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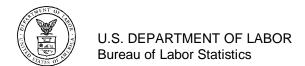
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The Implications of Flexible Staffing Arrangements for Job Security

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There is a widespread perception that the nature of the employment relationship in the United States is fundamentally changing, resulting in less attachment between workers and firms and a decline in job security. For many, flexible staffing arrangements--including temporary, contract, and part-time work—epitomize unstable jobs and recent growth in some of these arrangements is viewed as evidence of a broader decline in job security.

If flexible staffing arrangements are a source of significant decline in job security in the United States, then it must be the case that 1) the share of employment in these arrangements has increased substantially in recent years, and 2) these jobs are indeed less stable. In fact, there is little evidence on either matter. Until recently, statistics providing a comprehensive picture of workers in flexible arrangements were not collected and thus data on trends in these types of employment are spotty. Similarly, although some studies have examined the labor market dynamics of female part-time workers (Blank 1994) and workers in the temporary help industry (Segal and Sullivan 1997a, 1997b), lack of data has hampered the examination of such issues in other, quantitatively important arrangements. The primary purpose of this paper is to shed new light on the job and employment stability of workers in a wide range of flexible staffing arrangements using two new sources of data.

Although it is generally presumed that flexible work arrangements reduce job security, such arrangements may serve as a vehicle for obtaining a more permanent, regular position, for those desiring such a job. Companies may use flexible staffing arrangements, in part, to screen workers for regular positions. Under this scenario, the use of such arrangements may actually result in better job matches and longer job tenure. Even if companies do not generally promote workers in flexible staffing arrangements into regular positions, workers may gain valuable job experience by holding such positions and consequently be better able to find more permanent, regular positions. In this case, the use of flexible work arrangements may help to reduce unemployment among certain groups of workers. If, however, companies primarily are substituting flexible arrangements for regular positions and are rarely using them as a

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screening device, the growth in such arrangements may result in lower job tenure, more frequent job changes, and higher levels of unemployment in the aggregate.

We draw on a nationwide employer survey on flexible staffing arrangements conducted by the Upjohn Institute for Employment Research and on the February 1995 Supplement to the Current Population Survey (CPS) on Contingent and Alternative Work Arrangements to provide insights into the relative importance of each scenario. The Upjohn Institute employer survey provides evidence on the magnitude of employers' use of various flexible staffing arrangements, why employers use these staffing arrangements, and the extent to which employers move workers in these positions into regular jobs within their organization.

The February 1995 supplement to the CPS represented the first attempt in government statistics to provide a comprehensive count of workers in a wide variety of employment arrangements. Exploiting the longitudinal component of the CPS, we match workers in February 1995 to their records in March 1995 and February 1996. With these matched records, we are able to follow individuals holding flexible work arrangements in February 1995 and compare their subsequent labor force status with those holding regular, full-time positions in February 1995.

Flexible Work Arrangements: Definitions and Prevalence

Using the February 1995 CPS data, we classify workers into eight mutually exclusive categories: agency temporaries, on-call workers, direct-hire temporary workers, contract company workers, independent contractors, regular self-employed (who are not independent contractors), regular part-time workers, and regular full-time workers. We do not distinguish between those who work part-time and full-time hours in the first six categories of employment. Regular part-time and regular full-time workers comprise those who are not classified in one of the other arrangements. Our temporary help agency category includes all of those who state they are paid by a temporary help agency. Thus, it includes the permanent staff of these agencies, though they are expected to represent a relatively small percentage of

this category. In the February 1995 CPS, a small number of individuals was classified as both on-call and contract company workers. We classified these individuals as on-call workers in our data set.

The category direct-hire temporaries comprises temporaries hired directly by the company, rather than through a staffing agency. The CPS does not include a specific question classifying individuals as direct-hire temporaries. We constructed this category based on a series of questions in the February Supplement. Our "broad" definition of direct-hire temporaries includes those who indicated that their job is temporary or that they can not stay in their job as long as they wish for any of the following reasons: they are working only until a specific project is completed, they are temporarily replacing another worker, they were hired for a fixed period of time, their job is seasonal, or they expect to work for less than a year because their job is temporary. Our "narrow" definition of direct-hire temporary is the same as our broad definition except we require individuals to explicitly state that their job is temporary. Our category of direct-hire temporaries excludes those already classified in another flexible work arrangement.

We also use broad and narrow definitions of contract company workers. In the broad definition, we classify individuals as contract company workers if they indicated that they work for a company that contracts out their services and that they generally work at the customer's worksite. In the narrow definition, we also require that the individual usually be assigned to just one customer.

The category independent contractor includes those who indicated that they work as an independent contractor, an independent consultant, or a free-lance worker. Thus, the category independent contractor is a large, and no doubt diverse, group of workers. The vast majority of independent contractors (85 percent) report being self-employed.[1]

Table 1 reports the distribution of employment by employment arrangement according to data from the February 1995 CPS. It is interesting to note that agency temporaries account for only about one

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[1]A further explanation of the variables in the Contingent and Alternative Work Arrangement Supplement may be found in a data appendix available from the authors and in Polivka (1996).

percent of total employment in these data. In the Current Employment Survey (CES), the Bureau of Labor Statistics' establishment survey, the percentage of employment accounted for by agency temporaries is about double that number. Part of the difference may be explained by differences in the data collected in the two surveys. Specifically, the CES counts jobs in the temporary help services industry, while the CPS counts workers whose main jobs are in this industry. Consequently, individuals registered with more than one temporary agency would show up once in the CPS, but could appear two or more times in the CES. Also multiple job holders with secondary jobs in the temporary help industry would not be counted in the CPS as agency temporaries, whereas those workers' secondary jobs would be counted in the CES. Another possible explanation is that, in spite of questions in the CPS designed to avoid this problem, some respondents may still view the client to whom they are assigned as their employer and thus fail to report that they are paid by a temporary help service. Finally, many companies classified as temporary help agencies in the CES may also be structured to provide both agency temporaries and contract company workers or leased employees (Polivka 1996). Using estimates from a recent BLS study, it can be shown that about 32 percent of the difference between the CPS and CES estimates are accounted for by the inclusion of leased employees as agency temporaries in the CES.[2]

Given the caveat that the CPS may understate employment in temporary help agencies, it is still interesting to note that on-call, direct-hire temporary, contract company, and independent contractor are all quantitatively as important or more important than temporary help agency employment. Together, agency temporary, on-call, direct-hire temporary, contract company, independent contract, and regular part-time workers account for 26.6 percent of total employment.

Workers in flexible arrangements, except those working as contract company workers, were asked

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[2]This figure comes from the authors' calculations from an unpublished internal BLS work table on the prevalence of employee leasing in BLS's establishment estimates of the Help Supply Industry.

if they preferred a regular wage and salary or full-time arrangement. If workers in these arrangements responded affirmatively, we classified them as dissatisfied with their current arrangement. We classified contract company workers as dissatisfied with their arrangement if they reported that they had been searching for another primary job as something other than a contract worker. The percent in each flexible arrangement dissatisfied with their work arrangement is reported in Table 1, column 2. Apart from independent contractors and regular, self-employed, the level of dissatisfaction is quite high. Among agency temporaries, on-call workers, and direct-hire temporaries, at least half report being unhappy with their work arrangement.

Workers in flexible arrangements also generally have much shorter job tenure. As shown in Table 1, the percent of workers with job tenure of one year or less is much higher for workers in flexible arrangements than for regular, full-time workers, with the exception of independent contractors who, like the regular, self-employed, have a much lower percentage with very short tenure. Although workers in flexible arrangements (including regular part-time workers but excluding regular self-employed) comprise 26.6 percent of the workforce, they account for 41.2 percent of those with job tenures of a year or less. This fact is at least consistent with the hypothesis that any shift in employment toward flexible staffing arrangements will result in lower job tenure in the aggregate.

Information on the number of workers in flexible staffing arrangements was also collected in the 1996 Upjohn Institute employer survey. In that survey, employers from a stratified random sample of 550 private sector establishments with 5 or more employees in the continental United States were interviewed by telephone on their use of five types of flexible work arrangements: temporary help agency, direct-hire temporary , part-time, on-call, and contract workers. The implied magnitude of the use of flexible staffing arrangements in the Upjohn survey is very similar to figures in the February 1995 CPS Supplement, where

comparisons are possible.[3] The Upjohn Institute employer survey also provides information on how employment of workers in flexible arrangements is distributed across businesses. Interestingly, use of all types of flexible arrangements is widespread: 46 percent of the establishments in the survey used agency temporaries, 38 percent used direct-hire temporaries, 72 percent used regular part-time workers, 27 percent used on-call workers, and 44 percent used contract workers. Seventy-eight percent of the establishments in the sample used at least one type of flexible staffing arrangement besides regular, part-time workers.

Trends in the Use of Flexible Staffing Arrangements

As noted above, the Supplement to the February 1995 CPS represented the first attempt in government statistics to take a comprehensive count of workers in a wide variety of work arrangements. The supplement was repeated in February 1997. Between these two points in time, while the number of workers in these arrangements grew, they remained roughly the same as a percentage of total employment (U.S. Department of Labor, 1997). This two-year time period, during which the economy was in rapid expansion, is too short to detect any real trends in these employment arrangements for the 1990s, however.

Longer time series on employment in flexible work arrangements are limited to part-time workers and agency temporaries. Government statistics on part-time employment come from the CPS. The fraction of workers usually working fewer than 35 hours per week rose substantially during the 1970s, but only modestly in the 1980s. Part-time employment grew from 14.5 percent of total employment in 1969 to 16.4 percent in 1979 to 17.0 percent in 1989; all of these years represented peaks in the business cycle. Changes to the CPS in 1994 increased the number classified as part-time. However, when adjustment factors designed to account for the effect of the redesign are used, part-time employment actually declined

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[3]A more detailed discussion of the survey instrument and comparisons between figures in the Upjohn Institute employer survey and the February 1995 CPS are found in Houseman (1997a, 1997b).

from 17.0 percent of total employment in 1989 to 16.2 percent in 1997 (Polivka and Miller, 1995). The

CES provides information on employment in the help supply services industry, SIC 7363, which is

comprised primarily of temporary help agencies. From 1982 to 1996 the share of non-farm payroll

employment in help supply services rose rapidly from 0.5 percent to 2.0 percent.

Some information is available on employment trends in other types of flexible work arrangements,

such as on-call, direct-hire temporary, contract company, and independent contractor work from various

employer surveys. Although none of these surveys provides time series data on employment in other

arrangements for a nationally representative sample of employers, collectively, the evidence from the

surveys suggests growth at least in some flexible arrangements during the 1980s and 1990s. Evidence

from government statistics and privately-conducted employer surveys on growth in various flexible work

arrangements is summarized in Table 2.

Why Employers Use Flexible Staffing Arrangements

It is generally presumed that workers in most flexible arrangements enjoy little job security

compared with those in regular positions and thus that any growth in the proportion of workers in flexible

arrangements will reduce job stability, as evidenced by lower job tenure, and employment stability, as

evidenced by higher unemployment. However, if firms are primarily using these arrangements as a way to

screen workers for regular jobs, their growth may actually increase job stability by facilitating better

matches between workers and firms. Given the large number of lawsuits brought by dismissed employees,

employers may wish to screen workers through temporary help and other staffing agencies, which are the

official employer during the probationary period. Staffing agencies may also develop a comparative

advantage in recruiting and screening workers for certain types of jobs. In addition, because workers in

flexible arrangements usually receive fewer benefits than full-time workers, a company may wish to try out

a worker in a flexible staffing arrangement before incurring expensive benefits costs. Even if firms do not

generally extend offers of regular employment to workers in these arrangements, such jobs may provide

valuable work experience and help workers find regular positions. Thus, even if work in these arrangements lowers a worker's expected job tenure, it may result in little increase in the probability of becoming unemployed.

The Upjohn Institute employer survey on flexible staffing arrangements provides some evidence on the first issue: the extent to which firms use flexible arrangements as a screening device and move workers in these arrangements into regular positions. If a company used agency temporaries, direct-hire temporaries, on-call workers, or regular part-time workers, they were asked a detailed set of questions on why they used the particular arrangement. Although screening candidates for regular jobs was cited as important by many employers, particularly those using agency temporaries (21 percent) and part-time workers (15 percent), the reasons most commonly cited by employers for using various types of staffing arrangements concern the need to accommodate fluctuations in their workload or in their regular staff. For example, about half of the employers using agency temporaries cited filling a vacancy until a regular employee is hired, filling in for an absent regular employee, and providing assistance at times of unexpected increases in business as important; 55 percent of employers using direct-hire temporaries cited seasonal needs; 62 percent of employers using regular part-time workers cited the need for assistance during peak time hours of the day or week; and 69 percent of employers using on-call workers cited the need to fill in for absent employees.

The relative importance of why employers, on average, use flexible staffing arrangements may differ from why, on the margin, employers are increasing their use of these arrangements. The answer to the latter question is particularly relevant for assessing the likely effects of any increase in the use of flexible staffing arrangements on job security. In the Upjohn Institute survey, employers who stated they had increased their employment in a particular flexible staffing arrangement *relative* to regular employment since 1990 were asked why. Table 3 summarizes the responses to this question. The reasons cited for increasing the use of agency temporaries are quite mixed. On the one hand, 24 percent cited greater use of

agency temporaries to screen workers for regular positions and 37 percent cited difficulty finding qualified workers on their own. These responses suggest that many companies are looking ultimately to hire temporary workers into permanent positions. On the other hand, 37 percent of employers cited a need to increase workforce flexibility to better accommodate fluctuations in workload, suggesting a shift in their employment mix toward temporary positions.

For the other types of flexible staffing arrangements, there is no indication that an important reason companies are increasing their use relative to regular workers is to screen workers and move them into regular positions.[4] The need to increase workforce flexibility to better accommodate fluctuations in workload was cited by a large percentage of employers increasing their relative use of short-term hires, part-time workers, and on-call workers. Competitive pressures to reduce costs and inability to compete with contractors on price, quality, and market position are particularly important factors in employers' decisions to contract out work. For all types of flexible staffing arrangements, business expansion was cited by many as an important reason for increasing their relative use. If management increases the use of these arrangements when employment is stagnant or falling, it will have to cut the number of regular positions, potentially harming workplace morale. It can increase the proportion of its workforce in flexible staffing arrangements without reducing the number of regular workers during an expansion. Additionally, management may choose to increase the relative use of workers in flexible arrangements during an expansion if it is concerned that the increase is temporary.

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[4]Employers were asked to state which reasons from a preset list were important for the increase in their use of a particular staffing arrangement. This list varied by type of arrangement. Employers increasing their use of part-time workers, on-call workers, and contractors were not specifically asked whether the increase was to screen workers for regular positions. However, employers were asked whether there were any other important reasons for increasing their use of a particular staffing arrangement. No employer mentioned screening in response to this question.

Employers participating in the survey also were asked to evaluate the extent to which they move workers in flexible arrangements into regular positions. Specifically, employers using agency temporaries, direct-hire temporaries, regular part-time workers, or on-call workers were asked if their organization moved each type of worker into regular positions often, occasionally or sometimes, seldom, or never. Table 4 reports the responses to this set of questions. Although for each type of arrangement only a small minority of employers stated that they often move flexible workers into regular positions, between 36 and 54 percent reported often, occasionally or sometimes moving workers in flexible arrangements into regular positions.

To get a better sense of the quantitative importance of mobility into regular positions, we ran simple correlations between whether or not an employer often moves agency temporaries, direct-hire temporaries or part-time workers into regular positions and the intensity of the employer's use of each type of worker, as measured by the ratio of workers in the flexible arrangement divided by regular workers.[5] We also ran the simple correlation between a combined category of whether the employer often, occasionally or sometimes moves each of these types of workers and the intensity of their use. These correlations are positive (.16 and .14) and significantly different from zero in the case of agency temporaries but are insignificant for direct-hire temporaries and part-time workers. This finding is consistent with that of a survey of agency temporaries by the National Association of Temporary Services (1994) in which more than one-third of respondents reported being offered a job by the organization to which they had been on assignment.

Although certainly employers do move workers in flexible arrangements into regular positions,

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[5]For agency and direct-hire temporaries, data on the number working at the establishment over the course of the year and the average duration of assignment were collected. This allowed us to construct the average number of agency or direct-hire temporaries at any point in time. Employers reported the number of regular part-time workers at the end of 1995.

there also is concern that companies do just the opposite: move workers from regular positions into flexible arrangements. Questions in the February Supplements to the CPS shed some light on the prevalence of this phenomenon. Specifically, individuals who were identified in the February 1997 CPS as agency temporaries, on-call workers, contract company workers (under our narrow definition), and independent contractors were asked whether they had always been in their present arrangement at the place they were currently working: 9.0 percent of all agency temporaries, 11.5 percent of contract company workers, 15.9 percent of on-call workers, and 8.5 percent of independent contractors reported working at the same place in another type of work arrangement. These workers were not directly asked the type of arrangement in which they were previously working, but they were asked how long they had worked there prior to being switched. Among agency temporaries, 39.5 percent had worked a year or more and 22.5 percent had worked three or more years prior to being switched; among on-call workers, 76.8 percent had worked a year or more and 51.2 percent had worked three or more years prior to being switched. Among independent contractors about 84.2 percent had worked three or more years prior to being switched. These tenure distributions imply that, with the possible exception of agency temporaries, the majority of workers who were switched were not in a short-term flexible arrangement and most of them probably were in "regular permanent" positions.

In sum, evidence from the Upjohn Institute survey provides some support for the hypothesis that the increase in agency temporary employment may be partly attributable to companies' use of this arrangement to screen workers for permanent positions, although traditional reasons concerning the accommodation of fluctuations in workload or staff also appear important. The Upjohn Institute survey suggests that screening workers for permanent positions is not a particularly important reason companies use or are increasing their use of other flexible staffing arrangements. Moreover, data from the February 1997 CPS Supplement suggests many employers are switching workers from regular positions into flexible arrangements.

Job and Employment Stability: Evidence from the CPS

In this section we exploit the longitudinal component of the CPS to track workers who were in flexible arrangements in February 1995 and compare their labor market status over time with those who were in regular, full-time jobs in February 1995. Blank (1994) uses PSID data to study the transitions of women in part-time jobs into full-time work or out of the labor force and Segal and Sullivan (1997(a), 1997(b)) use data from the main CPS questionnaire and administrative records data from the state of Washington to examine labor market outcomes of workers in the temporary help industry. However, the February 1995 CPS affords the first opportunity in a large data set to examine labor market outcomes of those in a much broader set of flexible arrangements.

Households in the CPS are in the sample for four months, out of the sample for eight months, and back in the sample for four months. From one month to the next a maximum of three-fourths of the sample can be matched; in months exactly a year apart a maximum of one-half of the sample can be matched. In practice, given that the CPS sample is based on addresses, the proportion of individuals who are the same across months is lower because some individuals and households move each month and some respondents refuse to continue cooperating. We matched individuals from the February 1995 CPS with those from the March 1995 CPS and February 1996 CPS.

In our data, a slightly lower proportion of workers in flexible arrangements in February 1995 were matched in subsequent months compared with workers in regular, full-time positions, suggesting that workers in flexible arrangements are somewhat more inclined to move. Assuming that workers who move are also more likely to change jobs, our analysis may understate the extent to which workers in flexible arrangements change jobs relative to regular, full-time workers. Any bias in our analysis on the propensity of workers in flexible arrangements to become unemployed compared to regular workers is unclear. On the one hand, those who are relocating may be more likely to have obtained other employment, so those who do not move may be more likely to become unemployed. On the other hand, those who become unemployed

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may be more likely to relocate to look for work or to stay with friends or family in order to save money. To help account for differences in attrition from our sample, we weighted the tabulations presented in the tables below using specially constructed weights.[6]

Our matched data allow us to follow the labor market status of workers in flexible arrangements one month and one year later and compare their outcomes with those who began in regular, full-time jobs. Specifically, from the March 1995 and February 1996 data, we can determine whether the individual is employed, unemployed, or not in the labor force. A question on the basic March 1995 survey also explicitly asks individuals who are employed if their employer is the same as in the previous month. Using data on job tenure from the February 1996 Supplement to the CPS, we can also determine if individuals hold the same job in February 1996 as they did one year earlier. A major drawback of the CPS data is that we only know the individual's type of work arrangement in February 1995. Thus, for example, we do not know if a direct-hire temporary worker who changed employers between February 1995 and March 1995 holds another temporary position or is in a regular, permanent job.

Determining whether agency temporary and contract company workers have changed employers between periods is complicated by the fact that many misreport their employer as the client firm. In the basic CPS each month, the respondents are asked to give or verify the name of their employers. In the February 1995 Supplement, individuals identified as working for a temporary help agency or for a company that contracts out their services were then asked if the employer listed for them in the basic CPS was the temporary help agency/contract company or the business for whom they were doing the work. In February 1995, 57 percent of agency temporaries and 17 percent of contract company workers under our narrow definition had incorrectly given the client firm as their employer. When we distinguish between

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[6]Details on the construction of these weights along with other variables are provided in the data appendix. the authors.

employed with the same employer and employed with a different employer in the analysis below, we exclude those individuals misreporting their employer as the client firm in the February 1995 data. Although these exclusions likely increase the accuracy of our classification as to whether the individual has the same or different employer, they substantially reduce the sample sizes in the two categories. Moreover, the distribution of subsequent labor force outcomes of agency temporaries who accurately report their employer as the temporary help agency is quite different from that of those who report the client as their employer. In particular, the latter are much more likely to drop out of the labor force and much less likely to become unemployed than the former. We have no explanation for these differences, but the fact that we use a restricted sample of agency temporaries in the results reported below should be borne in mind.

Simple descriptive statistics on the labor market transitions of workers by their employment arrangement in February 1995 are shown in Tables 5 and 6. Subsequently, we also present results of multivariate analyses which test for differences in labor force transitions by initial employment arrangement. Controlling for individual and job characteristics generally do not alter the picture portrayed in the descriptive statistics, however. Table 5 shows the labor force status in March 1995 of workers by their employment arrangement in February. Chi-square tests show that the distribution of labor force status for all types of flexible arrangements is significantly different than that of regular full-time workers. Workers in all flexible arrangements are less likely to be employed one month later compared to regular full-time workers. The differences in employment rates are particularly dramatic for agency temporaries, on-call workers, and direct-hire temporaries. The employment rate for contract company workers is closest to that of regular, full-time workers.

Except for the self-employed, who are much more likely than regular, full-time workers to drop out of the labor force, the incidence of unemployment one month later is higher for all workers in flexible arrangements than for regular, full-time workers. Agency temporaries are almost nine times more likely to become unemployed within a month than are regular, full-time workers. Even regular part-time workers

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are more than twice as likely to be unemployed a month later than are regular, full-time workers.

One might suspect that workers in flexible arrangements have a higher incidence of unemployment because they are more inclined to quit their jobs voluntarily. Questions on the March 1995 CPS specifically ask the unemployed whether they held a job prior to becoming unemployed and, if so, whether they lost or left that job. About 80 percent of those who were regular, full-time workers in February 1995 and who were unemployed the following month reported losing their job. Although the sample sizes are small for some cases, this figure is the same or higher for all categories of flexible arrangements. Thus, it appears that the higher incidence of unemployment among workers in flexible arrangements cannot simply be ascribed to a higher propensity to quit their job.

Apart from contract company workers, those in flexible arrangements also are more likely to drop out of the labor force within a month than are regular, full-time workers. Moreover, workers in flexible arrangements are more likely to be out of the labor force, but express a desire to be in the labor force. Below, we use the term involuntarily out of the labor force to denote this status.[7] The probability of becoming unemployed or involuntarily out of the labor force is particularly high among agency temporaries, on-call workers, and direct-hire temporaries. Among those who remain employed, workers in flexible arrangements are more likely to have changed employers; changing employers is particularly common among agency temporaries, on-call workers, direct-hire temporaries, and contract company workers.

Table 6 shows the labor market outcomes of workers in February 1996 by type of employment arrangement one year earlier. Again, chi-square tests show that the distribution of labor market outcomes is significantly different between regular, full-time workers and those in other arrangements. However, the

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[7]Workers who in our terminology are involuntarily out of the labor force differ from the BLS definition of discouraged workers, who must say that they currently want a job, must be available to work, must have looked for work in the last year, and must indicate they believe no work is available for them.

patterns differ by type of arrangement. Agency temporaries, on-call workers, direct-hire temporaries, contract workers, and regular part-time workers are much less likely to be employed one year later in part because they experience much higher levels of unemployment and in part because they are more likely to drop out of the labor force both voluntarily and involuntarily. One year later, agency temporaries, on-call workers, direct-hire temporaries, contract workers, and regular part-time workers are also much more likely than regular full-time workers to have changed employers. The pattern for independent contractors and other self-employed is quite different. Although workers in these groups had somewhat lower employment rates than regular full-time workers one year later, the lower employment rates may be ascribed entirely to the fact that a much higher proportion voluntarily drop out of the labor force. They are less likely than regular full-time workers to change employers and to become unemployed.[8]

Many in flexible arrangements prefer the schedules or flexibility of temporary, part-time, and contract work. Arguably, then, of greatest interest is the labor market outcomes of those who are in flexible arrangements but who prefer a regular position. Tables 5 and 6 also display the labor market outcomes of those in flexible arrangements in February 1995 one month and one year later, respectively, by whether or not they were satisfied with their arrangement. In general, those expressing dissatisfaction are more likely to switch employers and are more likely to become unemployed than are those who were satisfied with the arrangement. Unfortunately, in most cases, we do not know whether those switching employers found employment in their desired arrangement.[9]

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[8]Independent contractors are quite broadly defined in the CPS data to include independent contractors, independent consultants, and freelance workers and, unlike contract company workers, are not restricted to those who work primarily on the client's premises or work primarily for a single client. Given this definition, it is perhaps not surprising that their labor force patterns resemble those of the regular self-employed.

[9]In the case of part-time workers, we can tell if they work full-time hours with their new employer. For agency temporaries, we could also check whether the new employer is in the temporary help services industry.

The different labor market outcomes experienced by workers in flexible arrangements relative to those in regular, full-time jobs may result from the nature of the arrangements themselves. Alternatively, they may stem from differences in the average personal and job characteristics of individuals in those arrangements. To control for personal and job characteristics, we estimated multinomial logit models using the February 1995 to March 1995 matched data and the February 1995 to February 1996 matched data. In the models estimated, there are four possible labor market outcomes: employed, same employer (E_s); employed, different employer (E_d); unemployed (U); and not in the labor force (N). To identify the model, the coefficients for one outcome are set equal to zero, and the coefficients on the other outcomes are interpreted as measuring the change relative to the base group. We use employed, same employer as the base group in our models. In the models, the probability of each outcome is as follows:

$$\cdots \quad - \quad 0$$

where I = E_d, U, or N

where X is a vector of control variables measuring personal and job characteristics and ß is a vector of coefficient estimates. The effect of a one unit change in x_i on the probability of a particular outcome relative to the base outcome is just the exponentiated value of its coefficient estimate: 0.

Selected coefficient estimates for the multinomial logit models predicting labor force status in March 1995 and February 1996 are reported in Tables 7 and 8, respectively. In each set of specifications we control for age, age-squared, gender, race, level of education, industry (19 industry breakdowns), occupation (12 occupational breakdowns), region of the country, whether the individual is from the center city or a rural area, whether the individual lived in a poverty area, marital status, marital status interacted

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However, because many individuals who work for temporary help agencies report their client firm as their employer, this analysis would have to be restricted to a subset of agency temporaries. Variation in industry coding at the 3-digit level would also introduce error into the analysis of agency temporaries.

with gender, tenure on the job, and tenure-squared. Union status is also included in selected runs on the February 1995 to February 1996 matched data. All of these variables are taken from the February 1995 CPS. In most specifications we also include a dummy variable measuring whether the individual reported searching for a new job in the last three months or since starting in their current job or arrangement if this had started within the last three months. We include dummy variables for each flexible work arrangement; the excluded category is regular, full-time workers. In one specification we interact these work arrangement dummies with a dummy variable capturing whether the individual is satisfied with his or her work arrangement. The broad definitions for contract company workers and direct hire temporaries are used in all specifications in Tables 7 and 8.

Unmeasured personal characteristics may account for any greater incidence of job switching or unemployment experienced among those in flexible arrangements. Unfortunately, we only observe individuals' work arrangement at one point in time; thus we cannot compare individuals' propensity to change employers, become unemployed, or drop out of the labor force when they are in flexible arrangements versus when they are in regular, full-time arrangements. However, Segal and Sullivan (1997b), using longitudinal administrative records data, are able to control for individual fixed effects in a study of employment changes among agency temporaries. They find that controlling for individual fixed effects has little impact in their model; workers in the temporary help industry are much more likely than other workers to experience short employment spells.

Moreover, in our data we are able to control for measures of job history that arguably capture an individual's tendency to change employers, experience spells of unemployment, or drop out of the labor force. In the February 1995 Supplement, those who had three or less years of tenure in their current arrangement were asked a series of questions about what they were doing prior to their current arrangement. In certain specifications, we include controls for whether the individual held another job, whether they lost a job, and whether they were unemployed just prior to their current job. Those who had

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more than three years of tenure were coded as not having been employed in another job, lost a job, or been unemployed in the previous three years. We also include controls for the number of employers individuals had in 1994, the number of weeks they were unemployed in 1994, and the number of weeks they were out of the labor force in 1994 in certain specifications. These variables come from the March 1995 CPS Income Supplement.[10]

Finally, we include the logarithm of the hourly wage in certain specifications. The wage variable may be correlated with unmeasured characteristics affecting worker quality and stability in the work force. Alternatively, workers earning low wages relative to their education, tenure, and job characteristics may be more inclined to quit and find a new job, quit and become unemployed, or drop out of the labor force. The hourly wage measure was constructed either from wage data collected in the February 1995 CPS or from the earnings data for 1994 in the March 1995 CPS Income Supplement.

The control variables in the multinomial logit models have the expected signs and many are statistically significant. For example, those searching for a new job, not surprisingly, are more likely to switch employers or become unemployed. Workers who had another job immediately prior to their current one are more likely to change employers and those who lost a job immediately prior to their current one are also more likely to become unemployed in the short and long term. The number of employers an individual had in 1994 is positively associated with switching employers or becoming unemployed, and the number of weeks a worker was unemployed in 1994 and the number of weeks the worker was out of the labor force in 1994 is positively related to the probability that he/she will switch employers, become unemployed, or drop out of the labor force in both the short and long term. The logarithm of the worker's hourly wage is inversely related to the probability that he/she will change employers or drop out of the labor force.

Although the inclusion of controls for individual and job characteristics, employment history, and

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[10]A more detailed discussion of the variables used in these analyses is contained the data appendix.

wage levels reduces the size and significance of some coefficients on the flexible arrangement dummy variables, many of these coefficients remain large and statistically significant. Our estimates imply that being an agency temporary, an on-call worker, a direct-hire temporary, or a contract company worker increases the probability that a worker will switch employers in the short and long term. Being an independent contractor increases the probability that a worker will change employers in the short term and being a regular part-time worker increases the probability that the worker will change employers in the long term. Agency temporaries, on-call workers, and direct-hire temporaries are significantly more likely to become unemployed in the short and long term than are regular, full-time workers, and regular, part-time workers are significantly more likely to become unemployed in the long term in most specifications. Independent contractors and regular self-employed are significantly less likely to become unemployed in the long term in some specifications.

In addition, on-call workers, direct-hire temporaries, regular self-employed, and regular part-time workers are more likely than regular full-time workers to drop out of the labor force in both the short and long term; independent contractors are more likely to drop out of the labor force in the short term. These results by themselves are difficult to interpret. On the one hand, certain flexible work arrangements may be amenable to balancing family and work responsibilities or make good bridge jobs for retirement, and therefore a larger proportion of workers in these arrangements may voluntarily drop out of the labor force over the course of the year. On the other hand, workers in flexible arrangements may be more likely to lose their job and drop out of the labor force even though they would prefer to work. To address this issue we estimated multinominal logit models with four possible labor status outcomes--employed; unemployed; not in the labor force, don't want to be; and not in the labor force, want to be--on the February 1995 to February 1996 matched data. In these models, on-call workers, direct-hire temporaries, and, in most specifications, regular part-time workers are significantly more likely to involuntarily drop out of the labor

force than are regular, full-time workers.[11]

The final specification in Tables 7 and 8 includes the interaction of the work arrangement dummy variable with whether the worker was satisfied with that particular arrangement. As expected, workers who are satisfied are less likely to change employers or become unemployed, though these interaction terms usually are statistically insignificant in the models estimated on the February 1995 to February 1996 data.[12]

The point estimates on the flexible staffing dummy variables often imply quite large differences in the labor market outcomes of workers in flexible arrangements compared with those of regular, full-time workers. For example, estimates from Table 8 indicate that agency temporaries are four to six times more likely and on-call and direct-hire temporaries are two to three times more likely than regular, full-time workers to have changed employers one year later. Agency temporaries are five to seven times more likely and on-call and direct hire temporaries are three to five times more likely to be unemployed one year later than are regular, full-time workers.

It is also interesting to note that agency temporary, on-call, and direct hire temporary employment generally appears significantly less stable than regular part-time employment. Agency temporaries (in most specifications), on-call workers, and direct-hire temporaries are significantly more likely than regular part-time workers to become unemployed or change employers in the short and long term. In contrast, independent contractors are less likely to become unemployed in the long term, are less likely to drop out of

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[11]These results, reported in Table A3, included the same set of control variables as the equations reported in Table 8. Because there were no individuals in the category "not in the labor force, want to be" for certain work arrangements in March 1995, these models could not be run on the February 1995 to March 1995 matched data.

[12]All of our specifications include a dummy variable for gender. We also estimated a specification that included the interaction of our work arrangement dummy variables with gender. These interaction terms were insignificantly different from zero in almost cases.

the labor force in the short term, are but more likely to drop out of the labor force in the long term.

The broad definitions for contract company workers and direct-hire temporaries are used in Tables 7 and 8. Table 9 reports the coefficient estimates on the contract company worker and direct-hire temporary dummy variables from models using the narrow definitions for these two arrangements.[13] In the narrow definition of contract company workers, workers must not only work at the client's site, but must also work primarily for just one client. In the narrow definition of direct-hire temporaries, workers must explicitly state that their jobs are temporary; in the broad definition they could also state that they could not stay in their jobs as long as they wished for reasons suggesting that they were indeed temporary. The most interesting results from these tables are for the contract workers in the models predicting labor force status in February 1996. When using the narrow definition, contract workers are significantly more likely to change employers, and, unlike in the broad definition, to become unemployed and drop out of the labor force in the long term than are regular, full-time workers. Direct-hire temporaries continue to be significantly more likely to change employers, become unemployed, and drop out of the labor force in the short and long term under the narrow definition.

Conclusion

We set out in this paper to examine whether workers in a wide variety of flexible work arrangements experience less job and employment stability as a consequence of those arrangements. Our evidence suggests that while concern over the implications of flexible work arrangements for job and employment stability is warranted, it is important to distinguish between types of arrangements.

Evidence of a reduction in job and employment stability is clearest for agency temporaries, direct-hire temporaries, and on-call workers. Results from the Upjohn Institute employer survey show that, except possibly for agency temporaries, the use of flexible arrangements to screen workers for permanent

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[13]The coefficient estimates on the other variables are negligibly different from those in Tables 7 and 8.

jobs is not an important phenomenon. In fact, evidence from the February 1995 CPS Supplement suggests that companies also often move workers from regular into flexible arrangements. Moreover, workers in these arrangements are more likely to change employers, become unemployed, or, in the case of on-call workers and direct-hire temporaries, involuntarily drop out of the labor force in the short and long run. These results hold up even after controlling for individual and job characteristics, job histories, and wages. An important caveat to note is that the results for agency temporaries only pertain to those who accurately reported their employer as the temporary help agency in the basic CPS. Interestingly, workers in temporary agency, on-call, and direct-hire temporary arrangements tend to be the least satisfied with their arrangement.

We also find considerable evidence of job and employment instability for those in regular, part-time jobs. Regular, part-time workers are more likely than regular, full-time workers to change employers, become unemployed, and involuntarily drop out of the labor force, particularly in the long run. While most part-time workers desire part-time hours, a significant minority state that they want full-time jobs. Despite the greater job and employment instability of part-time workers compared to full-time workers, however, their employment is significantly more stable than the employment of agency temporaries, on-call workers, and direct-hire temporaries in that they are less likely to become unemployed or change employers.

Evidence of job and employment instability for contract company workers is somewhat weaker. Using our broad definition, contract workers appear significantly more likely to switch employers in the short and the long run, but they are not more likely to become unemployed or to drop out of the labor force. Using our narrow definition in which contract workers not only work at the client's site but also work primarily for one client, contract workers are more likely to switch employers and to become unemployed in the short and the long run.

Finally, we find little evidence that the jobs and employment of independent contractors are less stable than those of regular, full-time workers. Like the regular, self-employed, they tend to be quite

satisfied with their employment arrangement, and although they are more likely to drop out of the labor force in the short and long run, this change in labor force status appears largely voluntary. One caveat to this conclusion is that independent contractors, as classified in the CPS, constitute a large and probably quite diverse group of individuals.

In sum, agency temporaries, on-call workers, direct-hire temporaries, regular part-time workers, and certain types of contract workers are more likely to change employers, and, perhaps more importantly, to experience unemployment or involuntarily drop out of the labor force than are regular full-time workers. Although employer survey evidence often points to substantial employment growth in most types of flexible arrangements, apart from agency temporary and part-time work, we lack hard data on the recent employment trends in these arrangements. Thus, it is impossible to quantify the extent to which flexible work arrangements have contributed to any increase in job or employment instability in the past. Future supplements on contingent and alternative work arrangements to the CPS should help to fill this information gap in the coming years. The results presented here do indicate, however, that the effect of flexible arrangements on job security bear watching.

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DATA APPENDIX FOR THE CPS

Longitudinal Matching and Weighting

Because of a phasing in of a new area sample, household identifications on the public use tapes were generated such that households starting in May 1995 could not be matched forward. All longitudinal data reported in this paper were constructed using internal BLS data containing household identification numbers and unique person identification numbers for individuals within a household.

Households in the CPS are interviewed for four consecutive months, not interviewed for the next 8 months, and are then interviewed for 4 more consecutive months. In each calendar month of the year a new group of households is administered its first monthly interview. Given this structure, it is theoretically possible to match 75 percent of the households in consecutive calendar months and 50 percent of the households in months one year apart. In practice, a lower match rate results from the fact that the sample is based on addresses and some households or individuals within households move. A slightly lower match rate than can be accounted for by moving was obtained for February 1995 to February 1996 because starting in January 1996 the sample of both new and continuing households in the CPS was reduced by approximately 12 percent. Of those who were not in their fourth or eighth interview and were employed in February 1995, 96.3 percent had a valid record to which they could be matched in March 1995. Of those who were in the first half of their interviewing rotations (interviews 1 through 4) and were employed in February 1995, 67.1 percent were matched to a valid record in February 1996.

To account for the reduction in observations caused by the rotation pattern of interviewing, attrition, and the overall reduction in the CPS sample instituted in January 1996, the February 1995 supplement weights for individuals in a particular group were multiplied by the ratio of the weighted number of individuals in that particular group in February 1995 to the weighted number of individuals in the same group in the month being matched to, for instance February 1996. Ratios were calculated for eight gender, age and race groups (i.e., male, white, greater than 25 years old; male, nonwhite, greater than 25 years of age; etc.). Because comparisons were being made based on individuals' February 1995 work arrangements, the weighted

counts used to calculate the ratios were generated using the February 1995 weights to emulate the representative distribution of workers in February 1995. The transition data by rotation group should not be subject to the rotation group bias discussed in Abowd and Zellner (19xx) because all individuals started out as employed and the incidence of flexible arrangements did not vary significantly by rotation group.

Longitudinal Matching and the Use of Variables

Some of the data used in our analysis were only collected in the supplement or for a proportion of the sample in the basic CPS. Specifically, information about unionization and earnings on the current job was collected for all workers in flexible arrangements as part of the supplement, but it was only collected as part of the basic CPS for regular full-time and regular part-time workers in their fourth and eighth interviews. This data collection scheme means that the February 1995 wage and unionization data cannot be used in the February 1995-March 1995 data set. Instead hourly earnings for the February-March 1995 data set were constructed using data from the March income supplement which inquires about earnings in the previous year. Using data on 1994 earnings from the March 1995 CPS has the drawback that we must exclude those who worked in February 1995 but who report no earnings the previous year. Inclusion of the March earnings variable, however, generally has little effect on the size and significance of the other coefficients in the model. An indicator of unionization was not used in the models estimated on the February 1995-March 1995 data.

In the February 1995 -February 1996 matched data set it is possible to include both a unionization variable and an hourly earnings variable (constructed from information collected either in the supplement or for workers in their outgoing rotations). Given the rotation pattern, when March 1995 variables are included in the February 1995-February 1996 data, the February 1995 earnings and unionization variable cannot be used. Consequently, when March variables and earnings variables are both included, the earnings variable is derived from the March income supplement. In addition because of the rotation pattern, the merging in of March 1995 variables reduces the sample size of the February 1995-February 1996 data set by about a quarter.

Definition of Selected Variables

Satisfaction with Current Arrangement

Direct hire temps, on-call workers, day laborers, independent contractors, and other self-employed were asked questions in the February 1995 supplement to ascertain their satisfaction with their current work arrangements. Specifically, temporary workers were asked if they would prefer a permanent job, on-call and day laborers were asked if they prefer would regularly scheduled hours, and independent contractors and other self-employed were asked if they would prefer to work for someone else rather than being self-employed. If workers in these arrangements responded affirmatively, we classified them as dissatisfied with their current arrangement.

Part-time workers' satisfaction was ascertained from the monthly CPS where they were asked whether they wanted to work a full-time workweek of 35 hours or more. . Using the response to this question to measure dissatisfaction with part-time work is broader than the official measure of workers who are part time for economic reasons. Under the BLS definition of part-time for economic reasons, an individual must not only give an economic reason for working part time, but must also say that they are available to work full time. We used the broader measure of dissatisfaction for part-time workers because it is closer to the measures of dissatisfaction used for those in other flexible work arrangements.

Contract company workers were classified as dissatisfied with their arrangement if they reported that they had been searching for another primary job as something other than a contract company worker. This measure likely understates the number who are dissatisfied with being a contract worker, however. Workers in other flexible arrangements were also asked if they were looking for another primary job in a different arrangement. Those answering in the affirmative were a subset of those expressing dissatisfaction with their current arrangement when asked directly. Information on job satisfaction was not collected for workers in regular full-time arrangements.

Living in a Poverty Area

A poverty area is defined as a census tract in which more than 20 percent of the households had

income below the poverty level in 1990.

Job Tenure

Job tenure in February 1995 for those who were agency temporaries, contract company workers, or on-call workers is defined as how long individuals had worked for the temporary help agency or a contract company, or had been an on-call worker rather than how long they had been at a particular assignment. Independent contractors and the self-employed were asked how long they had been in these arrangements. In the February 1996 tenure supplement wage and salary workers were asked how long they had worked for the employer identified as their current and main employer in the monthly CPS. The self-employed were asked how long they had been self employed.

Searching for a New Job

Individuals who were on-call, agency temporaries, or contract company workers were asked if they were looking for a job in a different work arrangement. The self-employed and independent contracts were asked if they were looking for a job in which they would be someone else's employee. Regular full-time and regular part-time workers were simply asked if they were looking for other employment. In all cases individuals who said that they were looking for work were asked if they were looking for a second job or a new job. Only those who said they were looking for a new one were classified as having searched for another job.

Being Switched to a Flexible Work Arrangement at Current Place of Work

Agency temporaries, on-call workers and contract company workers (under our narrow definition) were asked if they had always worked at the place they were currently working in this arrangement. In February 1995 only independent contractors who were identified as wage and salary workers were asked about their previous status. In addition, in February 1997, independent contractors identified as self-employed were asked, "Have you ever worked for one of your clients as something other than an independent contractor?" The proportion of independent contractors who reported being switched was higher in 1995 than in 1997. However, this is almost entirely attributable to the fact that only wage and salary independent contractors were asked about their previous status. The percentage of workers in the other three

flexible work arrangements who said that their work arrangements had changed were higher or about the same in 1995 compared to 1997.

Agency temporaries, on-call workers, contract company workers, and wage and salary independent contractors were asked directly in both 1995 and 1997 how long they had worked at their current place of employment prior to being switched. Tenure prior to being switched for independent contractors identified as self employed was less precisely derived from a series of questions asked of those who had been independent contractors for no more than three years. In these questions independent contractors who stated that they had been employed directly prior to becoming an independent contractor were asked how long they had worked in this other job.

Table 1. Employment by Work Arrangement

	Percent of all workers	Percent dissatisfied with arrangement	Percent with tenure 1 year or less	Percent of all workers with tenure 1 year or less
Agency temporaries	1.0	64.2	75.1	2.7
On-call workers	1.7	61.1	47.4	3.0
Direct-hire temporaries				
(broad)	2.7	48.4	57.8	6.0
(narrow)	2.1	53.4	65.3	5.2
Contract workers				
(broad)	0.9	17.2	43.1	1.5
(narrow)	0.5	22.2	49.8	0.9
Independent contractors	6.7	10.6	17.3	4.4
Regular self-employed	5.9	7.3	12.2	2.6
Regular part-time	13.6	21.8	46.6	23.7
Regular full-time	67.5	--	22.2	56.2

Source: Authors' tabulations using February 1995 CPS. Unpaid workers and those in armed forces are
       excluded from tabulations. All tabulations were weighted using the CPS Supplement weight.

Table 2. Summary of Evidence on Trends in Flexible Staffing Arrangements

Survey	Sample	Alternative Arrangements Covered	Main Results
Current Population Survey, BLS	monthly survey of about 50,000 households	part-time employment[1]	Part-time employment grew from 14.5 % in 1969 to 16.4% in 1979 to 17.0% in 1989; adjusted for changes to the CPS in 1994, part-time employment fell to 16.2 percent in 1997.
Current Employment Statistics, BLS	monthly survey of about 350,000 non-farm establishments	help supply services employment (primarily agency temps)	Employment in help supply services grew from 0.5% to 2.0% of non-farm payroll employment between 1982 and 1996.
The Conference Board (1995)	91 Conference Board members—large companies operating in the U.S. and abroad—conducted in 1995	direct-hire temporaries, independent contractors, agency temporaries, on-call workers, leased employees	1/4 to 1/3 of companies reported sizable growth in their use of direct-hire temps, independent contractors, and agency temps in last 5 years and expected sizable growth in next 5 years. Few reported sizable growth or expected sizable growth of on-call and leased employees. Among US-based companies, workers in these arrangements comprised 10% or more of workforce at 23% of firms at time of survey compared with just 12% of the firms 5 years before; 35% expected they would comprise 10% or more of workforce 5 years in future.
1986, 1987 Industry Wage Surveys, BLS (Abraham and Taylor, 1997)	establishments in 13 manuf. industries	contracting out	Questions on contracting out of five services (janitorial, machine maintenance, engineering and drafting, and accounting services work) show increase in propensity of establishments to contract out this work between 1979 and 1986/87.
Bureau of National Affairs Survey (Abraham, 1990)	441 BNA members—mostly large employers—conducted in 1985	agency temporaries, direct-hire temps, on-call workers, contracting out[2]	Larger percentage reported increase than reported decrease in use of agency temps, direct-hire temps, on-call workers, administrative or business support contracts, and production subcontracting in 1985 than in 1980 relative to regular employment.
Upjohn Institute Employer Survey on Flexible Staffing Arrangements [Houseman 1997]	550 establishments—stratified random sample designed to be representative of private sector—conducted in 1996	agency temporaries, direct-hire temps, regular part-time workers, on-call workers, contract workers[2]	Many more reported increase in contracting out and use of regular part-time workers than reported decrease relative to regular workers since 1990. Slightly more reported relative increase in use of agency temps, direct-hire temps, and on-call workers since 1990. 2/3 of employers predicted use of flexible staffing arrangements would increase in their industry in next 5 years.

[1] Because evidence from the February CPS Supplements suggests that many working for temporary help agencies give the client as their employer in the main CPS questionnaire, we do not cite the CPS as a source of data on trends in the temporary help industry.

[2] Contracting out services, information on which was collected in these surveys, is a somewhat broader practice that includes using contract company workers and independent contractors.

Table 3. Reasons for Increased Use of Flexible Workers

	Temporary Help Agency Workers	Short-Term Hires	Part-Time Workers	On-Call Workers	Contract Out
Percent Responding the Increase was Partly Due to:					
Greater use of flexible workers to screen candidates for permanent jobs	24.2	3.3	--	--	--
Need to increase workforce flexibility to better accommodate fluctuations in workload	37.1	40.0	52.0	57.7	--
Competitive pressure to reduce labor costs	3.2	16.7	15.3	11.5	40.0
Corporate restructuring or merger	4.8	13.3	3.1	7.7	5.3
Increase in benefits or social insurance costs for regular employees	1.6	6.7	12.2	3.9	--
Greater use of family medical leave by regular employees	9.7	6.7	--	--	--
Difficulty finding qualified workers on own	37.1	--	--	--	--
Business expansion	25.8	50.0	48.0	50.0	30.5
Business contraction	4.8	13.3	6.1	3.9	5.3
Change in the hours of operation	--	--	9.2	0.0	--
Introduction of new machinery or equipment	--	--	2.0	7.7	--
Inability to compete on price, quality or market position	--	--	--	--	26.3
Sample Size	62	30	98	26	95

Source: Upjohn Institute Employer Survey on Flexible Staffing Arrangements.

Table 4. Mobility of Flexible Workers into Regular Positions, by Type of Flexible Worker

	Often	Occasionally/ Sometimes	Seldom	Never	Don't Know	Sample Size
Agency temporaries	11.5	31.3	19.0	36.8	1.6	253
On-call workers	9.3	26.7	27.3	32.7	4.0	150
Direct-hire temporaries	9.0	34.3	17.1	38.6	1.0	210
Regular, Part-time workers	14.7	39.6	16.0	28.9	0.8	394

Source: Upjohn Institute Employer Survey on Flexible Staffing Arrangements

Table 5. Labor Force Status in March 1995 by Work Arrangement in February 1995[1]

	Status in March 1995				
	Employed			Not in labor force	
Status in February 1995	Total	Different employer	Unemployed	Total	Want to be in labor force
Agency temporary[2]	87.6%	12.1%	7.9%	4.6%	2.3%
Dissatisfied	87.3	13.9	9.0	3.7	2.1
Satisfied	88.0	9.0	5.9	6.0	2.8
On-call	84.0	6.2	7.1	8.9	2.3
Dissatisfied	85.8	6.1	9.4	4.9	2.3
Satisfied	81.3	6.2	3.8	14.8	2.1
Direct hire temporary (broad)	88.6	5.8	4.4	7.0	2.2
Dissatisfied	87.7	7.5	6.9	5.4	2.5
Satisfied	89.5	4.1	2.0	8.5	1.9
Direct hire temporary	87.1	6.2	4.9	8.0	2.3
(narrow)	87.3	6.8	7.0	5.7	2.3
Dissatisfied	86.9	5.4	2.2	10.9	2.4
Satisfied					
Contract worker (broad)[2]	97.3	5.2	2.4	0.4	0.4
Dissatisfied	92.6	18.8	6.4	1.0	1.0
Satisfied	98.1	2.7	1.6	0.3	0.3
Contract worker (narrow)[2]	98.0	6.5	1.3	0.8	0.8
Dissatisfied	94.4	20.8	4.1	1.5	1.5
Satisfied	98.9	3.0	0.6	0.6	0.6
Independent contractor	94.8	3.2	1.5	3.8	1.0
Dissatisfied	91.7	6.2	5.5	2.9	1.0
Satisfied	95.1	2.8	1.1	3.8	1.0
Regular self-employed	94.6	2.5	0.7	4.6	0.6
Dissatisfied	88.5	6.1	3.1	8.5	2.8
Satisfied	95.2	2.2	0.5	4.3	0.5
Regular part-time	93.6	3.1	2.0	4.5	1.2
Dissatisfied	92.8	5.4	4.6	2.6	1.1
Satisfied	93.8	2.5	1.3	5.0	1.2

[1] The percentages in these tables are based on weighted tabulations. A data appendix, available from the authors, describes the construction of these weights.

[2] Excludes individuals misreporting their employer in the basic February 1995 CPS.

Table 6. Labor Force Status in February 1996 by Work Arrangement in February 1995[1]

	Status in February 1996				
	Employed		Unemployed	Not in labor force	
	Total	Different employer		Total	Want to be in labor force
Agency Temporary[2]	78.3%	43.7%	10.2%	11.5%	1.7%
Dissatisfied	76.0	45.4	11.7	12.3	2.3
Satisfied	85.0	38.6	5.7	9.4	0
On-call workers	73.4	214	10.7	15.8	3.4
Dissatisfied	76.6	29.0	12.4	11.0	3.6
Satisfied	69.1	11.2	8.4	22.5	3.1
Direct-hire temporary (broad)	76.6	24.2	6.2	17.2	2.8
Dissatisfied	76.0	28.1	10.0	14.0	4.4
Satisfied	77.2	20.8	2.8	20.1	1.4
Direct-hire temporary (narrow)	71.8	26.7	7.8	20.4	3.2
Dissatisfied	74.5	29.6	11.4	14.1	4.2
Satisfied	68.9	23.6	4.0	27.2	2.0
Contract workers (broad)[2]	87.8	20.4	4.3	7.9	3.8
Dissatisfied	95.2	47.9	0.5	4.3	0.9
Satisfied	86.6	16.0	4.9	8.5	4.3
Contract workers (narrow)[2]	83.4	24.0	5.4	11.2	6.7
Dissatisfied	94.3	60.4	0	5.7	0
Satisfied	81.4	17.4	6.4	12.2	8.0
Independent contractor	90.6	8.6	1.4	7.9	1.2
Dissatisfied	86.8	23.3	3.9	9.3	4.0
Satisfied	91.0	7.0	1.2	7.8	0.9
Regular self-employed	87.0	6.9	1.1	11.9	0.4
Dissatisfied	76.5	27.9	2.3	21.3	0
Satisfied	87.8	5.2	1.0	11.2	0.4
Regular part-time	77.2	18.5	4.5	18.3	2.7
Dissatisfied	77.7	24.8	9.7	12.6	3.4
Satisfied	77.1	17.0	3.3	19.7	2.6

[1] The percentages in these tables are based on weighted tabulations. A data appendix, available from the authors, describes the construction of these weights.

[2] Excludes individuals misreporting their employer in the basic February 1995 CPS.

Table 7. Multinomial Logit Models Predicting Labor Force Status in March 1996[1]

	Employed Different Employer					Unemployed					Not in Labor Force				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Searching new job	--	1.674***	1.647***	1.670***	--	--	1.287***	1.216***	1.172***	--	--	-0.216	-0.098	-0.135	--
Another job before	--	0.252**	0.240**	0.171	0.315***	--	0.143	0.381***	0.355**	0.163	--	-0.450***	0.272**	0.154	-0.420***
Unemployed before	--	0.241*	0.189	0.196	0.349**	--	0.351**	0.111	0.056	0.366***	--	-0.052	-0.317**	-0.313	0.025
Lost job before	--	-0.049	-0.103	-0.049	0.064	--	0.269*	0.120	0.153	0.343**	--	0.131	-0.015	0.098	0.145
Number employers '94	--	--	0.304***	0.352***	--	--	--	0.087	0.138*	--	--	--	-0.206***	0.009	--
Weeks unemployed '94	--	--	0.015***	0.014***	--	--	--	0.052***	0.052***	--	--	--	0.049***	0.037***	--
Weeks NILF '94	--	--	0.014***	0.010**	--	--	--	0.034***	0.032***	--	--	--	0.077***	0.070***	--
ln(wage)	--	--	--	-0.040	--	--	--	--	-0.180*	--	--	--	--	-0.053	--
Agency temporary	1.337***	0.741**	0.571*	0.680**	1.553***	1.822***	1.334***	1.078***	0.793*	1.940***	1.479***	1.547***	0.759	0.654	0.872
* satisfied	--	--	--	--	-0.937	--	--	--	--	-0.580	--	--	--	--	1.127
On-call workers	1.093***	0.867***	0.720***	0.562***	1.118***	1.886***	1.673***	1.338***	1.299***	1.983***	2.176***	2.123***	1.350***	1.520***	1.414***
* satisfied	--	--	--	--	-0.021***	--	--	--	--	-0.445	--	--	--	--	1.214***
Direct-hire temporary	0.843***	0.658***	0.519***	0.488***	1.057***	1.506***	1.342***	1.078***	1.112***	1.799***	1.813***	1.794***	0.984***	1.110***	1.430***
* satisfied	--	--	--	--	-0.479*	--	--	--	--	-0.945***	--	--	--	--	0.581**
Contract worker	0.657**	0.565**	0.504*	0.556**	2.195***	0.625*	0.573	0.405	0.347	1.899***	-0.400	-0.402	-0.603	-0.098	1.208
* satisfied	--	--	--	--	-2.174***	--	--	--	--	-1.615***	--	--	--	--	-2.218
Independent contractor	0.564***	0.586***	0.547***	0.629***	1.098***	0.358*	0.364*	0.213	0.010	1.330***	1.475***	1.448***	0.933***	1.283***	1.062***
* satisfied	--	--	--	--	-0.626**	--	--	--	--	-1.237***	--	--	--	--	0.441
Regular self-employed	0.264*	0.350**	0.335**	0.292	1.447***	0.125	0.162	0.052	-0.276	1.298***	1.542***	1.507***	0.852***	1.215***	2.191***
* satisfied	--	--	--	--	-1.366**	--	--	--	--	-1.445***	--	--	--	--	-0.742**
Regular part-time	0.155	0.131	0.070	-0.028	0.692***	0.443***	0.396***	0.213	0.095	1.000***	0.969***	0.930***	0.435***	0.566***	0.414*
* satisfied	--	--	--	--	-0.758***	--	--	--	--	-0.902***	--	--	--	--	-0.626***

[1]All models also include an intercept term and controlled for age, age-squared, gender, race, education, tenure, tenure-squared, occupation, industry, region, central city and rural location, marital status, and marital status interacted with gender. * denotes significance at .10 level; ** denotes significance at .05 level; *** denotes significance at .001 level.

Table 8 . Multinomial Logit Models Predicting Labor Force Status in February 1996[1]

	Employed, Different Employer						Unemployed						Not in Labor Force					
	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
Searching new job	--	1.252***	1.225***	1.259***	1.267***	--	--	0.983***	0.895***	0.789***	0.840***	--	--	0.554***	0.197	0.683***	0.640***	--
Another job before	--	0.196**	0.247**	0.266***	0.229**	0.231***	--	-0.001	-0.374	0.171	0.113	0.017	--	-0.251**	-0.640***	-0.019	-0.033	-0.234**
Unemployed before	--	0.054	-0.076	0.003	-0.106	0.086	--	0.572***	0.398	0.317	0.277	0.575***	--	0.009	-0.299	-0.143	-0.096	0.045
Lost job before	--	-0.030	-0.254	0.034	0.085	-0.010	--	0.457***	0.668**	0.428**	0.505***	0.459***	--	0.099	0.079	0.025	0.012	0.109
Number employers '94	--	--	--	0.280***	0.311***	--	--	--	--	0.293***	0.279**	--	--	--	--	-0.114	-0.083	--
Weeks unemployed '94	--	--	--	0.016***	0.013**	--	--	--	--	0.050***	0.050***	--	--	--	--	0.031***	0.024***	--
Weeks NILF '94	--	--	--	0.020***	0.017***	--	--	--	--	0.031***	0.024***	--	--	--	--	0.037***	0.034***	--
ln(wage)	--	--	-0.179**	--	-0.127*	--	--	--	-0.061	--	0.034	--	--	--	-0.246**	--	-0.139*	--
Agency temporary	1.856***	1.551***	1.358***	1.623***	1.562***	1.963***	0.852	1.762***	1.616***	1.775***	1.189	2.023***	0.852	0.780	1.079	0.419	0.702	0.550
* satisfied	--	--	--	--	--	-0.426	--	--	--	--	--	-0.069	--	--	--	--	--	0.835
On-call workers	1.046***	0.969***	0.912***	0.832***	0.918***	1.386***	1.458***	1.536***	1.335***	1.211***	1.425***	1.515***	1.458***	1.390***	1.643***	0.985***	0.705***	1.387***
* satisfied	--	--	--	--	--	-0.869**	--	--	--	--	--	0.262	--	--	--	--	--	0.057
Direct-hire temporary	1.092***	0.991***	0.959***	0.874***	0.824***	1.310***	1.699***	1.349***	1.260***	1.113***	1.146***	1.638***	1.699***	1.638***	2.030***	1.349***	1.217***	1.521***
* satisfied	--	--	--	--	--	-0.444	--	--	--	--	--	-0.491	--	--	--	--	--	0.274
Contract worker	0.662***	0.624***	0.532**	0.644***	0.634***	2.347***	0.553	0.895**	0.780*	0.696	0.558	1.663	0.553	0.533	0.712	0.352	0.304	1.291
* satisfied	--	--	--	--	--	-2.057***	--	--	--	--	--	-0.801	--	--	--	--	--	-0.810
Independent contractor	0.175	0.170	0.041	0.101	0.134	1.079***	-0.664**	-0.667**	-0.822*	-0.695**	-0.528	0.778*	0.423***	0.408**	0.464**	0.155	0.113	0.625
* satisfied	--	--	--	--	--	-1.046***	--	--	--	--	--	-1.808***	--	--	--	--	--	-0.227
Regular self-employed	-0.014	0.054	-0.159	-0.025	-0.134	1.221***	-0.552*	-0.491	-0.763**	-0.164	-0.064	0.481	0.778***	0.774***	0.719***	0.667***	0.627***	1.711***
* satisfied	--	--	--	--	--	-1.360***	--	--	--	--	--	-1.100	--	--	--	--	--	-1.032***
Regular part-time	0.305***	0.314***	0.155	0.303***	0.279***	0.669***	0.494***	0.468***	0.303	0.483***	0.507***	1.046***	0.995***	0.970***	0.851***	0.867***	0.830***	1.002***
* satisfied	--	--	--	--	--	-0.445***	--	--	--	--	--	-0.796***	--	--	--	--	--	-0.027

[1] All models also include an intercept term and controlled for age, age-squared, gender, race, education, tenure, tenure-squared, occupation, industry, region, central city and rural location, marital status, and marital status interacted with gender. * denotes significance at .10 level; ** denotes significance at .05 level; *** denotes significance at .001 level.

Table 9   Multinomial Logit Models Predicting Labor Force Status in March 1996 and February 1997: Narrow Definitions for Direct-Hire Temporaries and Contract Workers[1]

	March 1996				February 1997				
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(5)
Employed Different Employer									
Direct-hire temporary	0.820***	0.595***	0.434**	0.386**	1.122***	0.991***	0.843***	0.825***	0.788***
Contract worker	0.870**	0.722*	0.623	0.655*	0.930***	0.922***	0.862**	0.938***	0.923**
Unemployed									
Direct-hire temporary	1.476***	1.285***	0.994***	0.979***	1.707***	1.517***	1.296***	1.243***	1.280***
Contract worker	-0.616	-0.720	-0.949	-0.863	1.417*	1.357**	1.183**	1.113*	1.180**
Not in Labor Force									
Direct-hire temporary	1.825***	1.814***	0.940***	1.114***	1.457***	1.391***	1.632	0.989***	0.715***
Contract worker	0.426	0.397	0.307	0.798	1.834***	1.763***	2.052***	1.454***	1.332***

[1] The specifications correspond to those in Tables 7 and 8.

Table A1. Multinomial Logit Models Predicting Labor Force Status in March 1996[1]

	Employed, Different Employer				
	(1)	(2)	(3)	(4)	(5)
Agency temporary	1.181***	0.604*	0.497	0.718**	0.860**
* satisfied	--	--	--	--	-0.921
On-call workers	0.946***	0.743***	0.659***	0.607***	0.439*
* satisfied	--	--	--	--	-0.028
Direct-hire temporary	0.688***	0.529***	0.453***	0.528***	0.369
* satisfied	--	--	--	--	-0.485*
Contract worker	0.532*	0.459	0.457	0.621**	1.523***
* satisfied	--	--	--	--	-2.162***
Independent contractor	-0.048	-0.010	0.008	0.255	-0.050
* satisfied	--	--	--	--	-0.632*
Regular self-employed	-0.395*	-0.288	-0.245	-0.156	0.712**
* satisfied	--	--	--	--	-2.027***
Regular full-time	-0.145	-0.120	-0.064	0.042	-0.683***
Regular part-time satisfied	--	--	--	--	-0.759***

	Unemployed				
	(1)	(2)	(3)	(4)	(5)
Agency temporary	1.379**	0.941***	0.870**	0.703	0.940**
* satisfied	--	--	--	--	-0.579
On-call workers	1.443***	1.278***	1.127***	1.205***	0.983***
* satisfied	--	--	--	--	-0.445
Direct-hire temporary	1.063***	0.947***	0.866***	1.018***	0.799***
* satisfied	--	--	--	--	-0.945***
Contract worker	0.184	0.181	0.196	0.255	0.901
* satisfied	--	--	--	--	-1.615**
Independent contractor	-0.103	-0.056	-0.028	-0.023	0.297
* satisfied	--	--	--	--	-1.220***
Regular self-employed	-0.331	-0.251	-0.181	-0.389	0.291
* satisfied	--	--	--	--	-1.449***
Regular full-time	-0.443***	-0.396***	-0.214	-0.096	-1.000***
Regular part-time satisfied	--	--	--	--	-0.902**

	Not in Labor Force				
	(1)	(2)	(3)	(4)	(5)
Agency temporary	0.511	0.619	0.326	0.091	0.459
* satisfied	--	--	--	--	1.127
On-call workers	1.208***	1.194***	0.917***	0.955***	1.000***
* satisfied	--	--	--	--	1.214***
Direct-hire temporary	0.845***	0.865***	0.550***	0.545**	1.016***
* satisfied	--	--	--	--	0.581**
Contract worker	-1.368*	-1.330*	-1.037	-0.662	0.796
* satisfied	--	--	--	--	-2.218
Independent contractor	0.491***	0.504***	0.481***	0.701***	0.619
* satisfied	--	--	--	--	0.457
Regular self-employed	0.562***	0.567***	0.404**	0.638***	1.768***
* satisfied	--	--	--	--	-0.745**
Regular full-time	-0.969***	-0.930***	-0.436***	-0.567***	-0.415*
Regular part-time satisfied	--	--	--	--	0.625***

[1] The omitted flexible staffing dummy variable is regular part-time worker. Otherwise, the specifications correspond to those in Table 7.

Table A2. Multinomial Logit Models Predicting Labor Force Status in February 1996[1]

	Employed, Different Employer					
	(1)	(2)	(3)	(4)	(5)	(6)
Agency temporary	1.552***	1.237***	1.203***	1.320***	1.282***	1.294***
* satisfied	--	--	--	--	--	-0.426
On-call workers	0.742***	0.654***	0.757***	0.528***	0.638***	0.718***
* satisfied	--	--	--	--	--	-0.869**
Direct-hire temporary	0.787***	0.676***	0.805***	0.571***	0.544***	0.642***
* satisfied	--	--	--	--	--	-0.444
Contract worker	0.357	0.310	0.378	0.340	0.354	1.679***
* satisfied	--	--	--	--	--	-2.057***
Independent contractor	-0.130	-0.144	-0.114	-0.203	-0.146	0.411
* satisfied	--	--	--	--	--	-1.046***
Regular self-employed	-0.318**	-0.261*	-0.314	-0.328*	-0.413**	0.553
* satisfied	--	--	--	--	--	-1.360***
Regular full-time	-0.305***	-0.314***	-0.155	-0.303***	-0.279***	-0.669***
Regular part-time satisfied	--	--	--	--	--	-0.445***

	Unemployed					
	(1)	(2)	(3)	(4)	(5)	(6)
Agency temporary	1.477**	1.294**	1.312**	1.292**	0.682	0.977
* satisfied	--	--	--	--	--	-0.069
On-call workers	1.136***	1.068***	1.032***	0.728**	0.918***	0.469
* satisfied	--	--	--	--	--	0.262
Direct-hire temporary	1.010***	0.881***	0.956***	0.630**	0.639**	0.593*
* satisfied	--	--	--	--	--	-0.491
Contract worker	0.441	0.427	0.477	0.213	0.051	0.617
* satisfied	--	--	--	--	--	-0.801
Independent contractor	-1.158***	-1.135***	-1.125***	-1.178***	-1.035***	-0.268
* satisfied	--	--	--	--	--	-1.808***
Regular self-employed	-1.047***	-0.959***	-1.067***	-0.648*	-0.571	-0.565
* satisfied	--	--	--	--	--	-1.100
Regular full-time	-0.494***	-0.468***	-0.303	-0.483***	-0.507**	-1.046***
Regular part-time satisfied	--	--	--	--	--	-0.796***

	Not in labor force					
	(1)	(2)	(3)	(4)	(5)	(6)
Agency temporary	-0.143	-0.190	0.228	-0.449	-0.128	-0.452
* satisfied	--	--	--	--	--	0.835
On-call workers	0.464**	0.420**	0.792***	0.117	-0.125	0.385
* satisfied	--	--	--	--	--	0.057
Direct-hire temporary	0.704***	0.669***	1.180***	0.482**	0.387*	0.519*
* satisfied	--	--	--	--	--	0.274
Contract worker	-0.442	-0.437	-0.139	-0.516	-0.526	0.289
* satisfied	--	--	--	--	--	-0.810
Independent contractor	-0.572***	-0.561***	-0.387*	-0.712***	-0.717***	-0.377
* satisfied	--	--	--	--	--	-0.227
Regular self-employed	-0.217	-0.196	-0.132	-0.200	-0.202	0.709*
* satisfied	--	--	--	--	--	-1.032***
Regular full-time	-0.995***	-0.970***	-0.851***	-0.867***	-0.830***	-1.002***
Regular part-time satisfied	--	--	--	--	--	-0.027

[1] The omitted flexible staffing dummy variable is regular part-time workers. Otherwise, the specifications correspond to those in Table 8.

Table A3. Multinomial Logit Models Predicting Labor Force Status in February 1996[1]

	(1)	(2)	(3)	(4)	(5)
	Unemployed				
Agency temporary	0.903**	0.642	0.594	0.523	0.423
On-call worker	1.387***	1.287***	1.105***	1.050***	1.229***
Direct-hire temporary	1.186***	1.072***	0.960***	0.873***	0.953***
Contract worker	0.771*	0.728*	0.622	0.602	0.454
Independent contractor	-0.687**	-0.686**	-0.840***	-0.673**	-0.515
Regular self-employed	-0.567*	-0.524*	-0.799**	-0.167	-0.056
Regular part time	0.425***	0.401***	0.268	0.435**	0.462**
	Not in Labor Force, Don't Want to Be				
Agency temporary	0.822**	0.850**	1.233***	0.850**	0.858**
On-call worker	1.213***	1.173***	1.505***	1.173***	0.421
Direct hire temporary	1.424***	1.419***	1.896***	1.419***	1.015***
Contract worker	0.349	0.356	0.684	0.356	0.203
Independent contractor	0.384***	0.371**	0.497**	0.371**	0.119
Regular self-employed	0.873***	0.851***	0.827***	0.851***	0.707***
Regular part time	0.960***	0.941***	0.973***	0.941***	0.761***
	Not in Labor Force, Want to Be				
Agency temporary	0.549	0.305	0.808	-0.096	0.319
On-call workers	1.276***	1.152***	1.013**	1.006**	1.071**
Direct hire temporary	1.319***	1.183***	0.996**	0.978**	1.085**
Contract worker	0.526	0.479	0.282	0.361	-0.119
Independent contractor	0.419	0.397	0.100	0.116	-0.116
Regular self-employed	-0.086	-0.067	-0.541	-0.118	-0.101
Regular part time	0.761***	0.707***	-0.096	0.840***	0.972***

[1] The specifications in columns 1 - 5 correspond to the specifications in columns 1 - 5 of Table 8.