	38.11 (33.07)	66.03 (28.58)	67.49 (30.17)	66.31 (28.54)	68.62 (29.39)	66.36 (29.91)	77.29 (24.86)	74.84 (25.78)

Note: Standard deviations of continuous variables are in parentheses. Sample includes females aged at least 18 and less than 65 in single parent families, not in child only cases. Sampling frame is quarter by welfare recipient.

Table 3: Distribution of Jobs and Earnings by Industry Combinations

Industry Combinations	1993		1995		1997		1999	
	Percent	Earnings	Percent	Earnings	Percent	Earnings	Percent	Earnings
<i>Panel A. Missouri</i>								
<i>One job only:</i>								
Temp help	7.8	656 (770)	9.2	781 (924)	11.0	940 (1078)	10.2	936 (1144)
Manufacturing	6.9	1245 (1276)	6.4	1552 (1885)	4.9	1565 (1743)	4.2	1627 (1586)
Retail	29.1	891 (824)	27.9	1028 (963)	25.3	1090 (1039)	25.4	1152 (1108)
Service	35.7	1107 (1057)	33.0	1327 (1265)	34.1	1461 (1346)	35.6	1486 (1499)
Other	7.9	1457 (1385)	7.6	1773 (1618)	7.8	1973 (1793)	7.2	1992 (1924)
<i>Multiple jobs:</i>								
Temp help and any other industry	4.7	1269 (1038)	6.8	1367 (1110)	8.3	1535 (1299)	8.2	1522 (1283)
No jobs in Temp help industry	8.0	1344 (1114)	9.1	1542 (1736)	8.6	1615 (1460)	9.1	1673 (1504)
<i>Panel B. North Carolina</i>								
<i>One job only:</i>								
Temp help	n.a.	n.a.	9.1	1012 (1043)	10.2	1035 (1079)	12.1	1039 (1111)
Manufacturing	n.a.	n.a.	12.2	1616 (1322)	9.5	1604 (1365)	6.9	1551 (1334)
Retail	n.a.	n.a.	29.6	1126 (949)	30.1	1128 (927)	27.8	1090 (944)
Service	n.a.	n.a.	24.9	1405 (1205)	26.6	1413 (1207)	27.7	1396 (1214)
Other	n.a.	n.a.	5.6	1588 (1668)	5.1	1682 (1583)	5.3	1786 (1673)
<i>Multiple jobs:</i>								
Temp help and any other industry	n.a.	n.a.	8.2	1532 (1127)	8.6	1528 (1159)	10.7	1532 (1204)
No jobs in Temp help industry	n.a.	n.a.	10.4	1631 (1302)	9.9	1652 (1386)	9.5	1652 (1418)

Note: Standard deviations are in parentheses. Sample includes females aged at least 18 and less than 65 in single parent families, not in child only cases. Sampling frame is quarter by welfare recipient.

Table 4: Welfare Reciprocity Over The Next Two Years by Industry Combinations

Industry Combinations	1993			1995			1997		
	Percent on Welfare in 2 Years	Number of Quarters on Welfare Next 2 Years	Number of Obs.	Percent on Welfare in 2 Years	Number of Quarters on Welfare Next 2 Years	Number of Obs.	Percent on Welfare in 2 Years	Number of Quarters on Welfare Next 2 years	Number of Obs.
<i>Panel A. Missouri</i>									
<i>No job</i>	63.9	6.19 (2.54)	209,325	52.8	5.71 (2.67)	181,895	43.6	5.03 (2.81)	129,440
<i>One job only:</i>									
Temp help	57.3	5.65 (2.75)	6,230	49.1	5.28 (2.80)	9,549	40.6	4.51 (2.89)	9,921
Manufacturing	41.5	4.19 (3.02)	5,500	31.6	3.74 (2.94)	6,645	24.7	3.11 (2.77)	4,409
Retail	51.0	5.03 (2.93)	23,222	42.5	4.70 (2.90)	29,061	36.7	4.03 (2.93)	22,752
Service	47.1	4.75 (3.00)	28,503	39.1	4.38 (2.95)	34,287	32.7	3.76 (2.90)	30,710
Other	43.6	4.41 (3.04)	6,290	34.1	4.06 (2.95)	7,900	28.8	3.45 (2.87)	6,993
<i>Multiple jobs:</i>									
Temp help and any other industry	48.7	4.92 (2.94)	3,744	43.6	4.77 (2.86)	7,117	35.4	4.03 (2.82)	7,485
No jobs in Temp help industry	43.4	4.46 (2.95)	6,346	36.5	4.19 (2.89)	9,437	31.0	3.54 (2.83)	7,732
<i>Panel B. North Carolina</i>									
<i>No job</i>	n.a.	n.a.	n.a.	46.1	5.26 (2.73)	156,837	29.3	4.32 (2.71)	155,206
<i>One job only:</i>									
Temp help	n.a.	n.a.	n.a.	39.5	4.44 (2.85)	11,591	26.3	3.67 (2.71)	14,088
Manufacturing	n.a.	n.a.	n.a.	33.6	3.74 (2.87)	15,565	21.4	2.98 (2.63)	13,112
Retail	n.a.	n.a.	n.a.	36.6	4.28 (2.82)	37,901	24.3	3.45 (2.66)	41,623
Service	n.a.	n.a.	n.a.	32.6	3.87 (2.83)	31,907	21.6	3.16 (2.64)	36,706
Other	n.a.	n.a.	n.a.	32.2	3.82 (2.92)	7,123	20.5	2.98 (2.70)	7,073
<i>Multiple jobs:</i>									
Temp help and any other industry	n.a.	n.a.	n.a.	36.1	4.05 (2.82)	10,543	23.8	3.30 (2.64)	14,088
No jobs in Temp help industry	n.a.	n.a.	n.a.	33.4	3.83 (2.82)	13,248	22.5	3.10 (2.63)	13,668

Note: Standard deviations are in parentheses. Sample includes females aged at least 18 and less than 65 in single parent families, not in child only cases. Sampling frame is quarter by welfare recipient.

Table 5: Earnings and Employment Over the Next Two Years by Industry Combinations

Industry Combinations	1993		1995		1997	
	Sum of Earnings	Number Qtrs with Nonzero Earnings	Sum of Earnings	Number Qtrs with Nonzero Earnings	Sum of Earnings	Number Qtrs with Nonzero Earnings
<i>Panel A. Missouri</i>						
<i>No job</i>	3450 (6258)	2.1 (2.5)	4350 (7000)	2.5 (2.6)	5180 (7600)	2.9 (2.7)
<i>One job only:</i>						
Temp help	9380 (9805)	5.0 (2.6)	10361 (10301)	5.3 (2.5)	11600 (10980)	5.5 (2.4)
Manufacturing	11846 (12467)	4.9 (2.7)	13803 (15643)	5.2 (2.7)	13391 (13016)	5.3 (2.6)
Retail	9332 (8895)	5.2 (2.6)	10169 (9199)	5.4 (2.5)	10705 (9501)	5.5 (2.5)
Service	11567 (11173)	5.4 (2.6)	13001 (11683)	5.7 (2.5)	13798 (11712)	5.8 (2.4)
Other	13752 (12378)	5.4 (2.6)	15195 (13104)	5.7 (2.5)	16810 (13831)	5.9 (2.4)
<i>Multiple jobs:</i>						
Temp help and any other industry	13365 (11391)	6.1 (2.3)	13838 (11622)	6.3 (2.1)	14779 (11874)	6.3 (2.1)
	12510	5.9	13675	6.1	13981	6.2
No jobs in Temp help industry	(10488)	(2.3)	(1176)	(2.2)	(11436)	(2.1)
<i>Panel B. North Carolina</i>						
<i>No job</i>			7180 (8019)	2.8 (2.7)	7605 (8154)	3.1 (2.8)
<i>One job only:</i>						
Temp help	n.a.	n.a.	11831 (10302)	5.4 (2.5)	12549 (10695)	5.7 (2.4)
Manufacturing	n.a.	n.a.	14111 (11363)	5.6 (2.5)	14444 (11421)	5.8 (2.4)
Retail	n.a.	n.a.	11131 (8781)	5.7 (2.5)	11329 (8879)	5.8 (2.4)
Service	n.a.	n.a.	13954 (11153)	5.9 (2.5)	14218 (11024)	6.0 (2.4)
Other	n.a.	n.a.	14590 (12513)	5.6 (2.6)	15542 (13106)	5.7 (2.5)
<i>Multiple jobs:</i>						
Temp help and any other industry	n.a.	n.a.	14491 (10984)	6.4 (2.1)	15085 (11296)	6.4 (2.0)
No jobs in Temp help industry	n.a.	n.a.	14105 (10722)	6.3 (2.2)	14569 (11093)	6.4 (2.1)

Note: Standard deviations are in parentheses. Sample includes females aged at least 18 and less than 65 in single parent families, not in child only cases. Sampling frame is quarter by welfare recipient.

Table 6: Multinomial Logit Estimation of Occupation Choice

	Missouri						North Carolina		
	1993			1997			1997		
	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help
Constant	-11.984 (0.935)	-11.862 (1.037)	-2.484 (0.216)	-7.510 (0.544)	-9.204 (0.587)	-1.813 (0.204)	-6.144 (0.396)	-7.454 (0.468)	-1.572 (0.183)
Age	0.129 (0.021)	0.037 (0.025)	-0.026 (0.007)	0.102 (0.014)	0.070 (0.018)	-0.005 (0.007)	0.075 (0.014)	0.052 (0.016)	0.014 (0.006)
Age square *100	-0.236 (0.033)	-0.129 (0.039)	-0.004 (0.010)	-0.175 (0.022)	-0.155 (0.028)	-0.027 (0.010)	-0.162 (0.023)	-0.129 (0.025)	0.000 (0.000)
Education lower than 12 years	-0.220 (0.036)	-0.306 (0.044)	-0.129 (0.013)	-0.142 (0.028)	-0.205 (0.031)	-0.116 (0.013)	-0.166 (0.026)	-0.202 (0.027)	-0.143 (0.013)
Nonwhite	0.912 (0.048)	0.714 (0.056)	0.167 (0.017)	0.825 (0.038)	0.739 (0.042)	0.170 (0.018)	0.695 (0.032)	0.532 (0.033)	0.026 (0.014)
Number of children	0.003 (0.017)	0.002 (0.021)	-0.013 (0.006)	-0.007 (0.013)	0.028 (0.014)	0.017 (0.006)	0.008 (0.013)	0.012 (0.014)	0.023 (0.007)
Age of the youngest child	0.037 (0.005)	0.061 (0.006)	0.022 (0.002)	0.020 (0.004)	0.027 (0.005)	0.021 (0.002)	0.008 (0.004)	0.016 (0.004)	0.014 (0.002)
On welfare 7-12 months in prior 2 years	0.044 (0.050)	0.167 (0.058)	0.110 (0.019)	0.045 (0.042)	0.105 (0.046)	0.115 (0.020)	0.052 (0.037)	0.127 (0.038)	0.040 (0.019)
On welfare 13-23 months in prior 2 years	0.037 (0.047)	0.139 (0.056)	0.102 (0.018)	0.067 (0.039)	0.142 (0.042)	0.114 (0.018)	0.062 (0.033)	0.074 (0.037)	0.012 (0.017)
On welfare 24 months in prior 2 years	-0.021 (0.053)	-0.028 (0.067)	0.056 (0.020)	0.059 (0.043)	0.011 (0.049)	0.169 (0.021)	0.000 (0.040)	-0.048 (0.045)	0.113 (0.019)
Percent of previous 8 quarters working	2.014 (0.097)	2.741 (0.104)	1.870 (0.038)	2.034 (0.073)	2.835 (0.080)	1.600 (0.037)	1.501 (0.064)	2.596 (0.072)	1.732 (0.035)
Working all of previous 8 qtrs	0.027 (0.078)	0.159 (0.070)	0.411 (0.030)	0.205 (0.052)	0.371 (0.049)	0.366 (0.028)	0.164 (0.044)	0.401 (0.041)	0.421 (0.025)
No work in any of previous 8 quarters	-1.081 (0.049)	-1.329 (0.086)	-1.096 (0.018)	-0.888 (0.046)	-1.146 (0.076)	-0.909 (0.019)	-1.105 (0.044)	-1.301 (0.078)	-1.088 (0.019)
Total annual earnings in the prior year *1000	0.069 (0.007)	0.138 (0.007)	0.164 (0.003)	0.073 (0.005)	0.142 (0.005)	0.162 (0.003)	0.122 (0.005)	0.168 (0.005)	0.164 (0.003)
Total annual earnings two years prior * 1000	-0.093 (0.007)	-0.097 (0.007)	-0.105 (0.003)	-0.070 (0.005)	-0.099 (0.005)	-0.084 (0.002)	-0.056 (0.004)	-0.084 (0.004)	-0.091 (0.002)
St. Louis central	0.791 (0.261)	0.725 (0.311)	-0.240 (0.067)	0.878 (0.213)	-0.115 (0.233)	-0.316 (0.081)	na	na	na
Kansas City central	0.642 (0.309)	0.565 (0.350)	-0.306 (0.073)	1.271 (0.207)	0.375 (0.227)	-0.278 (0.077)	na	na	na
Charlotte central							0.061 (0.086)	0.437 (0.089)	0.173 (0.045)
Suburban metro	0.953 (0.132)	1.274 (0.141)	-0.178 (0.035)	0.662 (0.087)	0.421 (0.103)	-0.192 (0.035)	-0.054 (0.090)	0.321 (0.089)	0.219 (0.041)
Small metro	0.331 (0.140)	0.508 (0.172)	-0.148 (0.035)	0.727 (0.097)	0.618 (0.101)	-0.045 (0.038)	-0.103 (0.042)	-0.017 (0.046)	0.084 (0.021)
Quarter 2	0.073 (0.060)	0.243 (0.079)	0.249 (0.018)	0.422 (0.056)	0.609 (0.063)	0.216 (0.022)	0.207 (0.031)	0.432 (0.037)	0.154 (0.014)
Quarter 3	0.271 (0.059)	0.670 (0.075)	0.367 (0.018)	0.548 (0.055)	0.818 (0.060)	0.328 (0.021)	0.391 (0.039)	0.591 (0.044)	0.189 (0.018)
Quarter 4	0.424 (0.113)	0.876 (0.137)	0.362 (0.031)	0.473 (0.078)	0.792 (0.084)	0.220 (0.031)	0.231 (0.059)	0.356 (0.069)	-0.062 (0.028)
Sanction rate in county	n.a.	n.a.	n.a.	-0.022 (0.005)	-0.030 (0.006)	-0.001 (0.002)	-0.095 (0.635)	-0.741 (0.688)	0.195 (0.302)
Welfare Departure rate in county	0.035 (0.013)	0.054 (0.016)	0.032 (0.003)	0.013 (0.005)	0.012 (0.006)	0.017 (0.002)	0.937 (0.357)	3.823 (0.376)	2.211 (0.166)
Log of total employment in county	0.181 (0.074)	0.290 (0.097)	0.041 (0.019)	0.014 (0.051)	0.096 (0.057)	-0.005 (0.019)	0.218 (0.045)	0.109 (0.053)	-0.070 (0.021)

Employment Share by Major Industry Division (Omitted Industry: Service)

Agriculture, Forestry and	-5.466	-0.846	0.026	-0.284	2.343	-0.045	-7.580	-5.898	-0.010
Fishing	(3.276)	(2.596)	(0.477)	(1.531)	(1.134)	(0.409)	(0.819)	(0.875)	(0.345)
Mining	1.818	-2.382	-0.104	7.626	7.696	-1.168	-17.743	-25.101	-16.016
	(4.447)	(4.413)	(0.749)	(1.674)	(1.975)	(0.799)	(9.952)	(11.073)	(4.717)
Construction	12.443	6.717	1.039	3.873	7.352	-0.260	8.894	8.956	0.868
	(1.952)	(2.480)	(0.554)	(1.417)	(1.504)	(0.539)	(1.236)	(1.381)	(0.597)
Manufacturing	3.319	2.689	0.252	1.798	2.411	-0.513	1.854	2.590	0.046
	(0.725)	(0.848)	(0.158)	(0.351)	(0.392)	(0.134)	(0.229)	(0.259)	(0.119)
Transportation,	4.165	3.176	0.128	0.787	1.863	-1.149	-2.645	3.214	-0.139
Communication, etc.	(1.117)	(1.204)	(0.294)	(0.914)	(0.907)	(0.348)	(1.848)	(2.083)	(0.903)
Wholesale trade	5.878	6.209	-0.501	1.231	1.288	-0.960	5.681	7.199	0.720
	(1.710)	(1.949)	(0.433)	(1.284)	(1.363)	(0.476)	(1.467)	(1.700)	(0.723)
Retail Trade	2.417	1.844	0.895	2.970	1.556	-0.380	-3.030	-1.095	1.360
	(1.366)	(1.674)	(0.334)	(0.763)	(0.829)	(0.287)	(0.610)	(0.704)	(0.265)
Finance, Insurance and	5.238	5.382	2.830	-4.726	2.957	2.103	-10.947	-11.813	-0.351
Real Estate	(3.885)	(4.129)	(0.852)	(2.541)	(2.907)	(0.872)	(2.393)	(2.694)	(0.900)

Earnings by Major Industry Division (x1,000)

Agriculture, Forestry and	-0.220	-0.671	-0.171	-0.425	-0.774	-0.064	-0.792	-0.767	0.258
Fishing	(0.556)	(0.475)	(0.073)	(0.236)	(0.260)	(0.079)	(0.168)	(0.194)	(0.079)
Mining	-0.013	-0.040	-0.007	0.174	0.092	0.127	-0.151	-0.292	0.001
	(0.085)	(0.123)	(0.011)	(0.055)	(0.061)	(0.025)	(0.089)	(0.097)	(0.046)
Construction	-0.034	0.069	-0.168	-0.153	0.074	0.204	0.242	0.294	0.022
	(0.484)	(0.604)	(0.131)	(0.301)	(0.318)	(0.105)	(0.206)	(0.245)	(0.094)
Manufacturing	0.289	-1.017	-0.161	0.440	0.363	0.299	-0.088	0.056	0.005
	(0.366)	(0.474)	(0.096)	(0.188)	(0.214)	(0.072)	(0.120)	(0.132)	(0.058)
Transportation,	-0.064	0.147	0.053	0.507	-0.059	0.030	-0.520	-0.780	0.153
Communication, etc.	(0.394)	(0.466)	(0.101)	(0.216)	(0.233)	(0.087)	(0.159)	(0.186)	(0.072)
Wholesale trade	-1.770	-0.628	0.344	-1.127	-0.752	0.092	0.684	0.003	0.017
	(0.589)	(0.643)	(0.122)	(0.306)	(0.315)	(0.101)	(0.149)	(0.175)	(0.071)
Retail Trade	0.935	-1.569	-0.437	-0.321	1.544	0.142	-1.089	-0.182	-0.073
	(0.904)	(1.198)	(0.281)	(0.714)	(0.799)	(0.292)	(0.491)	(0.479)	(0.219)
Finance, Insurance and	-0.522	-0.434	0.470	0.461	0.281	0.017	-0.359	0.333	-0.112
Real Estate	(0.345)	(0.423)	(0.107)	(0.193)	(0.229)	(0.076)	(0.109)	(0.119)	(0.053)
Services	2.282	2.718	0.268	0.239	0.486	0.019	0.288	0.492	0.374
	(0.730)	(0.906)	(0.198)	(0.466)	(0.518)	(0.182)	(0.319)	(0.364)	(0.149)
N	289,160	289,160	289,160	219,442	219,442	219,442	250,227	250,227	250,227

Table 7: Predicted Outcomes Contingent on Job Choice

	Missouri								North Carolina				
	1993				1997				1997				
	No Job	Job in Temp			No Job	Job in Temp			No Job	Job in Temp			Job, but none in Temp
		Job in Temp	Help and Other	Job, but none in Temp		Job in Temp	Help and Other	Job, but none in Temp		Job in Temp	Help and Other	Industry	
No Job	Help	Industry	Temp Help	No Job	Help	Industry	Temp Help	No Job	Help	Industry	Help		
Panel A. Dependent Variable: Current Earnings													
1. Observed Outcome	na	732 (16)	1416 (22)	1227 (8)	na	945 (17)	1543 (20)	1425 (8)	na	982 (1028)	1470 (1118)	1328 (1159)	
2. Predicted Outcome at Grand Mean of Characteristics, Conditional on Job Choice	na	683 (24)	1183 (50)	1047 (23)	na	834 (16)	1347 (22)	1249 (9)	na	929 (12)	1344 (18)	1201 (6)	
3. Predicted Outcome at Grand Mean of Characteristics	na	613 (957)	1204 (915)	1640 (3299)	na	1552 (464)	2274 (535)	931 (1076)	na	927 (239)	1122 (214)	1267 (155)	
Panel B. Dependent Variable: Total Eight Quarter Earnings													
1. Observed Outcome	3450 (37)	9380 (206)	13365 (289)	11128 (90)	5180 (53)	11600 (192)	14779 (187)	13113 (92)	5194 (7272)	11365 (10150)	14122 (10812)	12228 (10148)	
2. Predicted Outcome at Grand Mean of Characteristics, Conditional on Job Choice	4046 (46)	8507 (276)	11598 (497)	9739 (136)	6062 (65)	11059 (282)	13217 (375)	12041 (96)	6249 (60)	10975 (202)	12574 (255)	11410 (82)	
3. Predicted Outcome at Grand Mean of Characteristics	2500 (378)	7708 (10145)	-715 (12420)	12585 (14601)	3769 (636)	4300 (10417)	17596 (6805)	11683 (6399)	2900 (954)	11872 (3156)	15633 (2703)	9231 (1708)	
Panel C. Dependent Variable: Earnings in Eighth Quarter following Reference													
1. Observed Outcome	673 (8)	1453 (37)	1891 (53)	1538 (14)	929 (10)	1660 (29)	2005 (30)	1780 (14)	891 (1465)	1623 (1779)	1911 (1886)	1637 (2281)	
2. Predicted Outcome at Grand Mean of Characteristics, Conditional on Job Choice	769 (9)	1283 (50)	1552 (87)	1321 (16)	1058 (12)	1556 (35)	1693 (49)	1624 (14)	1044 (11)	1531 (28)	1643 (39)	1517 (16)	
3. Predicted Outcome at Grand Mean of Characteristics	493 (70)	1421 (1956)	-930 (2132)	1541 (1371)	556 (121)	988 (1059)	2026 (999)	1559 (667)	512 (174)	1741 (510)	1855 (428)	1168 (204)	

Table 8: Movement of Welfare Recipients Between Industries 1993, 1995, 1997.

Employment One Year Later						
Current Employment	Panel A. Missouri					
	Service (incl. Temp Help)	Manufacturing	Retail Trade	Other	No job	Total
1993						
Temp Help	38.6	5.9	10.8	9.3	35.5	100.0
Service, not temp help	50.3	3.5	9.1	4.5	32.7	100.0
Manufacturing	16.8	32.4	9.7	4.2	36.9	100.0
Retail Trade	17.7	4.0	38.0	4.8	35.5	100.0
Other	18.0	4.1	9.6	38.0	30.4	100.0
No job	13.3	2.8	7.7	2.7	73.4	100.0
1995						
Temp help	41.7	5.5	11.8	8.4	32.6	100.0
Service, not temp help	53.7	2.8	9.8	4.8	29.0	100.0
Manufacturing	19.3	31.8	10.4	4.4	34.1	100.0
Retail Trade	20.3	3.4	38.7	5.1	32.6	100.0
Other	20.7	3.1	10.2	38.9	27.1	100.0
No job	16.2	2.7	9.0	3.3	68.9	100.0
1997						
Temp help	42.5	5.5	11.9	10.2	29.8	100.0
Service, not temp help	54.7	2.6	9.9	5.2	27.7	100.0
Manufacturing	21.8	29.7	11.5	4.6	32.4	100.0
Retail Trade	22.5	2.9	38.0	5.4	31.3	100.0
Other	23.7	3.0	9.9	38.0	25.4	100.0
No job	19.4	2.9	10.4	3.8	63.6	100.0
1995						
Panel B. North Carolina						
Temp help	37.2	14.3	13.7	6.7	28.1	100.0
Service, not temp help	56.5	4.9	10.4	4.2	24.0	100.0
Manufact	17.0	42.5	10.9	3.7	25.9	100.0
Retail Trade	18.5	5.9	43.8	4.0	27.8	100.0
Other	19.9	6.5	11.8	36.3	25.4	100.0
No job	15.8	5.2	11.7	3.0	64.4	100.0
1997						
Temp help	39.5	13.7	13.5	7.5	26.0	100.0
Service, not temp help	58.2	4.1	10.7	4.6	22.4	100.0
Manufacturing	19.4	41.9	10.6	3.9	24.3	100.0
Retail Trade	19.8	5.4	44.0	4.2	26.6	100.0
Other	22.1	5.2	11.4	37.2	24.1	100.0
No job	17.6	5.0	12.3	3.2	62.0	100.0

Note: Industry classification is according to employer paying most earnings in a quarter.

Table 9: Probit Estimation of the Probability a Recipient is not on Welfare 8 Quarters Later

	Missouri				North Carolina			
	1993		1995		1997		1997	
	Coefficient	Marginal Effect						
Age	0.01 (.004)	0.00	0.04 (.004)	0.02	0.06 (.005)	0.02	0.01 (.004)	0.00
Age square *100	-0.01 (.006)	-0.01	-0.06 (.006)	-0.02	-0.09 (.007)	-0.04	0.00 (.006)	0.00
Education lower than 12	-0.22 (.009)	-0.08	-0.23 (.008)	-0.09	-0.23 (.010)	-0.09	-0.12 (.009)	-0.04
Nonwhite	-0.26 (.011)	-0.10	-0.33 (.011)	-0.13	-0.35 (.012)	-0.13	-0.38 (.010)	-0.12
Number of children	-0.03 (.004)	-0.01	-0.04 (.004)	-0.02	-0.05 (.004)	-0.02	0.01 (.005)	0.00
Age of the youngest child	0.03 (.001)	0.01	0.03 (.001)	0.01	0.02 (.001)	0.01	0.03 (.001)	0.01
On welfare 7-12 months in prior 2 years	-0.16 (.010)	-0.06	-0.12 (.010)	-0.05	-0.13 (.013)	-0.05	0.00 (.012)	0.00
On welfare 13-23 months in prior 2 years	-0.31 (.011)	-0.12	-0.25 (.011)	-0.10	-0.26 (.012)	-0.10	-0.11 (.011)	-0.04
On welfare 24 months in prior 2 years	-0.53 (.012)	-0.20	-0.40 (.011)	-0.16	-0.35 (.013)	-0.13	-0.16 (.013)	-0.06
Percent of previous 8 quarters working	-0.05 (.027)	-0.02	-0.04 (.026)	-0.01	-0.15 (.028)	-0.06	-0.14 (.025)	-0.05
Working all of previous 8 qtrs	-0.05 (.020)	-0.02	0.01 (.018)	0.00	-0.01 (.020)	0.00	-0.01 (.016)	0.00
No work in any of previous 8 quarters	-0.08 (.012)	-0.03	-0.03 (.012)	-0.01	-0.01 (.014)	0.00	-0.06 (.013)	-0.02
Total annual earnings in the prior year * 1000	0.02 (.002)	0.01	0.03 (.002)	0.01	0.03 (.002)	0.01	0.02 (.002)	0.01
Total annual earnings two years prior *1000	0.01 (.001)	0.00	0.01 (.002)	0.00	0.02 (.002)	0.01	0.02 (.002)	0.01
<i>One job only:</i>								
Temp help	0.23 (.021)	0.09	0.20 (.017)	0.08	0.18 (.017)	0.07	0.12 (.015)	0.04
Manufacturing	0.31 (.022)	0.12	0.32 (.021)	0.13	0.30 (.025)	0.11	0.13 (.017)	0.04
Retail	0.25 (.012)	0.10	0.26 (.011)	0.10	0.19 (.012)	0.07	0.15 (.010)	0.05
Service	0.34 (.011)	0.13	0.33 (.010)	0.13	0.31 (.011)	0.11	0.22 (.011)	0.07
Other	0.41 (.021)	0.16	0.43 (.020)	0.16	0.37 (.022)	0.13	0.18 (.023)	0.06
<i>Multiple jobs:</i>								
Temp help and other	0.34 (.024)	0.13	0.24 (.018)	0.10	0.25 (.019)	0.09	0.14 (.016)	0.05
No jobs in Temp help	0.36 (.019)	0.14	0.33 (.016)	0.13	0.28 (.018)	0.10	0.15 (.015)	0.05
St. Louis central	-0.29 (.013)	-0.11	-0.32 (.013)	-0.13	-0.36 (.014)	-0.14	n.a.	n.a.
Kansas City central	-0.19 (.014)	-0.07	-0.16 (.014)	-0.06	-0.17 (.016)	-0.06	n.a.	n.a.
Charlotte central	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-0.24 0.01	-0.09
Suburban metro	-0.03 (.015)	-0.01	0.01 (.015)	0.01	0.02 (.018)	0.01	0.06 (.024)	0.02
Small metro	-0.02 (.015)	-0.01	0.00 (.015)	0.00	0.01 (.018)	0.00	-0.04 (.009)	-0.01
Number of observation	289160	289160	285891	285891	219442	219442	250412	250412

Note: Standard errors are in parentheses. Standard errors are corrected for multiple observations per person. Sample includes females aged at least 18 and less than 65 in single parent families, not in child only cases. Sampling frame is quarter by welf

Table A-1: Estimantes for Regression Equations Predicting Current Earnings, Controlling for Self-Selection into Job Category

	Missouri						North Carolina		
	1993			1997			1997		
	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help
Constant	-212.08 (1389.100)	-955.85 (1150.035)	296.35 (2518.649)	806.45 (730.829)	1488.74 (830.088)	-205.01 (977.562)	194.24 (312.99)	612.70 (419.91)	474.00 (176.25)
Age	54.07 (21.958)	118.46 (23.617)	56.60 (46.844)	40.83 (17.007)	39.11 (26.076)	33.75 (15.009)	29.58 (12.55)	25.74 (21.76)	28.07 (6.60)
Age square *100	-71.42 (36.376)	-151.85 (38.617)	-64.44 (39.059)	-47.13 (26.533)	-39.59 (44.358)	-38.96 (15.448)	-31.71 (20.23)	-18.22 (35.38)	-31.14 (9.20)
Education lower than 12 years	-129.15 (39.346)	-182.41 (50.322)	-117.98 (99.494)	-164.20 (26.939)	-215.09 (33.257)	-177.02 (26.680)	-150.70 (21.62)	-119.17 (24.90)	-109.87 (9.83)
Nonwhite	-83.02 (121.867)	-102.90 (93.001)	-5.68 (71.534)	-66.10 (69.105)	-166.97 (78.242)	32.60 (17.158)	-26.89 (37.61)	-14.17 (38.61)	-3.59 (11.69)
Number of children	-31.70 (13.233)	-54.76 (24.276)	-21.01 (16.637)	-55.61 (11.781)	-50.55 (16.018)	-28.57 (11.327)	-11.91 (11.80)	-42.60 (14.10)	2.75 (5.25)
Age of the youngest child	-7.78 (7.008)	-16.06 (9.687)	-6.77 (15.381)	-14.98 (5.147)	-11.47 (7.664)	-6.25 (5.279)	-10.31 (4.00)	-20.79 (5.21)	-7.75 (1.98)
On welfare 7-12 months in prior 2 years	176.73 (45.401)	151.95 (59.585)	222.89 (103.803)	191.84 (50.497)	266.73 (58.931)	302.18 (35.124)	107.79 (33.50)	117.26 (40.34)	190.44 (19.91)
On welfare 13-23 months in prior 2 years	78.02 (42.065)	207.86 (58.210)	226.97 (91.814)	177.83 (39.400)	257.12 (57.684)	348.89 (26.472)	110.39 (31.03)	95.68 (31.51)	218.30 (27.78)
On welfare 24 months in prior 2 years	102.29 (50.577)	77.67 (73.609)	239.14 (80.859)	232.72 (47.095)	402.36 (61.796)	434.78 (47.812)	189.65 (37.98)	127.98 (41.54)	293.42 (39.09)
Percent of previous 8 quarters working	-175.94 (218.724)	-410.67 (260.728)	-747.92 (1539.021)	-570.71 (140.644)	-955.31 (242.348)	-561.73 (416.377)	-303.59 (74.27)	-546.20 (100.47)	-655.63 (78.74)
Working all of previous 8 qtrs	35.54 (93.878)	-20.24 (87.171)	-152.89 (174.785)	75.77 (68.015)	-101.18 (57.168)	-66.59 (27.041)	26.31 (43.75)	70.87 (38.70)	39.06 (21.40)
No work in any of previous 8 quarters	-124.79 (142.559)	-51.05 (178.011)	39.59 (1166.344)	-25.76 (68.075)	15.73 (98.881)	-329.86 (409.613)	-105.41 (55.98)	-295.66 (77.69)	-232.89 (82.64)
Total annual earnings in the prior year *1000	78.59 (12.579)	103.10 (13.717)	91.26 (147.976)	111.10 (12.117)	104.39 (13.329)	158.87 (56.249)	78.03 (7.17)	80.30 (6.00)	112.53 (13.61)
Total annual earnings two years prior * 1000	4.62 (11.331)	13.99 (9.988)	37.55 (90.822)	25.14 (6.937)	49.15 (10.884)	21.66 (26.388)	15.01 (4.51)	22.92 (4.78)	28.13 (7.07)
St. Louis central	-78.32 (178.824)	229.82 (144.932)	289.62 (119.863)	61.55 (72.389)	223.00 (70.569)	344.94 (17.995)	na	na	na
Kansas City central	-83.95 (186.764)	237.81 (174.096)	290.05 (35.571)	-5.35 (82.325)	167.48 (98.468)	405.27 (41.181)	na	na	na
Charlotte central	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-5.64 (35.41)	106.45 (50.42)	116.19 (18.34)
Suburban metro	-45.95 (201.111)	55.86 (179.181)	115.71 (106.545)	-45.66 (78.270)	-76.75 (63.904)	129.01 (46.221)	20.00 (63.42)	49.22 (50.96)	40.10 (25.66)
Small metro	-223.01 (132.894)	-9.44 (151.639)	38.22 (19.017)	-131.09 (56.291)	-130.37 (61.107)	54.35 (16.343)	-4.72 (22.93)	16.35 (24.56)	47.20 (9.17)
Quarter 2	36.92 (32.532)	141.93 (52.995)	46.93 (187.248)	15.78 (28.236)	-3.65 (52.658)	46.04 (35.956)	113.74 (21.34)	107.69 (30.27)	96.29 (11.08)
Quarter 3	46.37 (52.478)	168.34 (77.932)	22.63 (281.910)	8.38 (34.439)	-13.61 (55.186)	34.28 (64.788)	153.86 (24.43)	110.47 (34.21)	82.96 (11.95)
Quarter 4	160.97 (59.922)	226.15 (74.127)	173.68 (278.074)	142.18 (34.225)	141.91 (62.336)	197.69 (64.582)	267.69 (27.74)	202.26 (33.90)	232.97 (10.39)
Lambda	26.92 (370.317)	-7.43 (315.082)	-412.39 (2311.235)	-323.09 (210.604)	-379.29 (219.524)	270.13 (919.819)	1.16 (112.01)	94.31 (91.38)	-61.33 (147.40)
N	6,230	3,744	69,861	9,921	7,485	72,596	12,148	10,073	95,254

Table A-2 Estimates for Regression Equations Predicting Total Earnings in Subsequent Eight Quarters, Controlling for Self-Selection into Job Category

	Missouri								North Carolina			
	1993				1997				1997			
	No Job	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help	No Job	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help	No Job	Job in Temp Help	Job in Temp Help and Other Industry	Job, but none in Temp Help
Constant	2950.014 (524.150)	5046.317 (15295.150)	-17533.42 (16756.630)	4448.406 (11018.960)	2385.021 (635.130)	-6147.823 (15382.030)	13649.09 (12894.480)	4162.094 (5924.987)	2237.36 (674.461)	8004.139 (4695.544)	14613.92 (5246.276)	3927.033 (2135.080)
Age	15.01 (25.735)	291.11 (298.834)	968.61 (342.617)	380.32 (239.741)	112.08 (33.630)	527.75 (274.342)	164.67 (416.584)	316.16 (124.897)	124.07 (30.287)	160.09 (236.773)	70.06 (277.196)	182.65 (94.316)
Age square *100	-89.71 (32.818)	-425.06 (480.119)	-1337.32 (560.714)	-420.82 (237.539)	-240.09 (45.567)	-741.25 (438.906)	-88.86 (723.619)	-396.71 (163.222)	-200.47 (41.188)	-150.20 (392.369)	50.19 (461.426)	-216.54 (137.574)
Education lower than 12 years	-1251.00 (74.514)	-2561.01 (461.216)	-3266.04 (631.815)	-2641.22 (467.455)	-1692.26 (105.533)	-3041.44 (359.793)	-3147.08 (360.128)	-3140.74 (176.340)	-1443.14 (103.449)	-2473.80 (260.831)	-2060.43 (280.235)	-2296.92 (134.369)
Nonwhite	-5.77 (104.149)	44.20 (1249.438)	588.53 (1322.456)	32.09 (394.323)	-446.53 (153.377)	-184.08 (1257.249)	-393.90 (763.697)	-167.77 (254.634)	-225.57 (113.837)	-377.09 (501.230)	641.58 (385.692)	50.37 (174.211)
Number of children	-109.21 (26.180)	-596.37 (164.349)	-702.10 (287.391)	-382.36 (113.981)	-60.84 (38.938)	-335.75 (169.086)	-541.25 (178.658)	-291.52 (84.241)	4.79 (47.189)	-26.40 (148.119)	-26.10 (154.791)	-31.08 (78.477)
Age of the youngest child	29.61 (11.133)	-59.82 (77.516)	-79.60 (134.367)	-51.16 (77.098)	-16.39 (15.377)	-152.59 (74.100)	-167.72 (66.105)	-85.55 (38.761)	-51.22 (14.625)	-88.45 (48.909)	-128.83 (54.476)	-61.53 (26.876)
On welfare 7-12 months in prior 2 years	-16.95 (83.414)	177.76 (618.962)	524.50 (734.041)	1276.00 (491.417)	147.26 (111.680)	1025.45 (499.881)	1423.47 (502.790)	1354.36 (316.008)	-302.66 (107.258)	-44.44 (381.297)	5.64 (410.614)	742.09 (216.262)
On welfare 13-23 months in prior 2 years	52.13 (93.052)	-699.61 (618.990)	135.34 (702.940)	1101.88 (470.010)	315.89 (121.850)	1105.96 (535.519)	1624.07 (463.963)	1599.11 (360.411)	-324.32 (112.138)	19.40 (400.528)	248.69 (401.176)	759.12 (313.031)
On welfare 24 months in prior 2 years	9.68 (97.831)	-855.38 (668.859)	-254.42 (951.925)	1036.67 (466.595)	780.68 (141.303)	790.09 (567.895)	2627.30 (571.842)	2465.23 (504.518)	121.75 (133.374)	775.81 (505.713)	580.14 (524.849)	1979.14 (440.303)
Percent of previous 8 quarters working	73.32 (636.677)	-771.22 (2759.177)	501.90 (3321.710)	-3192.52 (6723.817)	293.82 (741.512)	-993.17 (2100.008)	-5932.98 (2663.276)	-3800.95 (2182.493)	-1606.59 (961.098)	-2834.40 (1033.978)	-6209.42 (1260.362)	-2101.07 (972.659)
Working all of previous 8 qtrs	-771.41 (327.354)	-1158.80 (1262.815)	-965.26 (1168.373)	-990.64 (785.605)	-999.13 (318.431)	74.34 (806.162)	-322.37 (529.493)	-167.71 (300.308)	-876.56 (336.829)	494.40 (566.991)	938.41 (497.355)	368.39 (286.310)
No work in any of previous 8 quarters	46.13 (168.562)	39.94 (1383.282)	-508.08 (2072.273)	1177.09 (5180.344)	611.86 (199.399)	963.72 (1666.427)	2482.48 (1327.115)	459.23 (2472.677)	810.32 (271.798)	1418.63 (733.668)	-268.20 (1042.223)	-296.54 (899.754)
Total annual earnings in the prior year *1000	85.41 (71.061)	733.48 (153.370)	816.01 (200.580)	552.57 (660.379)	126.90 (69.465)	808.14 (132.578)	815.54 (72.762)	868.60 (351.773)	130.30 (93.114)	688.33 (67.336)	706.30 (65.753)	856.32 (139.955)
Total annual earnings two years prior * 1000	242.91 (43.555)	362.31 (156.069)	274.88 (143.340)	468.41 (387.404)	319.15 (50.088)	369.36 (138.304)	560.27 (81.496)	466.36 (125.004)	382.38 (66.542)	423.79 (113.803)	430.40 (78.796)	366.02 (94.156)
St. Louis central	-110.79 (107.441)	-439.92 (2060.587)	3411.00 (1939.221)	2067.41 (589.519)	165.03 (152.694)	2879.81 (1237.665)	2663.45 (837.417)	2541.99 (270.331)	n.a.	n.a.	n.a.	n.a.
Kansas City central	176.33 (130.483)	313.64 (2088.122)	3922.93 (2335.676)	1928.21 (296.192)	560.94 (194.842)	2689.35 (1472.653)	2130.40 (1094.930)	2767.79 (402.672)	n.a.	n.a.	n.a.	n.a.
Charlotte central	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	336.47 (167.184)	1656.20 (477.361)	1210.55 (549.650)	1186.90 (247.769)
Suburban metro	467.3197 (151.077)	-58.57 (2156.926)	2327.39 (2323.367)	1263.28 (542.850)	807.3162 (217.453)	1385.62 (1343.566)	761.79 (1020.780)	1904.44 (391.484)	451.59 (264.680)	1321.65 (624.037)	424.03 (831.756)	1007.78 (364.096)
Small metro	175.33 (130.354)	-845.39 (1525.989)	2423.20 (1943.385)	494.97 (233.173)	272.08 (175.411)	-377.10 (1023.937)	-1036.79 (1047.379)	529.35 (233.254)	136.73 (106.359)	417.47 (291.938)	104.79 (314.099)	436.59 (139.192)
Quarter 2	-40.80 (39.340)	-313.26 (311.624)	-421.06 (661.797)	-277.15 (827.097)	-234.66 (58.977)	190.82 (396.595)	-1186.69 (628.312)	-336.02 (213.165)	-326.82 (77.562)	-57.65 (211.173)	-1217.33 (302.078)	-99.66 (102.644)
Quarter 3	-192.26 (65.804)	-78.75 (542.144)	8.81 (1058.268)	-260.65 (1250.939)	-646.91 (88.155)	-342.16 (525.959)	-977.91 (753.248)	-379.42 (384.941)	-774.23 (110.133)	-250.44 (258.136)	-1216.56 (352.630)	-155.34 (123.589)
Quarter 4	11.92 (67.160)	131.41 (613.969)	-210.81 (1038.988)	-260.98 (1240.508)	-434.51 (78.911)	-411.91 (395.105)	-1385.91 (746.372)	-622.96 (336.953)	-617.95 (66.574)	-684.45 (259.929)	-1809.33 (355.230)	-677.28 (81.875)
Lambda	3272.27 (797.709)	309.66 (3937.927)	4293.85 (4346.960)	-1980.73 (10232.980)	3283.79 (916.216)	3039.09 (4765.997)	-1792.84 (2742.797)	304.30 (5472.752)	4126.49 (1183.317)	-416.60 (1485.739)	-1303.06 (1162.456)	2032.95 (1616.570)
N	209,325	6,230	3,744	69,861	129,440	9,921	7,485	72,596	130,894	12,148	10,073	95,254

Table A-3: Estimates for Regression Equations Predicting Earnings in the Eighth Quarter after Reference Quarter, Controlling for Self-Selection into Job Category

	Missouri								North Carolina			
	1993				1997				1997			
	Job in				Job in				Job in Temp			
	Job in	Temp Help	Job, but		Job in	Temp Help	Job, but		Job in Temp	Help and	Job, but	
	Temp	and Other	none in		Temp	and Other	none in		Help	Other	none in	
	No Job	Industry	Temp Help	No Job	Help	Industry	Temp Help	No Job	Help	Industry	Temp Help	No Job
Constant	537.57 (101.357)	1846.11 (2834.228)	-3528.67 (2728.077)	759.52 (1046.970)	206.01 (122.023)	-279.27 (1591.796)	1787.27 (1509.506)	675.87 (645.646)	334.54 (127.077)	1234.53 (731.193)	1749.37 (758.787)	501.60 (232.437)
Age	5.31 (5.123)	-15.10 (56.194)	124.07 (61.132)	32.16 (26.076)	26.21 (6.470)	56.56 (38.906)	-17.67 (48.425)	29.48 (15.808)	24.00 (5.494)	11.30 (29.719)	-2.54 (35.701)	16.70 (11.390)
Age square *100	-21.61 (6.481)	20.71 (90.930)	-178.72 (98.284)	-35.08 (29.157)	-51.42 (8.688)	-79.18 (62.017)	38.81 (80.907)	-46.35 (21.788)	-46.99 (7.346)	-11.56 (48.522)	13.72 (58.828)	-24.80 (17.333)
Education lower than 12 years	-273.14 (15.956)	-437.54 (84.955)	-444.80 (112.515)	-411.88 (49.723)	-311.06 (20.748)	-418.93 (55.776)	-365.83 (61.579)	-453.03 (26.939)	-279.27 (19.794)	-338.10 (45.196)	-298.47 (47.843)	-350.04 (23.660)
Nonwhite	-5.02 (20.850)	88.81 (246.396)	152.30 (241.645)	70.08 (47.090)	-128.61 (31.225)	-15.84 (142.587)	-37.90 (112.452)	-17.14 (38.834)	-27.67 (22.486)	-8.93 (80.083)	137.15 (65.133)	60.22 (27.333)
Number of children	-18.40 (5.429)	-81.60 (33.647)	-98.79 (57.012)	-54.34 (15.281)	-12.52 (7.705)	-36.53 (25.078)	-44.87 (28.289)	-30.88 (12.902)	-5.55 (9.346)	24.83 (27.029)	19.39 (24.980)	-15.37 (11.716)
Age of the youngest child	6.34 (2.351)	-9.02 (14.297)	-2.03 (27.292)	-4.44 (8.567)	-4.59 (2.980)	-28.67 (9.995)	-21.15 (10.920)	-8.61 (5.238)	-11.16 (2.749)	-9.77 (8.160)	-12.81 (8.911)	-5.88 (3.185)
On welfare 7-12 months in prior 2 years	9.59 (16.248)	101.30 (109.528)	117.91 (134.608)	118.25 (52.266)	50.08 (21.937)	211.09 (79.748)	247.32 (91.996)	159.18 (41.011)	-66.99 (20.207)	-79.30 (70.369)	-93.16 (72.779)	45.54 (23.472)
On welfare 13-23 months in prior 2 years	24.88 (18.137)	-37.09 (103.587)	82.87 (141.725)	111.04 (52.772)	73.11 (23.560)	205.79 (77.375)	220.39 (77.346)	206.83 (44.891)	-59.69 (21.120)	-67.04 (68.360)	-50.86 (69.88472)	51.44 (29.920)
On welfare 24 months in prior 2 years	41.02 (19.235)	9.13 (112.474)	12.34 (154.435)	106.65 (55.928)	181.17 (27.671)	144.30 (84.028)	271.05 (92.571)	296.80 (59.624)	48.65 (25.017)	42.23 (79.814)	-17.76 (86.371)	262.32 (63.114)
Percent of previous 8 quarters working	-70.81 (118.560)	-159.42 (442.962)	-209.53 (522.778)	-209.53 (633.517)	-204.70 (135.086)	13.36 (256.208)	65.49 (373.951)	31.89 (243.982)	-165.62 (170.664)	32.06 (142.928)	132.30 (202.207)	36.22 (167.912)
Working all of previous 8 qtrs	(61.240)	(236.195)	(200.410)	(86.499)	(59.219)	(117.004)	(92.939)	(48.719)	(62.741)	(91.765)	(77.410)	(32.439)
No work in any of previous 8 quarters	8.69 (32.079)	16.82 (284.191)	-187.88 (370.432)	79.85 (486.437)	154.95 (38.188)	82.89 (173.754)	144.52 (204.177)	36.47 (257.060)	152.83 (51.017)	176.85 (112.665)	-61.85 (166.069)	-76.81 (90.097)
Total annual earnings in the prior year *1000	3.81 (11.938)	93.82 (25.255)	112.99 (43.257)	69.10 (62.643)	2.66 (12.851)	110.55 (16.100)	115.62 (12.912)	101.92 (36.233)	11.99 (16.523)	93.62 (10.808)	97.46 (10.737)	109.37 (138.592)
Total annual earnings two years prior * 1000	48.53 (8.009)	70.87 (27.060)	28.94 (23.446)	56.85 (36.500)	60.69 (8.482)	56.84 (16.763)	72.27 (14.180)	62.88 (14.087)	69.29 (11.535)	51.56 (11.539)	50.01 (11.422)	46.58 (9.624)
St. Louis central	-15.23 (21.558)	-146.63 (364.999)	797.65 (317.141)	240.15 (62.443)	62.99 (31.092)	407.85 (156.789)	469.50 (110.813)	342.82 (41.590)	n.a.	n.a.	n.a.	n.a.
Kansas City central	21.24 (25.668)	-35.47 (369.514)	804.85 (392.301)	216.64 (44.484)	106.16 (38.868)	285.84 (181.987)	411.96 (137.642)	360.64 (52.311)	n.a.	n.a.	n.a.	n.a.
Charlotte central	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	94.08 (33.039)	270.82 (81.557)	305.83 (94.155)	215.95 (30.367)
Suburban metro	98.21804 32.1256	-23.79 (380.044)	586.94 (377.470)	178.93 (62.437)	142.2807 (41.684)	61.59 (168.273)	183.02 (142.932)	283.35 (55.172)	76.88 (48.130)	145.48 (121.210)	168.75 (154.719)	169.98 (42.558)
Small metro	35.18802 (26.587)	-257.67 (269.070)	527.24 (316.161)	61.83 (36.360)	47.79 (35.600)	-88.92 (144.769)	-45.88 (133.343)	97.91 (38.931)	32.35 (20.331)	38.04 (47.752)	-16.10 (52.400)	82.15 (28.695)
Quarter 2	25.65 (7.466)	6.11 (61.241)	69.89 (120.604)	50.72 (78.664)	40.77 (11.292)	155.51 (51.393)	83.34 (83.213)	138.58 (24.953)	12.77 (14.588)	175.03 (36.167)	1.95 (55.100)	110.26 (11.540)
Quarter 3	-14.30 (12.505)	46.90 (104.255)	114.24 (200.090)	-8.88 (118.384)	13.15 (17.001)	167.77 (64.775)	202.56 (100.126)	166.59 (42.577)	-43.89 (20.399)	141.68 (44.805)	11.08 (61.800)	80.72 (13.838)
Quarter 4	76.90 (12.872)	181.26 (125.287)	267.67 (179.692)	137.94 (117.792)	129.33 (16.060)	288.69 (59.242)	397.46 (101.986)	304.58 (39.363)	35.05 (12.823)	120.52 (46.462)	91.89 (62.679)	149.50 (53.427)
Lambda	584.08 (148.281)	-53.39 (763.43)	865.38 (747.43)	-152.86 (960.41)	719.27 (175.573)	255.08 (481.714)	-136.57 (411.040)	55.63 (570.409)	656.42 (216.980)	-97.65 (239.147)	-90.47 (184.193)	325.83 (185.669)
N	209,325	6,230	3,744	69,861	129,440	9,921	7,485	72,596	130,894	12,148	10,073	95,254