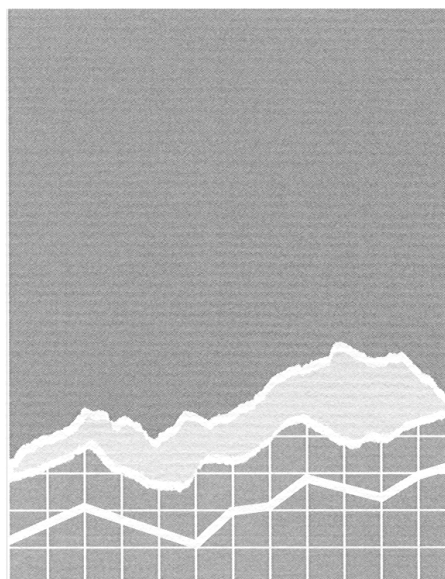# The Role of Contingent Work
in the War Against Poverty

Catalina Amuedo-Dorantes
Cynthia Bansak

Discussion Paper 03-01

January 2003

Department of Economics

Center for Public Economics

San Diego State University

San Diego, CA 92182

The Role of Contingent Work in the War Against Poverty

Catalina Amuedo-Dorantes
Department of Economics
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4485
Email: camuedod@mail.sdsu.edu
Phone: 619-594-1663
Fax: 619-594-5062

Cynthia Bansak
Department of Economics
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4485
Email: cbansak@mail.sdsu.edu
Phone: 619-594-4491
Fax: 619-594-5062

December 2002

Abstract

The 1990s witnessed the success of the work-based welfare reform initiated with the passage of the Personal Responsibility and Work Opportunity Reconciliation Act in reducing welfare caseloads. While welfare reform was effective in lowering immediate welfare dependency, researchers have questioned its long-run success in alleviating poverty partially due to the precariousness surrounding the jobs held by welfare leavers. This paper addresses this concern by examining *(1)* the likelihood of taking a contingent job *given one's welfare dependency and past poverty status; (2)* the probability of being on welfare *for different types of contingent workers relative to their non-contingent counterparts; and (3)* the likelihood of living in poverty *in the near future as a function of past employment in alternative types of contingent jobs.*

I.   Introduction

The 1990s witnessed the success of the work-based welfare reform initiated with the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in reducing welfare caseloads. While welfare-to-work programs were effective in lowering immediate welfare dependency and cutting administrative costs, researchers have questioned their long-run success in alleviating poverty (Blank and Ruggles 1994; Hoynes and MaCurdy 1994; Handler 1995; Peck and Theodore 2000). Part of the concern revolves around the type of jobs held by welfare leavers and their implications on the longer-run prospects of these individuals.

Indeed, the 1996 welfare reform in the U.S. has been characterized by a "work-first" philosophy, which channeled participants into any available jobs with the hope that, once working, these individuals would become less likely to revert to poverty (Gueron and Pauly 1991; Strawn 1998). As noted by Peck and Theodore (2000), many of these jobs have been contingent jobs, often characterized by high turnover rates and low wages (Sawhill 1999).[1] Given that many welfare leavers take contingent jobs, it is important to assess the relationship between contingent work and poverty alleviation. In particular, given the heterogeneity of contingent jobs and the important role they often play in the economy, it is important to decipher which characteristics of contingent jobs are the most influential in affecting the likelihood of self-sufficiency of welfare leavers.[2] This information would help policymakers to identify and "tackle" the most dangerous job characteristics threatening the success of "work-first" welfare reform. While many have assessed the success of welfare in terms of the reduction in welfare caseloads,[3] there have been few studies examining the relationship between welfare reform, the incidence of different types of contingent work, and poverty alleviation directly.[4]

In this paper, we examine: (1) *the likelihood of taking a contingent job* given one's welfare dependency and past poverty status; (2) *the probability of being on welfare* for different types of contingent workers relative to their non-contingent counterparts; and (3) *the likelihood of living in poverty* in the near future as a function of past employment in alternative types of contingent jobs. Using data for women from the NLSY79 between 1994 and 1998, we first examine the incidence of poverty and welfare dependency among different types of contingent and non-contingent workers, and describe the personal and job characteristics associated with contingent employment.

Following the descriptive evidence, we examine the relationship between welfare participation and contingent work. Given the simultaneity of these outcomes, we estimate a simultaneous equation probit model with sample selection for being employed, while correcting the standard errors for clustering at the individual level. Results from these models indicate that being on welfare has a significant positive effect on the probability of taking a contingent job. However, holding a contingent work contract does not, by itself, increase the likelihood of being on welfare once we control for other characteristics of the contingent job itself – such as the low pay, lack of fringe benefits, weekly hours of work, unionization, firm size, and industry of employment – and some of the worker's characteristics – including educational attainment, occupation as a proxy for skill, tenure, and intermittent work patterns.

Subsequently, we consider the possible broader implications of contingent work on a woman's overall well being, as measured by her probability of living below the poverty line. We use an instrumental variables approach to: (1) examine whether being poor in the previous year increases the probability of holding a contingent job, and (2) whether holding a contingent job raises the individual's likelihood of life in poverty in the following year.[5] Given the

2

dichotomous nature of the dependent variables and the fact that our sample is limited to wage and salary earners, both instrumental variable models are estimated as maximum likelihood probits with sample selection. To address the panel aspect of our dataset, we also correct the standard errors to reflect clustering at the individual level. Our results suggest that living in poverty is associated with a higher likelihood of holding a contingent position. This finding points to the frequently involuntary character of contingent work among these individuals, for whom economic need is one of the elements compelling them to take less-stable, lower-paying jobs. Nonetheless, a contingent worker is no more likely to be poor a year later than is a similar worker in a standard employment relationship once we control for individual, job-related, regional, and macroeconomic characteristics. Overall, the analysis provides an assessment of the importance of economic need and welfare reform in pushing individuals towards contingent work, as well as the role of these contracts and their diverse set of characteristics in ensuring self-sufficiency.

II.   *From Poverty and Welfare Dependency to Contingent Work and Back to Poverty*

The relationship between welfare reform, contingent work, and poverty is a complicated one. With the passing of PRWORA in 1996, adults are required to engage in some type of work-related activity after two years of receiving benefits and are limited to a cumulative five-years of individual participation. As a result, welfare recipients have been increasingly entering the labor force and caseloads have fallen dramatically. By the end of 1999, caseloads had fallen by about 50 percent since the enactment of the new welfare law (U.S. Department of Health and Human Services). Many welfare recipients have been steered towards contingent work arrangements. According to Lane et al. (2002), welfare agencies (e.g., New York City and Chicago) have used

3

temporary help agencies as a source of employment for individuals approaching their time limits.

While welfare reform may have pushed individuals into contingent positions after 1996, economic need, aside from its link to welfare, is also widely found as a reason for accepting a contingent job. Economic necessity, defined as living below the poverty line, could push an individual to take a contingent job even when it pays low wages and does not offer fringe benefits. According to the February 1999 Contingent and Alternative Work Arrangements Supplement to the Current Population Survey, more than half of contingent workers reported that they would rather be employed in a non-contingent job and approximately one-third reported economic reasons (such as "only type of work one could find" or "hope leads to permanent employment") for accepting contingent work (Hipple 2001). In an analysis of the growth of temporary help supply between 1982 and 1992, Golden (1996) finds that the use of contingent workers is more demand-led (due to input strategies used by employers) than supply-led (due to worker preferences for these jobs). Thus, it appears that contingent work arrangements may be largely involuntary in nature.

Once in a contingent position, either due to welfare reform's work-first initiative or to economic need, a worker may remain a low-income high risk individual. Contingent positions frequently offer less job security, lower pay, and fewer benefits compared to non-contingent jobs (Segal and Sullivan 1997), and it is not always clear whether these positions are stepping stones to more permanent arrangements or dead-end jobs. There are several arguments to suggest that the precarious nature of contingent positions may limit the likelihood of escaping poverty. First, the intermittent career patterns and limited work attachment characteristic of contingent jobs not only result in a loss of human capital but, furthermore, are often accompanied by a lack of unemployment insurance due to the short duration of their jobs.[6] Both factors may contribute to

these workers' observed poverty recidivism, even more so given their characteristic lack of means.[7]

Second, low wages are commonly believed to contribute to poverty. Indeed, there is evidence that approximately 28 percent and 15 percent of the official 13 percent of the population living in poverty are low-wage workers working full-time and part-time, respectively (Bureau of the Census 1998). These percentages may be even greater among workers in precarious work arrangements, as is often the case among contingent workers.

Third, many of these poor workers held flexible work contracts offering no fringe benefits, such as health insurance, pension plans, or child care (Bugarin 1998; Peck and Theodore 2000). The lack of fringe benefits, such as health insurance or even retirement benefits for the future, further threatens the ability of contingent workers to confront medical costs or to be self-sufficient in the future.

In sum, the intermittent career pattern, limited work attachment, low wages, and lack of fringe benefits characteristic of contingent work arrangements may have contributed to these workers' likelihood to fall back in poverty. This seems to be the conclusion reached by previous studies.[8] However, the literature has failed to identify the role that each of these individual factors plays in threatening the self-sufficiency of workers in different types of contingent work arrangements – in particular, temporary agency work and direct-hire temporary work. As previously discussed, this is an important exercise since "banning" the use of contingent work altogether does not seem an appropriate solution given the important function these contracts play in responding to the cyclical patterns of some industries. Instead, deciphering the role played by different characteristics of these contingent jobs believed to be the most threatening to the success of welfare reform in terms of alleviating poverty and, subsequently tackling some of

these characteristics, appears more promising. This is the intent of the analysis that follows.

III.   *Data and Descriptive Statistics*

__The Data:__ In this study, we use data from the National Longitudinal Survey of Youth (NLSY79). Since 1979, a large amount of labor market information has been collected from survey participants. In particular, in the years 1994, 1996, and 1998, additional information was collected on the type of employment arrangement. Specifically, respondents were asked for each job whether they were considered a "non-contingent employee", a temp worker, a consultant or contractor, or an employee of a contractor. Since our main focus in this paper is on the relationship between poverty, welfare, and contingent work, we limit our analysis to these years.

In addition to standard firm-level, individual-level, and regional-level variables, we also use the NLSY79's constructed poverty status variable. This variable is calculated using the family income for the last calendar year and the Department of Health and Human Services poverty income guidelines. [9] In addition, we categorize an individual as receiving welfare if they respond that they or their spouse "received any SSI or other public assistance/ welfare" during the year.

In this study, we focus on the effects of welfare reform, poverty, and contingent employment for women. Given that the vast majority of welfare recipients are women, we feel limiting our sample to only females allows us to examine the impact of welfare reform for the group considered to be most "at-risk" directly. A list of the variables used in this analysis, their means, and standard deviations are provided in Table A in the appendix.

The Incidence of Poverty and Welfare Dependency Among Contingent Workers:

Table 1 provides a comparison of the incidence of poverty and welfare receipt among different types of contingent and non-contingent female workers between 1994 and 1998. To start, we observe that the incidence of poverty (in the previous and following year) for contingent workers is over double the poverty rate of non-contingent workers. Almost one in four agency temps qualified as poor compared to only eleven percent of non-contingent workers. Furthermore, contingent workers are not only more likely to have been on welfare in the past year but, in addition, they are also considerably more likely to receive welfare in the next year than their counterparts in more traditional job arrangements. Therefore, it is immediately apparent that there is a link between contingent work, poverty, and welfare receipt.

Who are the contingent workers?

As an introduction to the differences in personal characteristics between those taking a contingent job and those with a more traditional position, Table 2 provides a comparison for female workers in non-contingent and contingent arrangements between 1994 and 1998. Tabulations are presented for agency temps, all temps (including both agency temps and direct-hire temps), and all workers in non-standard work arrangements (NSWA). Those categorized as non-standard workers include agency temps, direct-hire temps, consultants, independent contractors, and employees of contractors.

Personal characteristics significantly associated with being a contingent worker include race, years of education, marital status, and family size. For example, temporary workers (including both agency temps and direct-hire temps) are less likely than the average worker in a traditional job to be white and they have about a year less education than those with a permanent position. Less than half of all temporary workers are married compared to nearly sixty percent

of women in permanent positions and they tend to have smaller families. For all workers in non-standard work arrangements, many of the comparisons still hold. Despite their heterogeneity, workers in non-standard work arrangements have somewhat fewer years of education and smaller families than non-contingent workers. However, their race and marital status are no longer significantly different from that of their non-contingent counterparts.

What is the nature of contingent positions?

Table 3 summarizes work-related characteristics of contingent and non-contingent jobs. Temporary workers tend to earn an average of $2 per hour less than non-contingent workers, have, on average, only 61 weeks of tenure relative to an average of 255 weeks of non-contingent workers, and spend nearly five times as long unemployed as their non-contingent counterparts.

Contingent employees are also less likely to be offered fringe benefits. While three-fourths of non-contingent workers received health insurance, less than one-quarter of contingent employees enjoyed this benefit. A similar pattern is also found with respect to retirement benefits, with only 16 percent of all temps having this benefit relative to 66 percent of non-contingent workers. Finally, contingent workers are more likely to work at smaller firms and less likely to be unionized relative to their non-contingent counterparts.

Occupation and industry distributions across contract type, shown in Table 4, reveal that temporary employees are less concentrated in high-skilled jobs and more heavily concentrated in certain sectors. Specifically, female temporary workers are primarily employed in clerical and operator positions and are concentrated in manufacturing and business services. Meanwhile, female workers in more traditional (non-contingent work) are more represented in professional, managerial, and service jobs. By sector, women in non-contingent positions are most concentrated in professional services and trade. These differences, however, essentially

8

disappear when comparing all women in non-standard work arrangements to those in non-contingent jobs. Again, this is partially due to the fact that the alternative work arrangement category contains, in addition to temporary workers, workers who are consultants and contractors.

IV.   *Contingent Work and Welfare Participation: Empirical Methodology*

We first start by examining the relationship between welfare participation and contingent work. We distinguish among different types of contingent work: temporary work through a temporary help agency, temporary work – whether it takes place through a temporary help agency or through direct hiring – and non-standard work – which encompasses any type of job that is not a permanent job. As indicated by our results in the previous section and earlier research, contingent work is highly correlated with age, gender, race, educational attainment and marital status (Polivka 1996). Additionally, contingent workers are frequently placed in professional, service, administrative support, and labor occupations, as well as in the service and construction industries and smaller firms (Pardo 1992; Polivka 1996; Mavromaras and Rudolph 1998; and Gong, Van Soest, and Villagomez 2001). Furthermore, some studies have also argued the existence of a link between contingent work and a series of regional and macroeconomic descriptors. In particular, contingent work appears more frequent in urban areas and areas with relatively low unemployment rates (Otoo 1999; Peck and Theodore 2001). Therefore, we describe the likelihood of working in a contingent job as a function of a broad set of personal characteristics ($P_{it,1}$)– such as age, race, educational attainment, family size, marital status, and health; job related characteristics ($J_{it,1}$)– such as occupation, industry, and firm size; regional characteristics ($R_{it,1}$)– such as whether the respondent lives in an urban and a high/low unemployment rate area; and economy wide trends captured by year dummy variables (δ_{1t}).

Furthermore, since the "work first" philosophy of welfare reform might have "pushed" some welfare recipients into accepting contingent jobs even if they preferred a permanent job, we also include a dummy variable indicating whether the individual is on welfare in the contingent work equation ($Welfare_{it}$). As a result, the likelihood of holding a contingent job can be described as:

(1) $Contingent_{it} = \alpha_1 P_{it,1} + \beta_1 J_{it,1} + \chi_1 R_{it,1} + \delta_{1t} + \phi_1 Welfare_{it} + \upsilon_{it}$.

Similarly, aside from similar personal characteristics to those determining the likelihood of holding a contingent job (included in $P_{it,2}$),[10] welfare participation is likely to be related to specific job-related characteristics (captured in $J_{it,2}$), such as the hourly wage, weekly hours of work, the receipt of job benefits, tenure, and union membership to the extent that unions press for better employment conditions that guarantee a minimum standard of living (Peck and Theodore 2000). Additionally, we include the respondent's type of work contract ($Contingent_{it}$), which we use to test whether the contingent nature of the job on its own has an effect on the probability of receiving welfare. Finally, it is well-accepted that (poverty and) welfare participation are highly correlated spatially (Jargowsky 1997); therefore, we also include a series of regional characteristics ($R_{it,2}$) and time dummies (δ_{2t}) capturing macroeconomic trends potentially influencing the individual's likelihood of being on welfare. As a result, welfare participation can be described as given by:

(2) $Welfare_{it} = \alpha_2 P_{it,2} + \beta_2 J_{it,2} + \chi_2 R_{it,2} + \delta_{2t} + \phi_2 Contingent_{it} + \upsilon_{it}$.

Given the simultaneity of welfare participation and contingent employment, we estimate equations (1)-(2) as simultaneous equation probits (Maddala 1983, pp. 246-247). Equation (1) is econometrically identified by the exclusion of a dummy variable indicating that the respondent *lives in a neighborhood with problems* (e.g. a neighborhood with crime and violence or abandoned and run-down buildings) from equation (1) and its inclusion in equation (2). While

welfare recipients are more likely to reside in lower income areas and neighborhoods with problems (Jaworsky 1997), living in a problematic neighborhood is not, by itself, a determinant of contingent employment other than through economic need and poverty, already accounted for in the estimation through the welfare participation term. Similarly, equation (2) is identified by the exclusion of *firm size* and *industry* dummies as determinants of welfare participation other than through contingent work, and their inclusion in equation (1) as factors found to be highly correlated with the incidence of contingent work (Pardo 1992; Polivka 1996; Mavromaras and Rudolph 1998; and Gong, Van Soest, and Villagomez 2001).

Additionally, due to our focus on working individuals, each probit model is estimated as a maximum likelihood probit with sample selection allowing for clustering at the individual level. The appropriate variance-covariance matrix is subsequently computed following Maddala (1983).[11] In this manner, the analysis accounts for the potential endogeneity of welfare participation and contingent employment, the sample selection incurred when focusing on strictly working individuals, and for the individual specific autocorrelation and heteroscedasticity contaminating the standard errors.

V.   *From Contingent Work to Welfare or from Welfare to Contingent Work?*

Table 5 shows the results from estimating the simultaneous equation probit models of the respondent's likelihood of being employed in any of the different types of contingent jobs being considered and of their likelihood of being on welfare. The major finding is the significant effect that being on welfare displays on the likelihood of being in a contingent job, regardless of the specific type of contingent work arrangement being considered. Particularly, being on welfare raises the likelihood of being employed as an agency temp, as either an agency temp or a direct hire temp, and as a non-standard worker by as much as 5 percent, 8 percent, and 17 percent,

respectively. This result corroborates the "work-first" philosophy that the literature has emphasized about welfare programs (Gueron and Pauly 1991; Strawn 1998; Peck and Theodore 2000). Additionally, in line with the previous literature on contingent work,[12] we find contingent work to be related to a series of personal, job, and regional characteristics. In particular once we control for other personal, job, and regional characteristics, contingent employment appears to be less likely among black women, women with health problems, and women with larger families, while it seems more common among married women. Relative to non-contingent work, contingent work is generally more frequent in the construction, manufacturing, transportation, communications, public utilities, business services, and public administration. Lastly, contingent employment seems more frequent in areas with low unemployment rates and less prominent after 1994.[13]

However, unlike previously suggested, holding a contingent work contract – whether the latter is a temporary work contract through a temporary help agency, through direct hire, or, in general, a non-permanent work contract – does not, by itself, increase the individual's likelihood of being on welfare once we control for the major job characteristics. In particular, we find that – aside from personal characteristics, such as race, poor health, family size, and marital status – a reduced number of weekly hours of work along with the lack of health benefits are the two major job characteristics associated with the respondent's likelihood of receiving public assistance. Specifically, it is the lack of health benefits that displays an economically important effect on the individual's likelihood of being on welfare, raising it by as much as 19 percent for non-standard workers relative to permanent full-time workers. The lack of health insurance is worrisome to the extent that poor health appears to be significantly higher among individuals on welfare. Additionally, as found for contingent work and by previous literature on welfare,[14] welfare

participation appears to be highly correlated to various personal and neighborhood characteristics. In particular, black women, women with health problems, and women with larger families appear more likely to be receiving public assistance, while married women are significantly less likely. The latter result, in particular, has been the basis for promoting marriage as a means to reduce welfare dependency by the Bush's campaign. Finally, as argued by Jargowsky (1997), welfare receipt appears to be spatially concentrated in poorer and problematic neighborhoods.

VI. *Contingent Work and Poverty: Empirical Methodology*

We now turn to examine the potential and broader implications that contingent work might have on the likelihood of life in poverty. As in our previous analysis, we distinguish among different types of contingent work: temporary work through a temp agency, temporary work – whether it is through a temp agency or through direct hiring, and non-standard work. To our previous specification of the likelihood of working in a contingent job, we now add two terms. First, we include a dummy variable indicating whether the individual was deemed poor during the previous year ($Poverty_{it-1}$).[15] To the extent that contingent work often displays an involuntary nature, it is also likely to be related to the respondent's financial situation. In particular, individuals undergoing greater financial difficulty might feel compelled to take a contingent job even if they would rather be employed in a permanent job. Additionally, given the exogeneity exhibited by welfare participation as a determinant of contingent work, we include a dummy variable indicating whether the respondent was on welfare during the previous year ($Welfare_{it-1}$), as well as an interaction term of being on welfare during the previous year and the year 1998 ($Welfare_{it-1}*Year\ 1998$). While the previous analysis revealed the role played by welfare reform in "pushing" people into contingent type jobs, the interaction term captures the

13

growth rate in contingent employment for previous year welfare recipients versus non-welfare

recipients from after 1998. Therefore, our new contingent work equation is given by:

(3) $Contingent_{it} = \alpha_3 P_{it,3} + \beta_3 J_{it,3} + \chi_3 R_{it,3} + \delta_{3t} + \phi_3 Poverty_{it-1} + \gamma_3 Welfare_{it-1}$

$+\eta_3 (Welfare_{it-1}*Year\ 1998) + \varpi_{it}^{16}$.

Before estimating equation (3), a couple of econometric issues are worth noticing. First,

as in the previous section, our analysis is constrained to working individuals; therefore, we need

to correct for the sample selection incurred. Secondly, due to state dependence, the error terms

in the contingent work equation are likely to be serially correlated. Under this scenario, last year

poverty, despite being predetermined is likely to be endogenous (Greene 2000). As a result,

individuals on contingent jobs, possibly due to their interrupted career patterns, low wages, and

lack of fringe benefits, may be more likely to become poor than their non-contingent

counterparts. Therefore, we need to instrument last year poverty in our estimation. Given the

dichotomous nature of our dependent variable and the use of *past* (versus simultaneous) year

poverty, we estimate a maximum likelihood probit with sample selection and instrument

Poverty$_{it-1}$ using the dummy variable indicating whether the respondent lives in a neighborhood

with problems (e.g. a neighborhood with crime and violence or abandoned and run-down

buildings) provided the spatial concentration of poverty (Jargowsky 1997). Finally, standard

errors are corrected to account for clustering at the individual level.

A similar exercise is completed to examine the role of contingent work on the

respondent's likelihood of life in poverty. Specifically, as with welfare participation, life in

poverty may be described as a function of similar personal, job related, regional, and

macroeconomic factors. To the variables included in equation (2), we add the number of weeks

unemployed in the $J_{it,4}$ vector as a proxy for the individual's intermittent work pattern often

leading to a greater likelihood of life in poverty. As a result, we can express the individual's likelihood of living in poverty in the next year as a function of:

(4) $Poverty_{it+1} = \alpha_4 P_{it,4} + \beta_4 J_{it,4} + \chi_4 R_{it,4} + \delta_{4t} + \varphi_4 Contingent_{it} + \xi_{it}$.

As with equation (3), the estimation of equation (4) is restricted to working individuals. Similarly, while contingent work is predetermined, is likely to be endogenous. This is likely to be the case if contingent jobs display a rather involuntary nature and individuals accept these jobs when confronted with economic need. Therefore, we estimate a maximum likelihood probit with sample selection and instrument $Contingent_{it}$ using *firm size* and *industry* dummies, as in previous sections. Lastly, as in the estimation of the instrumental variable maximum likelihood with sample selection for contingent work, standard errors are corrected to reflect the clustering at the individual level.

VII.   *Does Contingent Work Increase the Likelihood of Being Poor or Vice Versa?*

The analysis in the previous sections revealed how welfare participation increases the likelihood of holding a contingent job, but contingent employment in itself does not increase welfare dependency. While interesting, the analysis in Table 5 did not allow us to assess, even indirectly, whether welfare reform after 1996 has increased the growth rate of contingent work among welfare participants versus non-welfare participants. Additionally, while the previous analysis uncovered the link between welfare dependency and contingent work, it did not explore the implications of contingent work on poverty. As argued by Schiller (2001), the ultimate goal of social policy should not be to lower welfare caseloads but, rather, to reduce poverty. Therefore, it is important to examine the implications that holding a particular type of work contract might have on the respondent's likelihood of life in poverty. The analysis in Table 6 addresses both of these important questions.

In particular, with respect to contingent work, it is important to note that being poor in the previous year appears to make respondents up to 4 percent more likely to be employed in a contingent job. While significant, this effect is smaller than the simultaneous effect of contingent work on welfare participation displayed in Table 5. Furthermore, the interaction term in Table 6 reveals the potentially important role played by welfare and, particularly, welfare reform. According to the latter, there has been a significant growth in the rate of contingent work, particularly direct hire temporary work and non-standard work, among previous welfare participants relative to non-welfare participants after 1996. The magnitude of this effect gets especially large in the equations for all temporary work and all non-standard work, both of which display growth rates for all temporary work and non-standard work of approximately 60 percent and 71 percent, respectively, among welfare recipients after 1996. This result points to the potential role that welfare reform might have played in changing the composition of contingent employment. Finally, as Table 5 did in the previous section, Table 6 uncovers a series of personal, job related, regional, and time trend characteristics of contingent work. Specifically, contingent work appears more likely among married women; women employed at smaller firms; women employed in manufacturing, business services, and public administration; and women living in urban areas. In addition, contingent work overall was less prominent after 1994.

Secondly, it is of interest to observe how, as in the case of welfare participation, being employed in a contingent job does not increase the individual's likelihood of life in poverty once we control for other job related characteristics. In fact, the likelihood of life in poverty is between 3 percent and 4 percent lower among all temps and non-standard workers, respectively. It is the wage, weekly hours of work, benefits received on the job, the respondent's tenure and her intermittent career pattern – as reflected by the total number of weeks unemployed, that

appear to be related to the respondent's likelihood of life in poverty; but not the type of work

contract held per se. In particular, health and retirement benefits display an economically large

impact on poverty, reducing its likelihood by as much as 6 percent. As found by Dutton (1993),

Owen (1994), and Seeborg (1996), other personal and regional characteristics play a significant

role on respondents' likelihood of life in poverty as well. For instance, having one additional

year of school completed and being married seems to lower the incidence rate of poverty at the

individual level by approximately 1 percent and 10 percent, respectively. Poor women are also

more likely to have health problems, to have larger families, to live in urban areas and in

neighborhoods with problems and are less likely to live in areas with low unemployment rates.

VIII. Conclusions

The 1996 welfare reform has been characterized by a "work-first" philosophy according

to which placing welfare recipients into any available jobs would lead to a reduction of welfare

dependency and welfare recidivism (Gueron and Pauly 1991; Strawn 1998). Nonetheless,

researchers have questioned the long-run success of the PRWORA in alleviating poverty (Blank

and Ruggles 1994; Hoynes and MaCurdy 1994; Handler 1995; Peck and Theodore 2000). In

particular, many have argued the type of jobs held by welfare leavers as the major impediment

for them to reach self-sufficiency (Peck and Theodore 2000).

In this paper, we use data on women from the NLSY79 for the years 1994, 1996, and

1998 to examine: (1) *the likelihood of taking a contingent job* given one's welfare dependency

and past poverty status; (2) *the probability of being on welfare* for different types of contingent

workers relative to their non-contingent counterparts; and (3) *the likelihood of living in poverty*

in the near future as a function of their past employment in alternative types of contingent jobs.

Various findings are worth emphasizing. First, we find that holding a contingent job does not, by itself, increase the individual's likelihood of life in poverty in the near future nor her likelihood of being on welfare once we account for other work related characteristics. Instead, it is the low pay, limited work attachment – as captured by the weekly hours of work and the number of weeks unemployed in the year, and lack of fringe benefits in the case of poverty, and the limited work attachment and lack of fringe benefits in the case of welfare, that significantly raise the likelihood of each state.

Secondly, we find that being on welfare does, however, increase the individual's likelihood of having a contingent job by as much as 17 percent. Furthermore, the growth rate of contingent work among previous year welfare participants relative to non-welfare participants significantly rose after 1996, providing empirical evidence of the "work-first" philosophy of welfare reform emphasized in the literature.

Finally, living in poverty also raises the individual's likelihood of holding a contingent job in the near future by as much as 4 percent, possibly reflecting the frequently involuntary nature of contingent employment.

In sum, our findings provide an assessment of the importance of economic need and welfare reform in changing the composition of contingent work in the United States, as well as of the role played by different types of contingent work contracts and their diverse set of characteristics in ensuring self-sufficiency.

References

Blank, Rebecca M., and Ruggles, Patricia. "Short-Term Recidivism Among Public-Assistance Recipients." *American Economic Review* 84 (1994): 49-53.

Bronars, Stephen G., and Grogger, Jeff. "The Economics Consequences of Unwed Motherhood: Using Twin Births as a Natural Experiment." *American Economic Review* 84 (1994): 1141-1156.

Bugarin, Alicia. "Linking Welfare Recipients to Jobs: The Role of Temporary Help Agencies." Working Paper CRB-98-017. Sacramento: California Research Bureau, 1998.

Bureau of the Census at: http://www.bls.census.gov/cps/ads/sdata.htm

Cancian, Maria, et al. "Work, Earnings, and Well-Being after Welfare: What Do We Know?" In *Economic Conditions and Welfare Reform*, edited by Sheldon H. Danzinger, 161-186. Kalamazoo: W. E. Upjohn Institute for Employment Research, 1999.

Council of Economic Advisors. "Explaining the Decline in Welfare Receipt, 1993-1996." Washington, D.C., The White House, 1997. Available at: http://clinton4.nara.gov/WH/EOP/CEA/Welfare/

Dutton, Diana B. *Poorer and Sicker: Legacies of the 1980s, Lessons for the 1990s*. Boston: Northeastern University Press, 1993.

Golden, Lonnie. "The Expansion of Temporary Help Employment in the U.S., 1982-1992: A Test of Alternative Explanations." *Applied Economics* 28 (1996): 1127-1141.

Gong, Xiaodong, and van Soest, Arthur. "Wage Differentials and Mobility in the Urban Labor Market: A Panel Data Analysis for Mexico." Discussion Paper No. 329. Bonn: IZA, 2001.

Gosling, Amanda et al. *The Dynamics of Low Pay and Unemployment in Early 1990s Britain*. London: The Institute for Fiscal Studies, 1997.

Greene, William H. *Econometric Analysis*. New York: MacMillan, 2000.

Gueron, J., and Pauly, E. *From Welfare to Work*. New York: Russell Sage Foundation, 1991.

Handler, Joel F. *The Poverty of Welfare Reform*. New Haven: Yale University Press, 1995.

Henrich, Carolyn et al. "Welfare to Temporary Work: Implications for Labor Market Outcomes." Discussion Paper No. 584. Bonn: IZA, 2002.

Hipple, Steven. "Contingent Work in the Late-1990s." *Monthly Labor Review* 1243 (2001): 3-27.

Hoynes, Hillary, and MaCurdy, Thomas. "Has the Decline in Benefits Shortened Welfare Spells?" *American Economic Review* 84 (1994): 43-48.

Jargowsky, Paul A. *Poverty and Place: Ghettos, Barrios, and the American City*. New York: Russell Sage Foundation, 1997.

Lane, Julia; Mikelson, Kelly; Sharkey, Pat; and Wissoker, Doug. "Pathways to Work for Low Income Workers: The Effect of Work in the Temporary Help Industry." Unpublished manuscript. Washington, D.C.: The Urban Institute, 2001.

Maddala, G.S. *Limited-dependent and Qualitative Variables in Econometrics*. New York: Cambridge University Press, 1983.

Mavromaras, Kostas G. and Rudolph, Helmut. "Temporary Separations and Firm Size in the German Labour Market." *Oxford Bulletin of Economics and Statistics* 602 (1998): 215-225.

Mishel, L.; Bernstein, J; and Schmitt, J. *The State of Working America 1998-99*. Ithaca, NY: Cornell University Press, 1999.

Otoo, Maria Ward. "Temporary Employment and the Natural Rate of Unemployment." Finance and Economics Discussion Paper 1999/66. Washington, D.C.: Board of Governors of the Federal Reserve System, 1999.

Owen, John D. "Education and Welfare Incidence Among Black Women: Changes Over Time." *Economics of Education Review* 13 (1994): 337-353.

Pardo V., Lucia. "El acceso al financiamiento: Un obstáculo al desarrollo de la pequeña empresa" *Estudios de Economía* 191 (1992): 107-150.

Peck, Jamie, and Theodore, Nikolas. "'Work First': Workfare and the Regulation of Contingent Labour Markets." *Cambridge Journal of Economics*, 24 (2000): 119-138.

Polivka, Anne E. "A Profile of Contingent Workers." *Monthly Labor Review* 119 (1996): 10-21.

Reich, Robert B. "Lost Jobs, Ragged Safety Net." *The New York Times*, 12 November 2001.

Rexroat, Cynthia. "Race, Work, and Welfare: Attitudes Toward the Required Employment of Young Mothers Who Use Welfare." *Population Research and Policy Review* 12 (1993): 123-138.

Sawhill, Isabel. "From Welfare to Work: Toward a New Antipoverty Agenda." *Brookings Review* (1999): 27-30.

Schiller, Bradley R. *The Economics of Poverty and Discrimination*. 8th ed. New Jersey: Prentice Hall, 2001.

Seeborg, M. C. "The Effects of Marriage and Divorce on the Poverty States of Young Adults." *Journal of Economics* 22 (1996): 89-96.

Segal, Lewis, and Sullivan, Daniel. "The Growth of Temporary Services Work." *Journal of Economic Perspectives* 11 (1997): 117-136.

Strawn, J. *Beyond Job Search or Basic Education: Rethinking the Role of Skills in Welfare Reform*. Washington, DC: Center for Law and Social Policy, 1998.

Tilly, Chris. "Workfare's Impact on the New York City Labor Market: Lower Wages and Worker Displacement." Working paper No. 92. New York: Russell Sage Foundation, 1996

U.S. Department of Health and Human Services. "U.S. Welfare Caseloads Information." http://www.acf.dhhs.gov/news/stats/newstat2.shtml (November 01, 2002).

Table 1
Incidence of Poverty and Welfare Receipt Across Different Types of Contingent Workers (Women only)

Characteristics	Agency Temps vs. Non-contingent			All Temps vs. Non-contingent			Non-Standard vs. Non-contingent		
	Mean	**Diff.**	**t-stat**	**Mean**	**Diff.**	**t-stat**	**Mean**	**Diff.**	**t-stat**
Past Year Poverty									
Temporary	.23			.23			.18		
Non-contingent	.11	-.12	-3.19	.11	-.13	-5.00	.11	-.08	-5.00
Next Year Poverty									
Temporary	.22			.24			.18		
Non-contingent	.11	-.11	-2.88	.11	-.13	-5.02	.11	-.07	-4.66
Past Year On Welfare									
Temporary	.09			.09			.09		
Non-contingent	.03	-.06	-2.78	.03	-.06	-4.18	.03	-.06	-4.18
Next Year On Welfare									
Temporary	.05			.07			.05		
Non-contingent	.02	-.03	-1.68	.02	-.05	-3.41	.02	-.03	-3.46

Table 2
Personal Characteristics of Contingent and Non-contingent Employees (Women only)

Characteristics	Agency Temps vs. Non-contingent			All Temps vs. Non-contingent			Non-Standard vs. Non-contingent		
	Mean	Diff.	t-stat	Mean	Diff.	t-stat	Mean	Diff.	t-stat
Age									
Temporary	34.9			34.9			35.0		
Non-contingent	35.0	.09	.43	35.0	.08	.58	35.0	-.00	-.03
Race (white)									
Temporary	.41			.50			.64		
Non-contingent	.65	.24	6.14	.65	.15	5.79	.65	.01	.64
Race (black)									
Temporary	.53			.41			.29		
Non-contingent	.29	-.24	-5.91	.29	-.12	-2.25	.29	.00	.12
Years of Education									
Temporary	12.54			12.62			13.11		
Non-contingent	13.34	.80	4.90	13.34	.72	5.52	13.34	.22	2.42
Married									
Temporary	.39			.47			.58		
Non-contingent	.58	.18	4.72	.58	.10	3.93	.58	-.01	-.58
Family Size									
Temporary	3.28			3.54			3.56		
Non-contingent	3.38	.10	.85	3.38	-.16	-2.01	3.38	-.18	-3.21

Table 3
Job Characteristics of Contingent and Non-contingent Employees (Women only)

Characteristics	Agency Temps vs. Non-contingent			All Temps vs. Non-contingent			Non-Standard vs. Non-contingent		
	Mean	Diff.	t-stat	Mean	Diff.	t-stat	Mean	Diff.	t-stat
Hourly Wage									
Temporary	5.34			5.59			7.66		
Non-contingent	7.61	2.28	8.21	7.61	2.02	7.87	7.62	-.04	-.11
Weekly Hours									
Temporary	19.07			14.42			16.88		
Non-contingent	30.07	11.00	6.94	30.07	15.65	16.07	30.07	13.19	18.44
Weeks Unemployed									
Temporary	11.78			10.29			5.95		
Non-contingent	2.45	-9.33	-5.58	2.45	-7.84	-7.63	2.45	-3.50	-6.25
Tenure									
Temporary	47.79			60.74			122.34		
Non-contingent	255.79	207.99	30.45	255.79	195.05	33.59	255.79	133.46	21.76
Health Benefits									
Temporary	.23			.26			.26		
Non-contingent	.77	.54	13.84	.77	.52	17.81	.77	.51	25.01
Retirement Benefits									
Temporary	.09			.16			.17		
Non-contingent	.66	.57	20.71	.66	.50	20.38	.66	.49	27.51
Firm Size									
Temporary	337.69			339.13			197.28		
Non-contingent	484.14	146.45	1.19	484.14	145.02	2.14	484.14	286.87	7.24
Union									
Temporary	.02			.06			.04		
Non-contingent	.14	.12	9.71	.14	.08	5.90	.14	.10	10.57

Characteristics	Non-contingent	Agency Temporary	All Temporary	Non-Standard Work Arrangements
Occupation				
Professional	21.85	6.08	13.25	18.02
Manager	13.24	4.05	4.22	10.17
Sales	4.15	2.03	3.92	6.54
Clerical	28.31	42.57	34.94	22.67
Craftsmen	2.08	1.35	2.41	2.47
Operators	8.10	29.73	17.17	9.16
Laborers	1.73	8.78	6.33	4.07
Farm	.40	.68	2.41	1.89
Service	19.21	4.73	14.16	19.48
Private Household	.93	.00	1.20	5.52
Industry				
Agriculture/Mining	1.32	.00	2.54	2.88
Construction	1.29	.70	1.59	1.60
Manufacturing	11.63	26.57	16.83	11.06
Transportation, Communication and Public Utilities	4.42	3.50	2.22	2.08
Trade	18.16	6.29	12.38	14.74
Finance, Insurance, and Real Estate	8.11	5.59	3.49	2.72
Business Services	5.76	45.45	24.13	18.75
Personal Services	6.21	2.80	3.81	15.54
Recreational Services	1.32	.70	2.22	2.56
Professional Services	35.61	6.29	23.17	23.56
Public Administration	6.18	2.10	7.62	4.49

Table 5

Estimated Coefficients from Simultaneous Equation Probit Models with Sample Selection for
Different Type of Contingent Work and Welfare Receipt
(Standard Errors)
[Marginal Effects]

	Agency Temps		All Temps		NSWA	
Variables	**Contingent Work**	**On Welfare**	**Contingent Work**	**On Welfare**	**Contingent Work**	**On Welfare**
Contingent Work	-	-.009 (.019) [-4.62e-04]	-	-.063 (.149) [-.003]	-	-.026 (.200) [-.001]
On Welfare	1.696*** (.221) [.050]	-	2.249*** (.371) [.081]	-	1.925*** (.245) [.174]	-
Age	.033 (.023) [.001]	-.001 (.025) [-5.78e-05]	.039 (.030) [.001]	.002 (.026) [8.41e-05]	.028 (.022) [.003]	-7.91e-05 (.026) [-4.27e-06]
Black	-.265** (.154) [-.007]	.281** (.129) [.017]	-.449** (.196) [-.014]	.295** (.135) [.018]	-.440*** (.134) [-.035]	.283** (.133) [.017]
Other Race	-.268* (.206) [-.006]	.100 (.249) [.006]	-.132 (.264) [-.004]	.104 (.249) [.006]	-.268* (.205) [-.020]	.097 (.251) [.006]
Years of Education	.019 (.027) [.001]	-.034 (.032) [-.002]	.071* (.041) [.003]	-.034 (0.32) [-.002]	-.075*** (.029) [.007]	-.034 (.032) [-.002]
Poor Health	-1.100*** (.261) [-.013]	.657*** (.164) [.063]	-1.543*** (.382) [-.017]	.654*** (.164) [.063]	-1.251*** (.266) [-.047]	.655*** (.164) [.063]
Family Size	-.124*** (.030) [.004]	.113*** (.035) [.006]	-.246 (.070) [-.009]	.113*** (.036) [.006]	-.189*** (.046) [-.017]	.113*** (.035) [.006]
Married	.464*** (.152) [.013]	-.338*** (.128) [-.020]	.774*** (.200) [.027]	-.338*** (.128) [-.020]	.617*** (.141) [.053]	-.340*** (.130) [-.020]
Real Hourly Wage	-	-.014 (.020) [-.001]	-	-.013 (.020) [-.001]	-	-.013 (.020) [-.001]
Weekly Hours of Work	-	-.005* (.003) [-2.89e-04]	-	-.006* (.003) [-2.99e-04]	-	-.005* (.003) [-2.91e-04]
Health Benefits	-	-.261** (.155) [-.014]	-	-.297** (.177) [-.016]	-	-.275* (.191) [-015]
Retirement Benefits	-	-.051 (.161) [-.003]	-	-.083 (.180) [-.005]	-	-.062 (.192) [-.003]
Tenure	-	3.80e-05 (9.10e-04) [2.06e-06]	-	-1.243-04 (.001) [-6.68e-06]	-	5.42e-06 (.001) [2.92e-07]

Table 5 -- Continued

	Agency Temps		All Temps		NSWA	
Variables	**Contingent Work**	**On Welfare**	**Contingent Work**	**On Welfare**	**Contingent Work**	**On Welfare**
Tenure Squared	-	-5.65e-07 (1.22e-06) [-3.06e-08]	-	-3.73e-07 (1.27e-06) [-2.02e-08]	-	-4.69e-07 (1.30e-06) [-2.53e-08]
Firm Size	-1.09e-04 (1.07e-04) [-3.19-e-06]	-	-1.28e-04 (1.32e-04) [-4.63e-06]	-	-1.08e-05 (9.23e-05) [-9.81e-06]	-
Union Member	-	-.056 (.236) [-.003]	-	.001 (.209) [5.18e-05]	-	-.011 (.212) [-.001]
Agriculture/Mining	-	-	-2.142** (.930) [-.077]	-	-1.146** (.562) [.019]	-
Construction	-	-	1.244** (.594) [.045]	-	.781* (.475) [.071]	-
Manufacturing	.466*** (.194) [.014]	-	.379* (.249) [.014]	-	.206 (.178) [.019]	-
Transportation, Communications, Public Utilities	1.487*** (.253) [.044]	-	1.497*** (.459) [.054]	-	1.160*** (.327) [.105]	-
Trade	-.145 (.194) [-.004]	-	-.405* (.251) [-.015]	-	-.420*** (.173) [-.038]	-
Finance, Insurance, Real Estate	.369** (.251) [.011]	-	.087 (.340) [.003]	-	-.003 (.227) [-2.35e-04]	-
Business Services	.812*** (.126) [.024]	-	.591*** (.216) [.021]	-	.416*** (.165) [.038]	-
Personal Services	-	-	-.800* (.534) [-.029]	-	-.276 (.256) [-.025]	-
Public Administration	.277* (.206) [.008]	-	.693*** (.272) [.025]	-	.492*** (.192) [.045]	-
Problematic Neighborhood	-	.165* (.148) [.009]	-	.177* (.151) [.010]	-	.168* (.152) [.009]
Urban	.149 (.126) [.004]	-.056 (.135) [-.003]	.220 (.175) [.007]	-.046 (.137) [-.003]	.243*** (.125) [.020]	-.050 (.141) [-.003]

Table 5 -- Continued

Variables	Agency Temps		All Temps		NSWA	
	Contingent Work	On Welfare	Contingent Work	On Welfare	Contingent Work	On Welfare
Low Unemployment	.398**	-.163	.624**	-.151	.418**	-.165
	(.236)	(.287)	(.280)	(.290)	(.220)	(.288)
	[.018]	[-.008]	[.041]	[-.007]	[.052]	[-.008]
High Unemployment	-.053	.026	.054	.035	.113	.028
	(.167)	(.179)	(.196)	(.180)	(134)	(.183)
	[-.001]	[.001]	[.002]	[.002]	[.011]	[.002]
Year 1996	-.416***	.047	-.267*	.039	-.316***	.046
	(.125)	(.154)	(.180)	(.156)	(.122)	(.159)
	[-.011]	[.003]	[-.009]	[.002]	[-.026]	[.003]
Year 1998	-.613***	-.072	-.370**	-.092	-.478***	-.077
	(.168)	(.181)	(.228)	(.188)	(.154)	(.202)
	[-.017]	[-.004]	[-.013]	[-.005]	[-.041]	[-.004]
Number of Observations	6665	6660	6665	6660	6665	6665
Log Likelihood	-3865.04	-4169.94	-4050.58	-4169.94	-4214.86	-4172.01

Notes: *** indicates significance at the 1% level, ** indicates significance at the 5% level, and * indicates significance at the 10% level.   All regressions include a constant term and occupation dummies.

Table 6

Estimated Coefficients for the Instrumental Variable Probits with Sample Selection for
Different Types of Contingent Work and Poverty
(Standard Errors)
[Marginal Effects]

Groups of Workers:	Agency-Temps		Temps		NSWA workers	
Variables	**Contingent Work**	**Next Year Poverty**	**Contingent Work**	**Next Year Poverty**	**Contingent Work**	**Next Year Poverty**
Contingent Work	-	-0.008	-	-0.174**	-	-0.244**
		(.013)		(0.092)		(0.129)
		[-0.001]		[-0.026]		[-0.036]
Past Year Poverty	0.464***	-	0.549***	-	0.204***	-
	(0.066)		(0.127)		(0.060)	
	[4.13e-04]]		[0.036]		[0.044]	
On Welfare	0.126	-	0.095	-	0.159	-
	(0.186)		(0.214)		(0.140)	
	[1.12e-04]		[0.006]		[0.035]	
On Welfare After 1998	7.179***	-	9.063***	-	3.282***	-
	(1.123)		(2.051)		(1.009)	
	[.006]		[.595]		[.714]	
Age	0.030*	0.004	0.031*	0.011	0.008	0.012
	(0.019)	(0.015)	(0.020)	(0.016)	(0.012)	(0.016)
	[2.72e-05]	[.001]	[0.002]	[0.002]	[0.002]	[0.002]
Black	0.051	0.311***	-0.002	0.350***	-0.028	0.344***
	(0.087)	(0.078)	(0.110)	(0.081)	(0.066)	(0.081)
	[4.70e-05]	[0.048]	[-1.58e-04]	[0.058]	[-0.006]	[0.057]
Other Race	-0.055	0.126	0.153	0.132	-0.079	0.095
	(0.167)	(0.145)	(0.176)	(0.147)	(0.118)	(0.150)
	[-4.51e-05]	[0.019]	[0.011]	[0.021]	[-0.017]	[0.015]
Years of Education	0.013	-0.096***	0.055*	-0.094***	0.016	-0.090***
	(0.022)	(0.019)	(0.030)	(0.019)	(0.017)	(0.020)
	[1.2e-05]	[-0.014]	[0.004]	[-0.014]	[0.003]	[-0.013]
Poor Health	-0.022	0.253**	-0.062	0.240**	0.229***	0.245**
	(0.151)	(0.128)	(0.175)	(0.131)	(0.104)	(0.135)
	[1.90e-05]	[0.042]	[-0.004]	[0.041]	[0.055]	[0.043]
Family Size	-0.002	0.120***	-0.053	0.121***	0.063***	0.123***
	(0.022)	(0.021)	(0.039)	(0.023)	(0.021)	(0.024)
	[-1.39e-06]	[0.017]	[-.004]	[0.018]	[0.014]	[0.018]
Married	0.392***	-0.610***	0.528***	-0.614***	0.209**	-0.630***
	(0.118)	(0.080)	(0.185)	(0.081)	(0.095)	(0.082)
	[3.37e-04]	[-0.095]	[0.033]	[-0.100]	[0.045]	[-0.103]
Real Hourly Wage	-	-0.031**	-	-0.027**	-	-0.027**
		(0.015)		(0.015)		(0.015)
		[-0.004]		[-0.004]		[-0.004]
Weekly Hours of Work	-	-0.009***	-	-0.010***	-	-0.010***
		(1.86e-03)		(1.91e-03)		(1.99e-03)
		[-0.001]		[-0.001]		[-0.002]
Health Benefits	-	-0.156**	-	-0.255***	-	-0.286***
		(0.091)		(0.107)		(0.117)
		[-0.022]		[-0.038]		[-0.043]
Retirement Benefits	-	-0.273***	-	-0.369***	-	-0.400***
		(0.095)		(0.109)		(0.119)
		[-0.039]		[-0.055]		[-0.060]

Table 6 - Continued

Groups of Workers:	Agency-Temps		Temps		NSWA workers	
Variables	**Contingent Work**	**Next Year Poverty**	**Contingent Work**	**Next Year Poverty**	**Contingent Work**	**Next Year Poverty**
Weeks Unemployed	-	0.008*** (1.90e-03) [0.001]	-	0.008*** (1.99e-03) [0.001]	-	0.008*** (2.02e-03) [0.001]
Tenure	-	-0.001* (5.35e-04) [-1.02e-04]	-	-0.001** (6.04e-04) [-1.78e-04]	-	-0.001* (6.29e-04) [-1.92e-04]
Tenure Squared	-	3.07e-07 (6.79e-07) [4.33e-08]	-	7.24e-07 (7.17e-07) [1.07e-07]	-	8.49e-07 (7.46e-07) [1.27e-07]
Firm Size	-1.17e-04* (6.91e-05) [-1.04e-07]	-	-3.58e-05 (5.10e-05) [-2.35e-06]	-	-7.81e-05** (3.29e-05) [-1.70e-05]	-
Union Member	-	-0.223 (0.235) [-0.032]	-	-0.075 (0.138) [-0.011]	-	-0.136 (0.141) [-0.020]
Agriculture/Mining	-	-	-1.212** (.692) [-.080]	-	-.102 (.298) [-.022]	-
Construction	-	-	.169 (.428) [.011]	-	.205 (.239) [.045]	-
Manufacturing	.407*** (.156) [3.62e-04]	-	.299* (.185) [.020]	-	.202** (.112) [.044]	-
Transportation, Communications, Public Utilities	.268* (.188) [2.39e-04]	-	-.062 (.279) [-.004]	-	-.002 (.158) [-.001]	-
Trade	-.101 (.129) [-.001]	-	-.308** (.171) [-.020]	-	-.063 (.094) [-.014]	-
Finance, Insurance, Real Estate	.370** (.167) [3.92e-04]	-	.051 (.219) [.003]	-	-.119 (.133) [-.026]	-
Business Services	.742*** (.165) [.001]	-	.655*** (.146) [.043]	-	.582*** (.097) [.127]	-
Personal Services	-	-	-.392* (.300) [-.026]	-	.465*** (.108) [.101]	-
Public Administration	.191 (.193) [1.70e-04]	-	.538*** (.177) [.035]	-	.285*** (.118) [.062]	-
Problematic Neighborhood	-	0.153** (0.090) [0.022]	-	0.187** (0.093) [0.028]	-	0.188** (0.094) [0.028]
Urban	0.206** (0.101) [1.54e-04]	0.114* (0.085) [0.016]	0.167* (0.119) [0.010]	0.141* (0.087) [0.020]	0.144** (0.068) [0.030]	0.168** (0.091) [0.024]

Table 6 - Continued

Groups of Workers:	Agency-Temps		Temps		NSWA workers	
Variables	**Contingent Work**	**Next Year Poverty**	**Contingent Work**	**Next Year Poverty**	**Contingent Work**	**Next Year Poverty**
Low Unemployment	-0.022	-0.447***	0.125	-0.405***	-0.004	-0.426**
	(0.201)	(0.183)	(0.214)	(0.187)	(0.133)	(0.188)
	[-1.92e-05]	[-0.048]	[0.009]	[-0.046]	[-0.008]	[-0.049]
High Unemployment	-0.093	-0.053	0.069	-0.025	0.138**	-0.015
	(0.127)	(0.114)	(0.120)	(0.116)	(0.073)	(0.118)
	[-7.47e-05]	[-0.007]	[0.005]	[-0.004]	[0.032]	[-0.002]
Year 1996	-0.138*	-0.102	-0.140	-0.125	-0.166***	-0.137*
	(0.097)	(0.098)	(0.115)	(0.100)	(0.068)	(0.105)
	[-1.12e-04]	[-0.014]	[-0.009]	[-0.018]	[-0.035]	[-0.020]
Year 1998	-0.381***	0.139*	-0.387***	0.077	-0.423***	0.034
	(0.120)	(0.107)	(0.149)	(0.115)	(0.085)	(0.128)
	[-3.04e-04]	[0.020]	[-0.023]	[0.012]	[-0.087]	[0.005]
No. of Observations	7450	5633	7450	5633	7450	5633
Log Likelihood	-4255.84	-4213.19	-4525.03	-4211.34	-4936.16	-4211.17

Notes: *** indicates significance at the 1% level, ** indicates significance at the 5% level, and * indicates significance at the 10% level.   All regressions include a constant term and occupation dummies.   The variable *past year poverty* in the contingent work instrumental variable probits with sample selection is instrumented using *problematic neighborhood*, along with other exogenous regressors included in the instrumental variable probit. The variable *contingent work* in the next year poverty instrumental variable probits with sample selection is instrumented using *firm size* and *industry* dummies, along with other exogenous regressors included in the instrumental variable probit.

Variables	All		Agency Temps		All Temps		Non-Standard Work	
	Means	**Means**	**Means**	**S.D.**	**Means**	**S.D.**	**Means**	**S.D.**
Age	34.90	2.74	34.88	2.64	34.88	2.77	34.97	2.77
White	.64	.48	.41	.49	.50	.50	.64	.48
Black	.30	.46	.53	.50	.41	.49	.29	.45
Other Race	.06	.24	.06	.24	.09	.29	.07	.26
Years of Education	13.14	2.44	12.54	2.04	12.61	2.47	13.11	2.58
Poor Health	.05	.22	.05	.23	.06	.24	.07	.26
Family Size	3.52	1.58	3.28	1.47	3.54	1.52	3.56	1.53
Married	.58	.49	.39	.49	.47	.50	.59	.49
Divorced	.14	.35	.20	.40	.18	.39	.15	.35
Young Child in HH	.09	.27	.03	.17	.05	.21	.08	.27
On Welfare	.06	.07	.07	.25	.08	.27	.06	.24
Poverty	.15	.23	.23	.42	.23	.42	.18	.39
Non-contingent Contract	.92	.27	--	--	--	--	--	--
Temporary Contract (Agency or Direct Hire)	.03	.18	1	0	1	0	.44	.50
Agency Temp	.01	.12	1	0	.43	.50	.19	.39
Real Hourly Wage	7.59	6.84	5.34	3.36	5.59	4.71	7.66	10.68
Weekly Hours of Work	24.21	20.02	19.07	19.92	14.42	18.43	16.88	20.00
Health Benefits	.74	.44	.23	.42	.26	.44	.26	.44
Retirement Benefits	.63	.48	.09	.29	.16	.36	.17	.37
Weeks Unemployed	2.87	10.98	11.78	20.59	10.29	19.15	5.95	15.61
Tenure	203.04	239.63	47.81	79.75	60.74	100.45	122.34	161.35
Professional	.22	.41	.06	.24	.13	.34	.18	.38
Manager	.13	.34	.04	.20	.04	.20	.10	.30
Sales	.04	.20	.02	.14	.04	.19	.07	.25
Clerical	.28	.45	.43	.50	.35	.48	.23	.42
Craftsman	.02	.14	.01	.12	.02	.15	.02	.16
Operative	.08	.27	.30	.46	.17	.38	.09	.29
Laborer	.02	.14	.09	.28	.06	.24	.04	.20
Farm	.01	.07	.01	.08	.02	.15	.02	.14
Service	.19	.39	.05	.21	.14	.35	.19	.40
Private Household	.01	.11	--	--	.01	.11	.06	.23
Agriculture & Mining	.01	.12	--	--	.03	.16	.03	.17
Construction	.01	11	.01	.08	.02	.13	.02	.13
Manufacturing	.12	.32	.27	.44	.17	.37	.11	.31
Transportation, Communications, and Public Utilities	.04	.20	.03	.18	.02	.15	.02	.14
Trade	.18	.38	.06	.24	.12	.33	.15	.35
Finance & Insurance	.08	.27	.06	.23	.03	.18	.03	.16
Business Services	.07	.25	.45	.50	.24	.43	.19	.39
Personal Services	.07	.26	.03	.17	.04	.19	.16	.36
Recreation Services	.01	.12	.01	.08	.02	.15	.03	.16
Professional Services	.35	.48	.06	.24	.23	.42	.24	.42
Public Administration	.06	.24	.02	.14	.08	.27	.04	.21
Firm Size	380.14	1979.05	337.69	1314.98	339.13	1108.21	197.28	873.95
Union Member	.13	.34	.02	.14	.06	.24	.04	.19

Variables	All		Agency Temps		All Temps		Non-Standard Work	
	Means	S.D.	Means	S.D.	Means	S.D.	Means	S.D.
Problematic Neighborhood	.11	.31	.20	.40	.20	.40	.13	.34
Urban	.77	.42	.82	.39	.79	.41	.79	.41
Low Unemployment	.05	.22	.07	.25	.05	.22	.05	.22
High Unemployment	.16	.37	.07	.24	.14	.35	.16	.37
Year 1994	.34	.47	.29	.45	.32	.47	.32	.47
Year 1996	.33	.47	.38	.49	.37	.48	.37	.48
Year 1998	.33	.47	.33	.47	.31	.46	.31	.46

[1] To make matters worse, there is concern that the massive number of placements taking place under welfare reform are likely to have resulted in a greater number of job displacements and lower wages for the entire workforce and, in particular, for the most disadvantaged workers (Tilly 1996 and Mishel et al. 1999).

[2] That is, whether it is the low pay, lack of fringe benefits, low weekly hours of work, frequent intermittent career pattern associated with contingent employment, low unionization rate, or any other characteristics imbedded in the classification of a job as contingent.

[3] See Council of Economic Advisors (1997).

[4] Previous studies have examined the link between welfare receipt and full-time year round work (Cancian et al. 1999). However, until recently, the literature has not analyzed the links between welfare receipt and contingent work. In particular, Heinrich et al. (2002) examine the link between welfare receipt and temporary agency employment using data from Missouri and North Carolina. Unlike the aforementioned study, however, the analysis in this paper examines the relationship between welfare receipt and different types of contingent work arrangements while taking into consideration the possible endogeneity between temporary work and welfare receipt. In addition, our analysis isolates the role played by the contingent nature of the job held from that of unemployment spells, low wages, lack of benefits, state dependence on welfare, and personal characteristics in escaping poverty.

[5] By strictly focusing on welfare leavers, the literature has failed to provide a comparative analysis of the incidence of contingent jobs among former welfare-recipients and non-former welfare-recipients or the role played by contingent employment in guaranteeing the self-sufficiency of former welfare and non-welfare-recipients. These comparative analyses are of interest because they help evaluate the effectiveness of welfare-reform as well as contingent employment in helping individuals escape poverty.

[6] As noted by Reich (2001) in The New York Times: "Eligibility rules have grown steadily tighter. Since part-time workers, temps, the self-employed and people who have moved in and out of unemployment often don't qualify, a large fraction of the lower-wage work force is excluded."

[7] See Blank and Ruggles (1994) for a discussion of poverty recidivism among welfare leavers.

[8] Handler (1995) shows that welfare recipients using temporary work arrangements as a stepping-stone often return to the welfare rolls following job loss. Similarly, Gosling et al. (1997) argue that temporary employment may lead to low-pay-unemployment cyclic career pattern and, therefore, to reiterative episodes of life in poverty.

[9] Since December 1965, there have been two slightly different versions of the federal poverty measure: poverty thresholds and poverty guidelines. Issued by the Census Bureau, poverty thresholds are used for calculating the number of persons in poverty in the United States or in states and regions. Poverty guidelines, which are used in this paper, are the administrative version of the poverty measure and are issued by the HHS. They are a simplification of the poverty thresholds and are used in determining financial eligibility for certain federal programs. (http://www.ssc.wisc.edu/irp/faqs/faq7.htm) and (http://aspe.hhs.gov/poverty/02poverty.htm)

[10] For instance, previous research has found a significant correlation between poverty/welfare participation and race, marital status, family size, health, and educational attainment (Dutton 1993; Rexroat 1993; Bronars and Grogger 1994; Owen 1994; and Seeborg 1996).

[11] The selection equations for being working include the following controls: age, race, educational attainment, health status of the respondent, family size, a dummy variable indicating the presence of children less than two years old, marital status, dummy variables indicating whether the respondent lives in an urban or rural area, an area with high or low unemployment rate, and year dummies. The selection equations are identified by the exclusion of the dummy variable indicating the presence of young children in the household – always statistically significant and inversely related to workforce participation – from the structural equations. Results from the selection regressions are available from the authors upon request.

[12] See Pardo (1992); Polivka (1996); Mavromaras and Rudolph (1998); Otoo (1999); and Gong, Van Soest, and Villagomez (2001).

[13] It should be noted that this finding of a decline in the use of contingent employment is pointing towards a decline in the number of individuals who report that a contingent job is their primary job. For temporary workers, the decline is approximately 2 percent for our time period under study. Our results refer to workers and do not give an estimate of the growth in the number of temporary jobs over this time period, which can diverge due to changes in multiple job holdings and reporting by establishments (Lane et al. 2002)

[14] See Dutton (1993); Owen (1994); and Seeborg (1996), for example.

[15] Due to the nature of the question asked in the NLSY79, data are only available on poverty status for the year prior to the survey year. All other labor market variables used in this paper relate to the current year.

16 Data on income and, thus, the poverty status refers to the previous year. As a result, there is a lag between the individual's contingent work status and the poverty status.