

The long-term consequences of nontraditional employment

Lower pay of former temporary employees and higher pay of men formerly self-employed are likely caused by unobserved heterogeneity; nonetheless, in wage growth models that eliminate this bias, past part-time work has a negative effect on current wages, which varies with gender and whether the part-time status was voluntary or involuntary

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The October 1996 special issue of the *Monthly Labor Review* profiled workers in nontraditional work arrangements and analyzed their reasons for entering such employment.¹ Several articles in the same issue of the *Review* reported on the earnings and benefits of nonstandard workers: Steven Hipple and Jay Stewart found that contingent workers tend to earn less, and are less likely to have health insurance and pension benefits, than noncontingent workers, and that some alternative workers, such as self-employed men, earn more than traditional or standard workers, but are less likely to have health insurance and pension coverage;² and Donna Rothstein, using longitudinal data from the National Longitudinal Survey of Youth (NLSY), compared earnings on the current job with earnings on the previous job, for a select sample of workers who had been on their current job for no more than 3 years.³ Interestingly, she found that, for the typical contingent worker in her sample, the current job represented a step *down* from the previous job, whereas for full-time, standard workers, the current job tended to represent a step *up* from the previous job.

These results, as well as some from earlier research,⁴ raise a host of questions about the longer term consequences of nontraditional employment. For example, because workers engaged in such employment not only have shorter job ten-

ures,⁵ but also are more likely to be assigned to routine jobs, to receive less training (particularly important for workers without a college education) and fewer promotions, and to be laid off,⁶ they may receive lower wages and benefits in the long run. Thus, to the extent that the problems associated with nontraditional work turn out to be more serious in the long run than in the short run, and to the extent that individuals are unaware that this is the case or have a short planning horizon, it may be that many of those who choose this type of employment voluntarily will eventually suffer serious deprivation as a result.⁷ With the exception of a handful of studies on the wage growth of part-time workers,⁸ there has been no research to date on these long-term effects. This article seeks to fill that gap.

The research to be presented uses the NLSY to investigate the long-term consequences of three types of nontraditional employment on individuals' subsequent earnings and benefits.⁹ Building on what is already known about the contingent labor force, we investigate the following questions, which have not been addressed in the research to date: First, how does nontraditional employment (that is, one's ever having had a nontraditional job) affect subsequent earnings and benefits? Second, are the returns to nontraditional work experience (that is, the length of time one spends in nontraditional jobs) different from the returns to traditional work experience?

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And third, to what extent are estimates of the effects of nontraditional employment and nontraditional work experience biased by unobserved heterogeneity among workers? The results suggest that nontraditional employment does have long-term effects on these outcomes, at least insofar as we are able to observe this in a sample of young workers followed over 15 years in the NLSY. Moreover, most of the long-term effects of nontraditional employment and nontraditional work experience persist even after controlling for potential heterogeneity bias.

Data and methodology

The NLSY provides complete work histories with detailed information about respondents' past and present jobs over a 15-year span, 1979–93. The data are used to observe whether respondents are currently in nontraditional jobs, to track whether they have ever been in such jobs, and to follow those who switch to or from these jobs. The NLSY data allow us to compare the fortunes not only of workers currently in nontraditional employment with those of workers in traditional employment, but also of those who have ever been in nontraditional jobs with those who have not; the data also allow us to compare workers with varying lengths of nontraditional work experience. In addition, the longitudinal structure of the data is used to assess the effects of changes in employment type and employment experience on wage growth over time, in order to control for potential bias caused by unobserved heterogeneity.

The NLSY follows a nationally representative sample of young men and women aged 28 to 36 by 1993. With 1993 assumed to be the current year, information from the 1979–93 surveys (including retrospective information on the period 1975–78 contained in the 1979 survey) is used to track each individual's actual labor market experience, beginning with the year the person turned 18 (or the year he or she left high school if before age 18, but in no case earlier than age 16). Work experience is calculated in terms of actual time worked, expressed in years. Each year that the respondent worked at all is then categorized in terms of whether the individual worked part time, was self-employed, was a temporary worker, or performed traditional work. An individual is coded as working part time if his or her main job that year was less than 35 hours per week. Because there is reason to believe that working part time voluntarily is a very different matter than working part time involuntarily,¹⁰ part-time employees are further divided into those who work part time voluntarily and those who do so involuntarily. An individual is coded as being self-employed if he or she so reports, and the category is further divided into those whose business is incorporated and those whose business is not. A worker is coded as temporary if he or she reports having worked on any

job during the year that ended because the program under whose aegis the job fell was terminated or because the position was only temporary; however, because the reason the job ended is the only way to identify temporary jobs, those currently working on a temporary basis cannot be identified.¹¹ Any respondent who is classified as a part-time worker, self-employed, or a temporary worker is defined as engaged in nontraditional work.¹² If an individual is in none of these categories, he or she is defined as a traditional worker.

Multivariate analysis is used to investigate the effects of current and past nontraditional employment on current earnings and benefits. For earnings, ordinary least squares models that include controls for age, actual work experience, level of education, marital status, number of children, race, and ethnicity are utilized to estimate the effects of nontraditional employment on the natural logarithm of current hourly wages.¹³ For benefits, probit models that include the same controls are used to estimate the effects of nontraditional employment on the receipt of health insurance and pension benefits; to facilitate interpretation of the results, the marginal effects (and their standard errors) from these probit models are reported in tables.

To determine whether nontraditional work experience and traditional work experience have differential returns, the earnings functions are reestimated, with experience broken out into part-time and full-time components. Prior research on this issue has provided mixed results, ranging from findings of basically zero returns to part-time experience¹⁴ to returns that were significantly positive, albeit lower than to full-time experience.¹⁵ A similar analysis is conducted of self-employment and non-self-employment experience.

The third issue examined is how nontraditional employment affects wage growth, as opposed to wage levels. This is important because, to the extent that there is unobserved heterogeneity (say, in ability or motivation) among those who enter traditional as opposed to nontraditional employment, cross-sectional estimates of the effects of nontraditional employment on wages would be biased. A wage growth model in which the dependent variable (the natural logarithm of hourly wages) and all the independent variables (age, education, and so on) are expressed as differences from their values for a previous year is used to control for this potential bias.¹⁶

Earnings and benefits of nontraditional workers

In the NLSY sample, 12 percent of the men and 20 percent of the women working in 1993 were in nontraditional employment. The types of employment they were in varied a great deal by gender, as shown in table 1. Fully 16 percent of women were in part-time work, and only 5.5 percent were self-employed, while among men, the most common form of

Table 1. Nontraditional employment, young men and women, 1993

[In percent]

Employment status	Men	Women
Current¹		
Currently in nontraditional employment (part time, self-employed, or both)	11.95	19.76
Part time	3.78	16.07
Voluntary	.78	8.64
Involuntary	2.01	3.14
Reason undefined	.99	4.29
Self-employed	8.84	5.50
Incorporated	1.71	.66
Unincorporated	7.13	4.77
Reason undefined	.00	.07
Past²		
Ever in nontraditional employment (part time, self-employed, or temporary)	79.04	84.91
Ever part time	53.56	72.82
Voluntary	21.61	34.63
Involuntary	24.09	29.44
Reason undefined	7.86	8.75
Ever self-employed	24.75	16.51
Incorporated	4.88	1.74
Unincorporated	18.94	13.66
Reason undefined	.93	1.11
Ever temporary	52.02	49.34
Mean years of work experience	11.28	10.52
Mean years of part-time work experience	.87	1.69
Voluntary	.41	.96
Involuntary	.26	.32
Undefined	.20	.41
Mean years of self-employment work experience	.72	.36
Incorporated	.11	.04
Unincorporated	.57	.29
Undefined	.04	.03

¹ N = 3,337 for men and 2,870 for women.

² N = 4,261 for men and 4,242 for women.

NOTE: Tabulated from the National Longitudinal Survey of Youth, 1979-93.

nontraditional employment was self-employment, which made up 9 percent of all male workers, while less than 4 percent were employed part time.¹⁷ These point-in-time measures, however, greatly understate the prevalence of nontraditional employment over time. Only 21 percent of the men and 15 percent of the women in the sample had never worked in a nontraditional job. About half of both men and women had had a temporary job at some time in the past, and approximately half of the men and more than half of the women had worked part time at some time in the past, although the mean duration of their part-time experience was quite short. Just under 25 percent of the men and under 20 percent of the women had ever been self-employed; the mean amount of time spent in self-employment was also very short.

Differences in earnings and benefits between those who were working in nontraditional employment and those who were working in traditional employment in 1993, as well as

between men and women, are presented in table 2. Among men, those who were self-employed had higher wages, although they were less likely to have benefits, than those in traditional employment, while those working part time had both lower wages and lower benefits. Among women, the patterns were similar, but the wage differentials were smaller.

Table 3 shows that in 1993 there were substantial differences in earnings and benefits between those who had been in nontraditional employment in the past and those who had not. Among men who were working, past temporary work was associated with slightly lower-than-average current wages and benefits, past part-time employment had little relationship to either wages or benefits, and past self-employment was associated with higher-than-average wages, but lower-than-average benefits. Among women, in contrast, past self-employment was associated with lower-than-average wages, while past temporary or part-time work was associated with higher-than-average wages and nearly average benefits. The small minority of women and men with entirely traditional work histories had, on average, extremely high benefit coverage rates, but lower wage rates, than those who had been in nontraditional employment. The table also indicates that those who were in nontraditional employment in the past were more likely to be in nontraditional employment in 1993.

Effects of nontraditional employment on wages and benefits

Table 4 displays models that estimate the effects of current nontraditional employment on wages and benefits of women and men after controlling for demographic and human-capital variables. The table shows that in 1993, men who were working part time, particularly those working part time voluntarily, had much lower hourly wages than men in traditional jobs, while wages for men who were self-employed were much higher, particularly for those in incorporated businesses. In contrast, both self-employed women and women who worked part time were paid less well than women in traditional jobs, although the average penalty for part-time work was less for women than for men. This finding is related to those of the next model, which show that women who were working part time involuntarily were paid much less than women in traditional jobs or women working part time voluntarily. Also, the penalty in terms of benefits on the job was less for those working part time voluntarily. These results confirm that, at least for women, there appear to be "better," as well as "worse," part-time jobs.¹⁸ Still, in 1993, all forms of nontraditional employment for women and men were associated with lower benefits.

Table 5 shows that, for both men and women, having a nontraditional employment history was associated with lower

current wages and benefits, even after controlling for current employment type, with two exceptions: there were no significant effects on the wages of men or women who were self-employed and incorporated at some time in the past or on the wages of women who voluntarily worked part time in the past. Interestingly, the coefficients on past employment status do not change much with the addition of controls for current employment status, nor are the coefficients for current employment status in these models very different from those estimated without controlling for past employment status. This suggests that, in spite of the high correlation between past and present employment status, each of these has an independent effect on current wages and benefits.

Returns to nontraditional work experience

What are the effects on current wages of the amount of time spent in nontraditional employment, relative to time spent in traditional employment? This question is particularly important in regard to the NLSY sample, because the majority of its respondents have been in nontraditional employment, but the time they have spent in such employment varies a great deal. As shown in table 6, the return to part-time experience was basically zero for men, while for women, the return was about half as large as the return to non-part-time experience. The second model estimates the effects of voluntary and involuntary part-time experience separately and shows that for men, the return to both was basically zero. For women, in contrast, the return to voluntary part-time experience was strongly positive, while the return to involuntary part-time experience was negative. These patterns for men and women can also be seen in the third model, which adds the full set of current and historical nontraditional employment controls. The last column of table 6 displays the results regarding self-employ-

ment of analyses similar to those for part-time employment. For both men and women, there was a positive return to self-employment experience (although, as before, there was a penalty for women for having ever been self-employed at all), and the return to incorporated self-employment experience was even higher than the return to non-self-employment experience. These results suggest that the effects of long-term self-employment are likely to be more positive than the effects of a brief spell of self-employment.

Effects of changes in nontraditional employment on wage growth

To control for unobserved heterogeneity that might bias cross-sectional estimates, this section uses wage growth models to estimate the effects of changes in nontraditional employment and in nontraditional work experience on wage growth over time. Pooling data from 1984–93 yields a data set with 14,581 observations for men and 10,847 observations for women, which is utilized to estimate cross-sectional models for the pooled sample. This data set is also employed to estimate wage growth models in which the dependent variable (the natural logarithm of the hourly wage) and all the independent variables are defined as the change in the variable between the current year (which ranges from 1984 to 1993) and 5 years earlier (that is, from 1979 to 1988).¹⁹ These models are then used to estimate the effects of changes in contemporaneous employment status and changes in nontraditional work experience on changes in wages, both with and without controls for employment history.

Pooled cross-sectional and wage growth estimates of the effects of nontraditional employment on current wages are shown in table 7. As anticipated, some of the coefficients on nontraditional employment—in particular, those involving part-time

Table 2. Wages and benefits, currently employed young men and women, 1993

Wage or benefit	All workers	Traditional	Part time	Self-employed
Men¹				
Mean wage	\$12.68	\$12.46	\$10.87	\$16.20
Percent with:				
Health benefits	73.04	80.11	27.17	12.20
Pension	56.55	62.35	20.88	6.44
Women²				
Mean wage	10.50	10.61	10.02	11.05
Percent with:				
Health benefits	76.15	85.13	39.30	3.29
Pension	64.16	71.67	33.43	2.63

¹ N = 3,337 for all workers, 2,938 for traditional workers, 126 for part-time workers, and 295 for self-employed workers.

² N = 2,870 for all workers, 2,303 for traditional workers, 461 for part-time workers, and 158 for self-employed workers.

NOTE: Traditional workers are those who currently neither are working

part time nor are self-employed. All wages are in 1993 dollars. The percentage with health benefits (percentage with a pension) reflects those whose employer provides health insurance (a pension) and does not include those who have coverage from other sources (for example, a spouse). By definition, the percentage with health benefits or a pension among those who are self-employed and unincorporated is zero.

Table 3. Wages and benefits, currently employed young men and women, by past employment status, 1993

Wage or benefit	All workers	Always traditional	Ever part time	Ever self-employed	Ever temporary
Men¹					
Mean wage	\$12.88	\$12.35	\$12.89	\$13.27	\$12.24
Percent:					
With health benefits	73.04	86.69	70.74	44.76	70.05
With pension	56.55	66.05	55.90	30.78	54.09
Part time	3.78	.00	7.09	6.41	4.72
Self-employed	8.84	.00	9.28	35.71	8.99
Women²					
Mean wage	10.50	9.91	10.69	9.82	10.65
Percent:					
With health benefits	76.15	89.20	72.23	41.41	75.94
With pension	64.16	74.76	61.75	32.39	64.17
Part time	16.06	.00	22.07	25.96	16.46
Self-employed	5.55	.00	6.23	33.33	10.86

¹ N = 3,337 for all workers, 709 for those who always have been traditional workers, 1,777 for those who have ever worked part time, 826 for those who have ever been self-employed, and 1,736 for those who have ever been temporary workers.

² N = 2,870 for all workers, 430 for those who always have been traditional

workers, 2,090 for those who have ever worked part time, 479 for those who have ever been self-employed, and 1,416 for those who have ever been temporary workers.

NOTE: Workers classified as always traditional are those who have never worked part time, been self-employed, or been temporary workers.

nontraditional employment—change in the wage growth estimates, compared with those found in the cross-sectional models, indicating that unobserved heterogeneity does play a part. For men, significant penalties are associated with part-time work in both models, but the penalties are substantially lower in the wage growth model than in the cross-sectional one, suggesting that the cross-sectional estimate is biased downwards. For women, the penalty for switching to involuntary part-time work also is much less negative than the penalty for being in such work in the cross-sectional model, suggesting negative heterogeneity bias, but the penalty for moving to voluntary part-time work is more negative than the same penalty in the cross-sectional model, suggesting positive heterogeneity bias. Note that there are no strong positive or negative returns to self-employment, suggesting that the positive returns to self-employment for men (and the negative returns for women) seen in the single-year cross sections in tables 4 and 5 may reflect unobserved differences in wage-enhancing attributes such as motivation and ability.

In models that control for changes in the length of nontraditional work experience, also shown in table 7, the results for part-time employment are generally consistent across the wage growth and cross-sectional models (except that returns to experience are generally higher in the wage growth estimates). For men, both voluntary and involuntary part-time experience is worth less than full-time experience, while for women, voluntary part-time experience is worth at least as much as full-time experience, but involuntary part-time experience is worth essentially zero. The relative returns to self-employment experience also are fairly consistent across the wage growth and ordinary least squares models. On the other

hand, in contrast to the earlier cross-sectional results, the wage growth models show no penalty for having performed temporary work in the past.

THIS ARTICLE HAS USED 15 YEARS OF DATA from the NLSY to examine the possible effects of nontraditional employment and nontraditional work experience over time. It also has examined the effects of changes in nontraditional employment on wage growth, to control for unobserved variation between those who are currently in, or ever have been in, nontraditional, as opposed to traditional, jobs.

The results reported here confirm that both men and women in nontraditional employment tend to have different earnings and benefits than those in traditional employment, whether or not other characteristics are controlled for. There is a strong tendency for part-time employment and self-employment to persist over time,²⁰ but in spite of this, past and present nontraditional employment have independent effects on earnings and benefits. Further, the results indicate that both men and women who are, or who ever have been, in any type of nontraditional employment are far less likely to have benefit coverage than the minority who always have had traditional jobs.

Among men, those currently self-employed (especially those in incorporated businesses) tend to do better than other workers, while among women, the opposite tends to be true. This finding is consistent with other evidence about the relative positions of self-employed men and self-employed women.²¹ The greater negative impact on men than on women of currently working part time—particularly voluntarily—is consistent with the hypothesis that employers may be more

likely to judge men in part-time employment unfavorably because their careers do not conform to expectations. Second, the results of the wage growth models suggest that men who work part time voluntarily may have negative attributes (such as less ability or motivation) that are not measured in our data, while the opposite is true for women. Finally, it is entirely possible that low wages cause men to work fewer hours, rather than vice versa, while there is evidence to the contrary for women.²²

More generally, the results from the wage growth models suggest that some of the effects of nontraditional employment are due to unobserved heterogeneity between nontraditional and traditional workers. For instance, such heterogeneity

would explain all of the negative effects of temporary work and all of the positive effects of self-employment found in cross-sectional analyses, because we do not find these effects in the wage growth models. Importantly, however, this would not appear to be the case for the effects of part-time employment, which were only modestly attenuated. Thus, this article provides strong evidence that, over time, part-time work is associated with lower pay for both men and women, although part-time work experience does have some value for women, particularly when it is voluntary. Overall, the results reported suggest that the long-term, as well as the short-term, consequences of nontraditional work depend on both the type of work and the gender of the worker.

Table 4. Effects of current nontraditional employment on wages and benefits, 1993

Employment status	Logarithm of wage	Logarithm of wage	Health	Pension
Men				
Currently working part time	¹ -.0.1615 (.0410)	....	....	....
Voluntarily .....	....	¹ -.3273 (.0881)	¹ -.4025 (.1123)	¹ -.3325 (.1015)
Involuntarily .....	....	¹ -.1458 (.0556)	¹ -.5077 (.0689)	¹ -.4070 (.0607)
Currently self-employed	¹ .1310 (.0273)	....	....	....
Incorporated .....	....	¹ .2736 (.0596)	¹ -.2103 (.0697)	¹ -.3341 (.0556)
Unincorporated .....	....	¹ .0969 (.0301)	....	....
R ²	.2676	.2698	.0883	.0817
Number of observations	3,337	3,337	3,252	3,252
Women				
Currently working part time	¹ -.0469 (.0223)	....	....	....
Voluntarily .....	....	.0115 (.0289)	¹ -.3527 (.0408)	¹ -.2984 (.0403)
Involuntarily .....	....	¹ -.2165 (.0464)	¹ -.5335 (.0579)	¹ -.4193 (.0579)
Currently self-employed	¹ -.0952 (.0352)	....	....	....
Incorporated .....	....	¹ -.1993 (.0977)	¹ -.4577 (.1258)	¹ -.4145 (.1135)
Unincorporated .....	....	¹ -.0911 (.0375)	....	....
R ²	.3132	.3178	.1687	.1280
Number of observations	2,870	2,870	2,659	2,659

¹ Significant at 0.01 level.

NOTE: Equations yielding the natural logarithm of hourly wages are estimated using ordinary least squares. Health and pension equations are estimated using probits, with marginal effects reported in the table. All models include controls for age, years of actual work experience, level of education, marital status, number of children, race (black), and ethnicity (Hispanic). Models that distinguish between voluntary and involuntary part-time work (and between incorporated and unincorporated self-employment) include controls

for part time undefined (and self-employed undefined). The category of currently self-employed and unincorporated drops out of the benefits models because, by definition, individuals in this category have no employer-provided benefits. The sample for the wage equations includes all individuals who were working in 1993 and had no missing wage or work history data. The sample for the health and retirement equations includes all individuals in the wage sample, minus the self-employed unincorporated and those missing health or retirement data. Standard errors are in parentheses.

Table 5. Effects of past nontraditional employment on wages and benefits, 1993

Employment status	Logarithm of wage	Logarithm of wage	Health	Pension
Men				
Ever worked part time:				
Voluntarily	¹ -.0569 (.0229)	-0.0411 (.0230)	-0.0136 (.0256)	0.0223 (.0280)
Involuntarily	¹ -.1100 (.0198)	¹ -.0994 (.0203)	¹ -.0468 (.0214)	-.0347 (.0244)
Ever self-employed:				
Incorporated	¹ .1121 (.0361)	.0090 (.0442)	¹ -.3980 (.0496)	¹ -.3691 (.0395)
Unincorporated	-.0194 (.0201)	¹ -.0758 (.0237)	¹ -.4169 (.0226)	¹ -.3488 (.0218)
Ever temporary	¹ -.0664 (.0161)	¹ -.0646 (.0161)	-.0305 (.0166)	-.0347 (.0194)
Currently working part time:				
Voluntarily .....	....	¹ -.3128 (.0883)	¹ -.3901 (.1239)	¹ -.3261 (.1074)
Involuntarily .....	....	-.0728 (.0568)	¹ -.4194 (.0895)	¹ -.3465 (.0786)
Currently self-employed:				
Incorporated .....	....	¹ .2540 (.0728)	.0391 (.0599)	-.0267 (.0878)
Unincorporated .....	....	¹ .1609 (.0353)	....	....
R ²	.2735	.2819	.1990	.1450
Number of observations	3,337	3,337	3,252	3,252
Women				
Ever worked part time:				
Voluntarily	.0314 (.0216)	.0323 (.0226)	¹ -.0845 (.0262)	-.0449 (.0283)
Involuntarily	¹ -.1180 (.0212)	¹ -.1050 (.0221)	¹ -.1106 (.0264)	¹ -.0648 (.0279)
Ever self-employed:				
Incorporated	-.0781 (.0603)	.0056 (.0763)	¹ -.3193 (.1052)	¹ -.4194 (.0843)
Unincorporated	¹ -.0881 (.0238)	-.0780 (.0282)	¹ -.3825 (.0306)	¹ -.3254 (.0303)
Ever temporary	¹ -.0381 (.0165)	¹ -.0387 (.0165)	-.0001 (.0177)	-.0066 (.0210)
Currently working part time:				
Voluntarily .....	....	.0076 (.0297)	¹ -.3086 (.0441)	¹ -.2738 (.0435)
Involuntarily .....	....	¹ -.1321 (.0476)	¹ -.4796 (.0682)	¹ -.3838 (.0651)
Currently self-employed:				
Incorporated .....	....	-.2188 (.1223)	-.2158 (.1676)	-.0679 (.1749)
Unincorporated .....	....	-.0324 (.0441)	....	....
R ²	.3290	.3313	.2451	.1683
Number of observations	2,870	2,870	2,659	2,659

¹ Significant at 0.01 level.

NOTE: Equations yielding the natural logarithm of hourly wages are estimated using ordinary least squares. Health and pension equations are estimated using probits, with marginal effects reported in the table. All models also include controls for age, years of work experience, level of education, marital status, number of children, race (black), and ethnicity (Hispanic). Models that

distinguish between voluntary and involuntary part-time work (and between incorporated and unincorporated self-employment) include controls for part time undefined (and self-employed undefined). The category of currently self-employed and unincorporated drops out of the benefits models because, by definition, individuals in this category have no employer-provided benefits. Standard errors are in parentheses.

Table 6. Effects of part-time and self-employment work experience on current wages, 1993

Experience or employment status	Logarithm of wage	Logarithm of wage	Logarithm of wage	Logarithm of wage
Men				
Experience:				
Full time	¹ 0.0428 (.0033)	¹ 0.0430 (.0034)	¹ 0.0394 (.0034)	....
Part time	-.0049 (.0068)			....
Voluntary .....	....	-.0094 (.0100)	-.0141 (.0118)	....
Involuntary .....	....	-.0154 (.0125)	.0062 (.0173)	....
Non-self-employed .....	....	....	....	¹ 0.0394 (.0034)
Self-employed:				
Incorporated .....	....	....	....	¹ 0.0832 (.0177)
Unincorporated .....	....	....	....	.0054 (.0071)
Employment status:				
Ever worked part time:				
Voluntary .....	....	....	.0258 (.0270)	-.0406 (.0229)
Involuntary .....	....	....	-.0425 (.0272)	¹ -.0999 (.0202)
Ever self-employed:				
Incorporated .....	....	....	.0002 (.0441)	-.0196 (.0544)
Unincorporated .....	....	....	¹ -.0728 (.0236)	-.0219 (.0262)
Ever temporary .....	....	....	¹ -.0600 (.0162)	¹ -.0661 (.0161)
R ²	.2737	.2740	.2872	.2882
Observations	3,337	3,337	3,337	3,337
Women				
Experience:				
Full time	¹ 0.0534 (.0029)	¹ 0.0518 (.0029)	¹ 0.0502 (.0030)	....
Part time	¹ 0.0262 (.0047)	....	....	....
Voluntary .....	....	¹ 0.0502 (.0057)	¹ 0.0404 (.0068)	....
Involuntary .....	....	¹ -.0473 (.0122)	-.0239 (.0171)	....
Non-self-employed .....	....	....	....	¹ 0.0457 (.0030)
Self-employed:				
Incorporated .....	....	....	....	¹ 0.1210 (.0350)
Unincorporated .....	....	....	....	¹ 0.0590 (.0105)
Employment status:				
Ever worked part time:				
Voluntarily .....	....	....	¹ 0.0654 (.0241)	.0306 (.0223)
Involuntarily .....	....	....	.0019 (.0288)	¹ -.1052 (.0221)
Ever self-employed:				
Incorporated .....	....	....	.0133 (.0755)	-.1123 (.0926)
Unincorporated .....	....	....	¹ -.0691 (.0280)	¹ -.0900 (.0317)
Ever temporary .....	....	....	-.0273 (.0165)	¹ -.0365 (.0167)
R ²	.3247	.3386	.3443	.3318
Number of observations	2,870	2,870	2,870	2,870

¹ Significant at 0.01 level.

Note: All models include controls for age, experience, education, marital

status, children, race (black), and ethnicity (Hispanic). Models also include controls for type of experience and type of part-time experience undefined. Standard errors are in parentheses.

Table 7. Effects of changes in nontraditional employment and changes in nontraditional work experience on wage growth, 1979-93

Experience or employment status	Pooled ordinary least squares	Wage growth	Pooled ordinary least squares	Wage growth	Pooled ordinary least squares	Wage growth
Men						
Employment status:						
Part time:						
Voluntary	¹ -0.3126 (.0499)	¹ -0.2223 (.0248)	....	....	....	....
Involuntary	¹ -.1609 (.0429)	¹ -.0628 (.0242)	....	....	....	....
Self-employed:						
Incorporated	.1073 (.0602)	.0421 (.0540)	....	....	....	....
Unincorporated	-.0008 (.0362)	.0383 (.0316)	....	....	....	....
Experience:						
Full time .....	....	....	¹ .0403 (.0043)	¹ .0683 (.0057)	....	....
Part time:						
Voluntary .....	....	....	-.0147 (.0130)	¹ .0381 (.0189)	....	....
Involuntary .....	....	....	.0022 (.0263)	.0261 (.0265)	....	....
Non-self-employed .....	....	....	....	....	¹ .0434 (.0050)	¹ .0998 (.0085)
Self-employed:						
Incorporated .....	....	....	....	....	¹ .0679 (.0165)	¹ .0973 (.0269)
Unincorporated .....	....	....	....	....	.0145 (.0094)	¹ .0720 (.0113)
Ever temporary .....	....	....	¹ -.0762 (.0168)	.0145 (.0181)	¹ -.0800 (.0168)	.0127 (.0182)
R ²	.2066	.1019	.2284	.1053	.2252	.1065
Number of observations	14,581	14,581	14,581	14,581	14,581	14,581
Women						
Employment status:						
Part time:						
Voluntary	-.0592 (.0309)	¹ -.0999 (.0186)	....	....	....	....
Involuntary	¹ -.2303 (.0369)	¹ -.0840 (.0264)	....	....	....	....
Self-employed:						
Incorporated	.0719 (.1035)	.1117 (.1239)	....	....	....	....
Unincorporated	-.0246 (.0731)	.0735 (.0627)	....	....	....	....
Experience:						
Full time .....	....	....	¹ .0492 (.0043)	¹ .0471 (.0054)	....	....
Part time:						
Voluntary .....	....	....	¹ -.0466 (.0101)	¹ .0523 (.0101)	....	....
Involuntary .....	....	....	-.0136 (.0200)	.0071 (.0238)	....	....
Non-self-employed .....	....	....	....	....	¹ .0559 (.0047)	¹ .0699 (.0073)
Self-employed:						
Incorporated .....	....	....	....	....	.0090 (.0422)	.0611 (.0404)
Unincorporated .....	....	....	....	....	¹ .0712 (.0172)	¹ .0634 (.0149)
Ever temporary .....	....	....	-.0293 (.0176)	-.0211 (.0203)	-.0259 (.0173)	-.0191 (.0203)
R ²	.2433	.1005	.2637	.1056	.2685	.1079
Number of observations	10,847	10,847	10,847	10,847	10,847	10,847

¹ Significant at 0.01 level.

NOTE: All models include controls for age, education, marital status (including married and previously married), number of children, and year; ordinary least squares models control for race and ethnicity as well. The second and third pair of models also control for whether the individual ever worked part time or was self-employed. The pooled ordinary least squares models include

observations from 1984 to 1993. In the wage growth models, all variables are expressed as the difference between the value in the current year (ranging from 1984 to 1993) and the value 5 years earlier (ranging from 1979 to 1988). All models are weighted (using the inverse probability of appearing in the sample) to control for the unbalanced panel, and the standard errors are corrected for cluster sampling. Standard errors are in parentheses.

Footnotes

ACKNOWLEDGMENT: We thank Rebecca Blank, Françoise Carré, Pam Joshi, and Chris Tilly for their very helpful suggestions. Andrew Lenney provided excellent research assistance.

¹ For profiles of these workers, see Anne E. Polivka, "Contingent and alternative work arrangements, defined," pp. 3-9, and "A profile of contingent workers," pp. 10-21; and Sharon R. Cohany, "Workers in alternative employment arrangements," pp. 31-45. For analyses of their reasons for entering into such arrangements, see Polivka, "Into contingent and alternative employment: by choice?" pp. 55-74; and Donna S. Rothstein, "Entry into and consequences of nonstandard work arrangements," pp. 75-82.

² Steven Hipple and Jay Stewart, "Earnings and benefits of contingent and noncontingent workers," pp. 22-30; and Hipple and Stewart, "Earnings and benefits of workers in alternative work arrangements," pp. 46-54.

³ Rothstein, "Nonstandard work arrangements."

⁴ See, for example, Rebecca M. Blank, "Contingent Work in a Changing Labor Market," in Richard Freeman and Peter Gottschalk, eds., *Generating Jobs* (New York, Russell Sage Foundation, 1998), pp. 258-94.

⁵ Rothstein, "Nonstandard work arrangements."

⁶ See Kathleen Barker, "Changing Assumptions and Contingent Solutions: The Costs and Benefits of Women Working Full- and Part-Time," *Sex Roles*, January 1993, pp. 47-71; and Chris Tilly, *Half a Job: Bad and Good Part-Time Jobs in a Changing Labor Market* (Philadelphia, Temple University Press, 1996).

⁷ For instance, young people in alternative work arrangements may not be unduly concerned about their wages rising less in later years or that they are less likely to have health insurance or pension benefits. Nor will many of them look ahead to the time when they may have greater problems finding new jobs when they are older, not only because of age discrimination in hiring, but because their discontinuous employment history is likely to be viewed unfavorably by potential employers. Similarly, single heads of families often have to take nonstandard jobs when they have young children, but will find it very difficult to manage with low earnings and meager benefits when they are faced with education expenses, occasional medical emergencies, and, finally, retirement without adequate provisions for any of these eventualities.

⁸ Rebecca M. Blank, "Introduction," in Rebecca M. Blank, ed., *Social Protection versus Economic Flexibility* (Chicago, University of Chicago Press), 1994, pp. 1-19; and Jerry A. Jacobs and Zhenchao Qian, "The Duration of Employment in Part-Time Jobs," unpublished paper, University of Pennsylvania, May 1994, explored dynamic labor supply choices between part-time and full-time work. Ethel Jones and James Long, "Part-Week Work and Human Capital Investment by Married Women," *Journal of Human Resources*, vol. 14, no. 4, 1979, pp. 563-78; and Mary Corcoran, Greg Duncan, and Michael Ponza, "A Longitudinal Analysis of White Women's Wages," *Journal of Human Resources*, winter 1983, pp. 497-520, showed that, at least in the short run, part-time work is related to lower wage growth.

⁹ We use the term *nontraditional* here to avoid confusion, because the workers we are looking at differ somewhat from the workers included in the BLS definition of nonstandard employment.

¹⁰ R. Leppel and S. H. Clain, "Determinants of Voluntary and Involuntary Part-Time Employment," *Eastern Economic Journal*, winter 1993, pp. 59-70.

¹¹ Obviously, this definition of a temporary worker is not ideal, but it is the best that can be done with the NLSY data. One problem is that the question is asked after the worker has left the job, so biased information may result if people use this category to describe jobs that ended for reasons other than that the position was temporary (such as involuntary termination). In that case, we might overestimate the number of people who have held temporary jobs. We might also overestimate the negative effects of such employment; however, in this regard, it is reassuring to note that we in fact find no long-run negative effect of temporary employment once we control for unobserved heterogeneity. A second problem is that the NLSY question may yield information that is at odds with how one customarily thinks of

temporary work. A person may report that a job held for a number of years was temporary, whereas typically, temporary jobs are short term. Still, there is in fact no agreed-upon time limit for a temporary job, and thus, the implicit definition provided by the worker is likely to be as valid as any other. A third problem is that the job may not in fact have been temporary, but may have been viewed as temporary by the jobholder. It would be preferable to distinguish these two situations, as we do between voluntary and involuntary part-time work, but the data do not allow us to do this. Note, however, that in both these instances, the job was in fact temporary, just as both voluntary and involuntary part-timers are counted as part-time workers.

¹² It is important to note that the nontraditional categories are not mutually exclusive. (That is, an individual may belong to more than one category.)

¹³ More formally, the model takes the general form $lw_i = \beta_0 + \beta_1 age_i + \beta_2 exp_i + \beta_3 ed1_i + \beta_4 ed2_i + \beta_5 ed3_i + \beta_6 mar_i + \beta_7 child_i + \beta_8 PT_i + \beta_9 SE_i + \mu_i$, where lw = natural logarithm of hourly wage, age = age in years, exp = actual work experience in years, $ed1$ = college degree or higher, $ed2$ = some college, $ed3$ = high school degree only ($ed4$, less than high school, is the omitted category), mar = married, $child$ = number of children, PT = dummy variable for part time, SE = dummy variable for self-employed, and μ_i = a disturbance term that is assumed to be independent and identically distributed. All wages are in 1993 dollars. Extreme values (wages below 40 percent of the minimum wage and wages above \$100 per hour in 1993 dollars, together representing less than 1 percent of the sample) are excluded.

¹⁴ See Jones and Long, "Part-Week Work"; and Corcoran, Duncan, and Ponza, "Longitudinal Analysis."

¹⁵ See Jane Waldfogel, "The Effect of Children on Women's Wages," *American Sociological Review*, vol. 62, 1997, pp. 209-17.

¹⁶ More formally, this wage growth or difference model takes the general form $\Delta lw_i = \beta_0 + \beta_1 \Delta age_i + \beta_2 \Delta exp_i + \beta_3 \Delta ed1_i + \beta_4 \Delta ed2_i + \beta_5 \Delta ed3_i + \beta_6 \Delta mar_i + \beta_7 \Delta child_i + \beta_8 \Delta PT_i + \beta_9 \Delta SE_i + \Delta \alpha_i + \Delta \mu_i$, where the variables are defined as in footnote 13 and where α_i = a fixed effect that may be correlated with one or more independent variables and μ_i = a disturbance term that is assumed to be independent and identically distributed. Because individuals contribute multiple observations and different numbers of observations, the standard errors are corrected for clustered sampling and weighted regressions are used. Other types of fixed-effect models could be estimated, but this model is intuitively the most straightforward, because the dependent variable is simply the change in wage from one period to the next.

¹⁷ These proportions are consistent with those found in other research. For example, Thomas Nardone, "Part-Time Employment: Reasons, Demographics, and Trends," *Journal of Labor Research*, summer 1995, pp. 275-92, reports that 4.6 percent of men and 19.2 percent of women aged 25 to 54 were employed part time in 1993, and John E. Bregger, "Measuring self-employment in the United States," *Monthly Labor Review*, January-February 1996, pp. 3-9, finds that 7 percent of men and 5 percent of women aged 25 to 34 were self-employed in 1994.

¹⁸ See Rebecca M. Blank, "Understanding Part-Time Work," in Laurie Bassi and David Crawford, eds., *Research in Labor Economics*, vol. 11 (Greenwich, CT, JAI Press, 1990), pp. 137-58; and Tilly, *Half a Job*.

¹⁹ Models estimated with a 1-year and a 3-year interval produce similar results.

²⁰ Marianne A. Ferber and Jane Waldfogel, *The "Contingent" Labor Force: Blessing and/or Curse*, Radcliffe Public Policy Institute paper, 1996.

²¹ See, for instance, Theresa Devine, "Characteristics of self-employed women in the United States," *Monthly Labor Review*, March 1994, pp. 20-24.

²² See Alice Nakamura and Masao Nakamura, "Part-Time and Full-Time Work Behavior of Married Women," *Canadian Journal of Economics*, May 1983, pp. 229-57. These researchers found that Canadian wives with higher potential wage rates were more likely to be employed, but that, among women who were employed, those who were paid more per hour worked fewer hours.