W.E.
UPJOHN INSTITUTE
FOR EMPLOYMENT RESEARCH

Upjohn Institute Working Papers | Upjohn Research home page

2000

Why Employers Use Flexible Staffing Arrangements: Evidence from an Establishment Survey

Susan N. Houseman
W.E. Upjohn Institute, houseman@upjohn.org

Upjohn Institute Working Paper No. 01-67

****Published Version****
Industrial and Labor Relations Review 55(1) (October 2001): 149-170

Citation
Houseman, Susan N. 2000. "Why Employers Use Flexible Staffing Arrangements: Evidence from an Establishment Survey." Upjohn Institute Working Paper No. 01-67. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. http://dx.doi.org/10.17848/wp01-67

This title is brought to you by the Upjohn Institute. For more information, please contact ir@upjohn.org.

Why Employers Use Flexible Staffing Arrangements:
Evidence from an Establishment Survey

Upjohn Institute Staff Working Paper No. 01-67

Susan N. Houseman
W. E. Upjohn Institute for Employment Research

June 1998
1st revision, December 1999
2nd revision, October 2000

JEL Classification Codes: J23, J30

I am indebted to George Erickcek, who helped develop the survey and provided many helpful comments on the data analysis. I am also indebted to Carolyn Zinn and Lillian Vesic-Petrovic for excellent research assistance in the data analysis and to Claire Black for secretarial support during the survey implementation. The research reported in this paper was partially funded under contract no. 41USC252C3 from the U.S. Department of Labor. The analyses and conclusions presented herein do not necessarily represent the official position of the U.S. government.

Abstract

This paper examines which employers use flexible staffing arrangements, why they use these arrangements, and their implications for workers and public policy, drawing on a nationally representative survey of private sector establishments. Use of flexible staffing arrangements—including temporary help agency, short-term, on-call, regular part-time, and contract workers—is widespread and two-thirds of employers believe this use will increase in the near future. Traditional reasons concerning the need to accommodate fluctuations in workload or absences in staff are the most commonly cited reasons for using all types of flexible staffing arrangements. Many employers also use agency temporaries and part-time workers to screen candidates for regular positions. Finally, savings on benefits costs is an important factor determining employers' use of flexible staffing arrangements. Workers in flexible staffing arrangements typically are not covered by regulations governing benefits, and they typically do not receive key benefits, like pension benefits and health insurance, when these benefits are offered to regular full-time workers.

Why Employers Use Flexible Staffing Arrangements:
Evidence from an Establishment Survey

Employers' use of temporary, on-call, part-time, and contract employment is widespread and available evidence suggests the fraction of employment in certain flexible staffing arrangements is growing (Houseman and Polivka, 1998). Many regard this development as troubling, arguing that companies use these arrangements to increase workforce flexibility, which translates into less job security for workers, or to circumvent employment and labor laws, which often do not cover workers in flexible arrangements. Concern over the latter issue led a recent Department of Labor Task Force to recommend changes to these laws (U.S. Department of Labor, 1999).

Others contend that employers' use of flexible staffing arrangements has little adverse consequences for workers and may even benefit them. For instance, companies may use flexible staffing arrangements simply to access workers with special skills, to accommodate workers' desires for short hours or temporary work, or to screen workers for regular positions. In the last case, if such arrangements facilitate good job matches, both workers and firms stand to benefit. Under the presumption that temporary help agencies can help workers find stable employment, some states refer unemployment insurance and welfare recipients to these agencies (Jobs for the Future, 1997; Bugarin, 1998).

The debate over why employers use flexible staffing arrangements and their implications for workers is hampered by lack of evidence. To help bridge this information gap, the Upjohn Institute for Employment Research sponsored a nationwide telephone survey of 550 employers on their use of five flexible staffing arrangements: temporary agency workers, short-term hires,

regular part-time workers, on-call workers, and contract workers. This survey was designed to be representative of private sector employment in establishments with five or more employees.

Below, I present evidence from the survey on the patterns of use of flexible staffing arrangements and the importance of competing hypotheses for why employers use agency temporary, direct-hire temporary, on-call, regular part-time, and contract workers. To conclude, I discuss some of the policy implications of this evidence.

I. Background on Survey

Recent supplements to the Current Population Survey (CPS) on contingent and alternative work arrangements were intended to provide, for the first time, a comprehensive picture of employment in flexible staffing arrangements.[1] In the supplements, information on employment in four types of flexible or "alternative" work arrangements was collected: employment in temporary help agencies, on-call workers, independent contractors, and workers in contract companies. In addition, the number hired directly by employers on a short-term basis may be inferred from the survey questions.[2] These supplements reveal, among other things, that large numbers of workers in flexible staffing arrangements are dissatisfied with their arrangement. In the case of agency temporaries, direct-hire temporaries, and on-call workers a majority stated that they would prefer a permanent job or one with regular hours (Houseman and Polivka, forthcoming). This fact underscores the importance of examining evidence from employer surveys to understand why these arrangements are being used and their implications for workers.

[1]The CPS Supplement on Contingent and Alternative Work Arrangements was first conducted in February 1995 and was repeated in February 1997 and February 1999.

[2]See Houseman and Polivka (forthcoming) for such an estimate.

Several privately sponsored employer surveys on flexible staffing arrangements have been conducted since the 1980s.[3] The information in the Upjohn Institute's survey, conducted in July and August 1996, supplements that in other surveys in several important ways. Unlike earlier employer surveys, which were restricted either in terms of the number of industries covered or in terms of the size of the company or establishment sampled, this survey is representative of private sector employment in the United States. In addition, the most widely cited (and arguably most representative) employer surveys on flexible staffing arrangements are now over a decade old, and the information in these surveys needs to be updated given the widespread changes in staffing arrangements believed to have taken place in recent years.[4] The Upjohn survey also provides comprehensive coverage of staffing arrangements within the organization, including part-time employment. Part-time employment is typically an important part of an employer's flexible staffing strategy, but was ignored in most earlier employer surveys. Finally, the Upjohn survey complements the CPS Supplements on contingent and alternative work arrangements by providing better information on which employers use these arrangements and why they use them.

The survey sample was drawn from a comprehensive list of private sector establishments with five or more employees in the continental United States. Fifty-one percent of establishments contacted responded to the survey. Establishments were randomly sampled within each of seven employment-size strata. The proportion of establishments in the data set coming from a particular

[3]See, for example, Mangum, Mayall, and Nelson (1985); Abraham (1988, 1990); Bureau of National Affairs (1994); Axel (1995); Christensen (1995); and Kahn (1996). A more detailed discussion of these studies is provided in Houseman (1997).

[4]Another nationwide employer survey, reported in Kalleberg, Reynolds, and Marsden (1999), was conducted about the same time as the Upjohn survey. However, the categorization of staffing arrangements used in that survey is quite different from that used in the Upjohn survey and earlier surveys, making comparisons of findings with that survey difficult.

employment-size stratum approximately equals the proportion of private sector employment in establishments in this size stratum. Thus, the sample is representative of private sector employment in establishments with five or more employees. The appendix provides a more detailed discussion of the survey sample and instrument.

II. Patterns and Trends in the Use of Flexible Staffing Arrangements

Survey respondents were asked whether their establishment had used agency temporaries, short-term hires, part-time workers, on-call workers, and contract workers since 1990. The definitions of the five types of flexible staffing arrangements covered in the survey are shown in Table 1 and the percent of establishments in the survey using each type of worker, by establishment size and industry, is shown in Table 2. At least one type of flexible arrangement besides part-time work is used in 78 percent of the establishments. Part-time workers are used in 72 percent of the establishments in the survey. Except for part-time workers, the incidence of the use of flexible staffing arrangements increases with establishment size. The prevalence of flexible staffing arrangements also varies across industries. The incidence of agency temporaries is particularly high in manufacturing relative to other industries, whereas the incidence of short-term hires and part-time workers is relatively low in manufacturing. Use of on-call workers is especially high in services.

For four out of the five categories of flexible arrangements—agency temporaries, short-term hires, part-time workers, and on-call workers—data on the extent of the establishment's use of these types of workers were collected. Because use of agency temporaries and short-term hires is likely to be seasonal, respondents were asked to give the number of each type of worker

hired by their establishment in 1995 and the average duration of their employment. I estimated the average agency temporary and short-term hire employment in the establishment in 1995 by multiplying the number of agency temporaries or short-term hires used in 1995 by the fraction of the year, on average, they were employed.

Table 3 shows the ratio of average temporary agency employment and of average short-term hire employment to regular employment (defined as regular full-time and regular part-time employment) within establishments using these types of flexible arrangements. For the majority of establishments using them, agency temporaries and short-term hires represent less than a one percent addition to regular employment. A significant minority, however, makes extensive use of agency temporaries and short-term hires. The ratio of agency temporaries to regular workers exceeds five percent among nine percent of the establishments using this type of flexible staffing arrangement. The ratio of short-term hires to regular workers exceeds five percent among seventeen percent of establishments using this arrangement.

Abraham (1988, Table 14.1) reported a similar measure of intensity of use of agency temporaries and short-term hires from her 1985 survey of Bureau of National Affairs (BNA) members. The sample in that survey, however, was quite different from that of the Upjohn survey. In particular, the BNA sample generally excluded organizations with fewer than 50 employees and was skewed toward manufacturing. For comparison purposes, I recalculated the figures from the Upjohn survey, excluding establishments with fewer than 50 employees and weighting the remaining establishments to reflect the industry distribution in the BNA survey. This weighted distribution is reported along with the distribution from the BNA survey in Table 3. Although the results of this comparison should be viewed cautiously, given that the adjustment to

the Upjohn sample may not fully control for the differences in the two samples, it suggests that among establishments using agency temporaries, the intensity of the use has increased over time. Among establishments using short-term hires, there is no clear indication of trend.[5]

I also used the Upjohn survey data to estimate the ratio of temporary agency workers to regular workers and the ratio of short-term hires to regular workers for the aggregate private sector. Specifically, I estimated these ratios within each establishment size class, and then took a weighted average of these ratios where the weights were each establishment size class's share of private sector employment in the U.S. economy in 1995. The estimate of this ratio was 1.5 percent for agency temporaries and 2.3 percent for short-term hires. Important caveats should be attached to these estimates. The sample is relatively small, and respondents were asked for approximate numbers. Still, the estimate for temporary agency workers falls within the range of BLS estimates: according to the February 1995 CPS supplement about 1.1 percent of wage and salary employees were temporary help agency workers in that month; according to figures from the Current Employment Statistics (CES), in 1995 about 1.8 percent of wage and salary employment was in the help supply services industry, which is dominated by temporary help agencies. Estimating short-term hires from the February 1995 CPS, between 2.3 and 3.1 percent

[5]The analysis in Table 3 compares the intensity of use of agency temporaries and short-term hires among those using these forms of employment in the data for 1995 from the Upjohn survey and data for 1985 from the BNA survey. Using the same weighting procedure, I also compared the incidence of agency temporary and short-term hire use in the two surveys. With these weighted figures, the percent of employers using temporary agency workers is about the same in the two surveys, though the incidence of short-term hire use is still lower in the Upjohn survey. Because the unit of observation in the BNA sample was sometimes the establishment and sometimes the company, the incidence of flexible staffing arrangements would be expected to be higher in the BNA survey, all else the same.

of wage and salary workers were short-term hires.[6] The consistency of these figures with BLS data suggests that, overall, the estimates received in Upjohn survey are reasonable.

Point-in-time estimates of the number of agency temporaries and short-term hires mask much larger flows into and out of temporary jobs. Using data on the number of agency temporaries and short-term hires the establishment used during the course of 1995 and the average duration of employment of each type of worker, I am able to look at the flows in these two types of jobs during a year. The data indicate that the number of positions created for agency temporaries during a year is seven to eight times the number of temporary agency jobs likely to exist at any point in time, while the number of short-term hires during a year is five to six times greater than that captured in a point in time survey. Some people no doubt hold multiple temporary jobs. Nonetheless, although only about four percent of the workforce is in a temporary job at any point in time, a much larger percentage is likely to experience a spell of temporary employment during the year.

From Table 2, 72 percent of employers in the survey use part-time workers and 38 percent use on-call workers. Table 4 shows regular part-time and on-call employment as a percent of regular part-time plus regular full-time employment among establishments using part-time or on-call workers. The intensity of use of part-time and on-call workers varies tremendously in the sample. Among establishments using them, regular part-time workers make up less than ten percent of the regular workforce in 34 percent of the establishments, while they comprise half or

[6]Under the smaller estimate, individuals were classified as short-term hires if they stated that their job was temporary for economic, not personal, reasons; they were not paid by a temporary help agency; and they were not self-employed. The larger estimate also includes those who did not report their job to be temporary, but who stated they could not remain in their current job as long as they wished for economic reasons. The larger estimate likely includes some workers who expect to be laid off from a regular job.

more of regular employment in 19 percent. Thus, for a large minority of establishments, the use of part-time employees is a key part of the organization's staffing strategy.[7] Most of the establishments that intensively use part-time workers are in the trade and services sectors. I also used the survey data to estimate regular part-time employment as a percent of the workforce for the private sector in the economy as a whole. This estimate, 18 percent, is in line with estimates of part-time employment from the CPS.[8]

The patterns of use of on-call workers are quite similar to those of part-time workers.[9] For 43 percent of establishments using them, on-call workers represent less than a 10 percent addition to regular employment. However, for five percent of establishments using on-call workers, these workers represent over a 50 percent addition to regular employment, and for 17 percent they represent over a 75 percent addition to regular employment. Thus, on-call workers are a major part of many organizations' staffing strategy.

Information on recent trends in the use of flexible staffing arrangements within the surveyed establishments and on employers' forecasts of future trends in their industry was also collected. Perhaps most interesting, 17 percent of all employers in the sample indicated that since 1990 they had contracted out work previously done in-house, while 9.5 percent stated that since

---

[7]For part-time workers, data on average weekly hours worked were also collected. Assuming full-time workers work a 40-hour week, regular part-time hours as a percent of total part-time and full-time hours is less than ten percent in 52 percent of establishments and 50 percent or more in just three percent of establishments.

[8]I used the February 1995 CPS Supplement to construct mutually exclusive categories of employment defined as closely as possible to those used in the Upjohn Institute survey. The methodology for this classification follows that in Houseman and Polivka (forthcoming). According to my estimates, 15.4 percent of wage and salary workers were regular part-time workers in February 1995.

[9]Because of a programming error, most users of on-call workers were not asked how many were in their establishment's on-call worker pool in December 1995 in the original survey. Through follow-up calls, usable responses to this question were obtained from about two-thirds of applicable respondents.

1990 they had brought contracted-out work back in-house. This finding along with evidence from earlier surveys (Abraham 1990, Abraham and Taylor 1996) suggests contracting out increased in the 1980s and 1990s. Slightly more establishments reported that their use of agency temporaries, short-term hires, and on-call workers had increased relative to regular workers than reported their use of these workers had decreased relative to regular workers since 1990. The percent increasing their use of regular part-time workers relative to full-time workers was substantially higher than the percent decreasing their use since 1990.[10]

The overwhelming majority of employers perceive that, in general, use of flexible staffing arrangements will grow. Two-thirds of respondents agreed with the statement that organizations in their industry would increase the use of flexible staffing arrangements, such as agency temporaries, short-term hires, on-call workers, part-timers, and contract workers, in the next five years.

III. Why Employers Use Flexible Staffing Arrangements

Firms seeking to minimize costs might use flexible staffing arrangements for several reasons. Traditionally, firms have used flexible staffing arrangements in order to reduce the quantity of labor hired. By using flexible staffing arrangements, firms can adjust staffing levels to fluctuations in their work load over the day, week, month or year and thereby avoid the need to always staff to their peak work load. Similarly, companies may hire workers from temporary help agencies or from in-house on-call pools when employees are sick or on vacation rather than

[10]Although the fraction of part-time employment as measured by the CPS increased from 1990 to 1995, this increase probably reflects revisions to the CPS in 1994. Making adjustments to help control for these revisions, Polivka and Miller (1998) argue that the share of part-time employment did not increase over this period.

overstaffing or paying regular workers overtime in the event of such absences. Freedman (1996) suggests that, in response to competitive pressures to lower labor costs, managers are making their organizations leaner, in part, by using more flexible staffing arrangements.

Employers may also use flexible staffing arrangements in order to provide certain groups of workers with lower wages or benefits. A unionized company may pay above-market wages, and thereby have an incentive to use temporary agency workers or contract workers who are not its legal employees and are not covered by the terms of the collective agreement. Even if a company is not unionized, management may wish to pay above-market or "efficiency" wages to reduce turnover or shirking among workers who have high levels of firm-specific human capital or who are difficult to monitor. Although a nonunion company legally may offer above-market wages to some workers and not to others, notions of inequality and their adverse effect on employee morale may inhibit management from doing so. Using flexible staffing arrangements—particularly agency temporaries and contract workers who are not the company's employees—may enable management to lower wages for certain groups with minimal adverse repercussions on morale.[11]

The incentive to use flexible staffing arrangements among companies wishing to offer different benefits packages to different groups of workers is especially strong. No law requires employers to offer benefits such as a retirement plan or health insurance plan to its employees. However, if the company does offer these benefits, the benefits plans must comply with the Employee Retirement Income Security Act (ERISA) and other benefits regulations in order to receive preferential tax treatment. These regulations limit an employer's ability to discriminate

[11]This argument is developed more fully in Abraham (1990).

among employees in the benefits package offered. However, the regulations exclude workers who have short tenures or who work fewer than a specified number of hours, and so often exclude a company's part-time, on-call, and short-term hire workforce.[12] Moreover, temporary agency and contract workers generally are not deemed the client company's employees for benefits purposes. As benefits costs, especially health insurance costs have risen relative to wages, employers have an incentive to cut these benefits. By using flexible staffing arrangements, employers may restrict benefits to certain groups without losing preferential tax status of their benefit plans.

A third reason why firms may use flexible staffing arrangements is to screen potential workers for regular full-time positions. Companies may increase labor productivity and reduce labor costs with such screening. Many believe the growth in law suits brought by terminated employees has dramatically increased the costs to companies of firing workers (Krueger, 1991). A worker hired on a fixed-term contract or through a temporary help agency may be terminated with minimal risk of legal action.[13] Moreover, using temporary help agencies as a screening device allows managers to side-step the unpleasant task of firing new employees who display poor or mediocre performance. Arguably, managers are less likely to fire a mediocre employee than

[12]Specifically, under ERISA, a pension plan must be provided to 70 percent of a company's non-highly compensated workers who have worked at least 1000 hours over the preceding 12 months to qualify for preferential tax treatment. Non-discrimination clauses in the IRS tax code stipulate that self-insured medical plans must be offered to all non-highly compensated employees, except part-time employees (those working less than 35 hours per week) and those with fewer than three years of service. If the plan does not comply, the value of the benefit is taxable as income to the employee (Miller, 2000; Collins, 1999). Interestingly, fully insured medical plans are not subject to any non-discrimination rules. About half of large and medium-sized private establishments and about a quarter of small private establishments with health insurance plans have self-insured plans (McDonnell and Fronstin, 1999, Table 9).

[13]Autor (1999) finds evidence linking the decline of employment-at-will in state laws to the growth of temporary agency employment.

they are to “not hire” a mediocre agency temporary, short-term hire, on-call, or part-time worker on as regular full-time staff. Thus, the result may well be a more productive staff. In addition, companies may save by hiring permanent staff through temporary help agencies if these agencies enjoy economies of scale and can recruit and screen workers more cheaply.

Companies may also use flexible staffing arrangements to access workers with special skills or to accommodate employees’ wishes for a more flexible working schedule. Finally, anecdotal evidence suggests that managers sometimes use these arrangements, especially agency temporaries, to bypass head count limits imposed by a corporate office during restructuring or a merger.

Inferences about why employers use flexible staffing arrangements are made in several ways from the survey data. First, I look at responses to questions in which employers were specifically asked why they use the various types of flexible staffing arrangements. In addition, I examine employers’ answers to follow-up questions designed, in part, as checks on employer responses to direct questions about why they use these arrangements. Finally, I use multivariate analysis to statistically identify the factors determining whether an employer uses a particular flexible staffing arrangement and the intensity of the employer’s use of that arrangement. Besides validating the reasons employers give, multivariate analysis provides further insights into who uses these arrangements and why.

Why Employers Say They Use Flexible Staffing Arrangements

Respondents in establishments using agency temporaries, short-term hires, regular part-time workers, and on-call workers were asked which among a list of possible reasons were important for their establishment's use of the particular type of flexible arrangement.[14] Table 5 shows the percent of establishments indicating that a particular reason is important for their establishment's use of each of the four types of flexible arrangements. Employers most commonly gave reasons pertaining to specific staffing needs, usually arising from fluctuations in work load or from absences among their regular staff. The three most frequently cited reasons for hiring workers from temporary help agencies were: 1) to provide needed assistance at times of unexpected increases in business, cited by 52 percent; 2) to fill a vacancy until a regular employee is hired, cited by 47 percent; and 3) to fill in for an absent regular employee who is sick, on vacation, or on family medical leave, cited by 47 percent. Seasonal needs, cited by 55 percent of employers using short-term hires, appear particularly important in the use of that type of flexible staffing arrangement. Among those using part-time workers, 62 percent use them to provide needed assistance during peak-time hours of the day or week and 49 percent use them to provide needed assistance during hours not covered by full-time shifts.[15] Among employers using on-call workers, 69 percent use them to cover for absent regular employees and 51 percent use them to provide needed assistance at times of unexpected increases in business.

[14]The list of reasons varied somewhat by type of arrangement. After going through the preset list of reasons, respondents were asked whether there was any other important reason for using that type of flexible arrangement as an open-ended question. These open-ended questions did not yield any other common reasons for using flexible arrangements.

[15]For example, a retail store open for 12 hours a day might hire full-time workers to cover the first eight hours and part-time workers to cover the last four hours.

Screening candidates for regular jobs appears particularly important in employers' decisions to use agency temporaries and part-time workers; 21 percent of employers using agency temporaries and 15 percent using part-time workers cited screening as an important reason for their use. Interestingly, manufacturers were especially likely to cite screening as a reason for using agency temporaries. In a related question, employers were asked their qualitative assessment about the extent to which they move workers in flexible staffing arrangements into regular positions.[16] Consistent with the above findings, somewhat more employers reported "often" moving agency temporaries (12 percent) and part-time workers (15 percent) than reported "often" moving short-term hires (9 percent) and on-call workers (9 percent) into regular positions. A much greater percentage of employers reported "occasionally or sometimes" moving workers in flexible staffing arrangements into regular positions. Together, about 43 percent of employers using agency temporaries, 43 percent using short-term hires, 54 percent using part-time workers, and 46 percent using on-call workers indicated that they often, occasionally or sometimes move these workers into regular positions. Thus, there appears to be a moderate degree of mobility of workers from flexible staffing to regular arrangements, though, when such mobility occurs, screening workers for regular jobs was not always the initial motivation for using the flexible staffing arrangement.

A majority of employers stated that accommodating employees' wishes for part-time hours was important in their use of part-time workers, indicating that many employers offer part-

[16]It would have been preferable to collect data on the percentage of workers in flexible staffing categories that employers moved into regular positions, but pretests suggested that many employers would be unable to provide such a statistic in a telephone interview.

time hours to retain valued employees. Relatively few employers cited special expertise or restructuring as reasons for using flexible staffing arrangements.

Wage and Benefit Cost Differences

Similarly, except for part-time workers, few employers cited wage and benefit cost savings as an important reason for using flexible staffing arrangements. Nevertheless, other information collected in the survey indicates that the wage and, especially, benefit costs are often lower for workers in all flexible staffing arrangements. Survey respondents were asked to compare the labor costs of workers in flexible staffing arrangements with those of regular workers in similar positions. This information was elicited in two questions. First, respondents were asked to compare the hourly wage cost of workers in a particular flexible arrangement with the hourly wage cost of regular workers in similar positions. Next, respondents were asked to compare total hourly wage plus hourly benefit costs of workers in that flexible arrangement with total hourly wage and benefit costs of regular workers in similar positions. For agency temporaries, respondents were asked to compare the billed hourly rate with the hourly wage cost or the total hourly wage and benefit costs for regular workers in similar positions.

The top panel of Table 6 shows the comparison of the hourly wage cost of workers in flexible arrangements and the hourly wage cost of regular workers in similar positions. For short-term hires, part-time workers, and on-call workers, a majority indicated that the hourly wage cost is about the same as that of regular workers, although more indicated that the hourly wage was lower than indicated it was higher. For agency temporaries, a majority indicated that the hourly

billed rate is higher than the hourly wage rate for regular workers, while relatively few indicated that it is lower.

The pattern is quite different, however, when the comparison concerns the hourly wage plus the hourly benefit cost. As shown in the bottom panel of Table 6, a negligible percent of employers indicated that the hourly wage and benefit cost of short-term hires, part-time workers, and on-call workers is higher than that of regular workers, while 59 percent employing short-term hires, 63 percent employing part-time workers, and 73 percent employing on-call workers indicated that it is lower. For agency temporaries, only 19 percent indicated that their billed hourly rate is higher than the hourly wage and benefit cost of regular workers and 38 percent indicated that it is lower.

Information was also collected on the benefits employers provide to their short-term hires, regular part-time workers, on-call workers, and regular full-time workers. Because agency temporaries and contract workers are not employees of the establishment interviewed, benefits information for these types of workers could not be collected. Table 7 shows, among establishments using a particular flexible arrangement, the percent that offers paid vacations and holidays, paid sick leave, a pension plan, participation in a profit or gain sharing plan, and health insurance to workers in that arrangement and to regular full-time workers. Because the survey pretest revealed that employers sometimes distinguish between types of part-time workers (usually based on the number of hours they work) in determining benefits eligibility, employers were asked if any of their part-time workers are eligible for a particular benefit and if so, approximately what percentage of part-time workers are eligible. Table 7 reports the percentage

of employers with part-time workers that offer any of their part-time workers the particular benefit and the percent that offer 50 percent or more of their part-time workers the benefit.[17]

Consistent with the wage and benefit cost comparisons reported in Table 6, workers in flexible arrangements are much less likely than regular full-time workers to be offered benefits. Whereas the overwhelming majority of employers offer paid vacation and holidays, paid sick leave, pension benefits, and health insurance benefits to regular full-time staff, employers rarely offer these benefits to short-term hires or on-call workers. Less than half of employers offer paid vacation and holidays to at least 50 percent of their part-time staff, and only about a third of employers offer at least half of their part-time employees paid sick leave, pension benefits, and health insurance benefits.

One might speculate that the difference in benefits eligibility arises because workers in flexible arrangements are concentrated in firms that provide few benefits to any employees, including their regular full-time employees. However, the within establishment comparisons displayed in Table 7 show that the workers in flexible arrangements are much less likely to receive benefits from their employer not because they are concentrated in firms offering few benefits, but rather because employers use the employment arrangement to determine benefits eligibility.

Although benefits information could not be collected for agency temporaries because they are not employees of the client firm, one can infer that within establishment benefits comparisons for agency temporary and regular full-time workers would yield similar findings. From Table 7, among establishments using agency temporaries, a relatively high percentage offer health

[17]Employers were asked whether each type of benefit is offered—not whether employees elect to receive it. Employees eligible to participate in health insurance and pension plans may elect not to participate, particularly if the required employee contribution is high and, in the case of health insurance, they have coverage from another source.

insurance (98 percent) and retirement benefits (80 percent) to full-time workers. In the 1995 CPS Supplement, the percent of workers paid by temporary help agencies (which includes the agencies' permanent staff) that reported they were eligible to receive health insurance and retirement benefits from their employer was just 19 percent and 5 percent, respectively.

The findings from these within-establishment comparisons are important, for they show that employers often avoid paying pension and health insurance benefits to certain groups of workers—as otherwise ERISA and anti-discrimination clauses in the IRS tax code would likely require—by using flexible staffing arrangements. These findings raise the question of why more employers did not cite savings on benefit costs as a reason for using flexible staffing arrangements. One reason may be that employers are reluctant to acknowledge such savings. Another may be that workers in these arrangements are, on average, less productive than regular full-time workers and so employers are not saving on labor costs once productivity differences are taken into account. Existing research on the differences in compensation between those in flexible staffing arrangements, on the one hand, and regular full-time positions, on the other, does not support the latter interpretation, however. Studies generally have found that those in flexible staffing arrangements earn lower wages and receive fewer benefits than those in regular full-time positions, even after controlling for differences in observed and unobserved human capital.[18]

[18]Hotchkiss (1991) finds that correcting for sample selection bias in the decision to work part-time actually increases the estimated wage differential between part-time and full-time workers. Lettau (1997) compares the hourly wages of part-time and full-time workers within establishments and finds that hourly wages of part-time workers are 16 percent lower on average and that total hourly compensation is 48 percent lower, on average. Although Blank (1990) finds that, after controlling for sample selection bias in the decision to work and to work part-time, part-time women earn more than full-time women, she continues to find that part-time men earn less than full-time men. Moreover, she finds that modeling the labor supply decision has no effect on the finding that part-time workers are significantly less likely than full-time workers to receive benefits from their employer. Segal and Sullivan (1997, 1998) use two different longitudinal data sets to control for individual fixed effects in studies of wage differentials between agency temporary workers and other workers. They find that temporary agency workers earn significantly less than other workers, though their estimates of this wage differential range from three

Even if the productivity of workers in flexible staffing arrangements is similar to that of workers in regular full-time jobs, there may be other costs associated with using flexible arrangements that negate any savings from lower wage or benefits costs. For instance, because those in flexible arrangements often work fewer hours per week or have shorter tenures than regular full-time workers, employers may wish to offer them lower wages or benefits than those in regular full-time arrangements to recoup fixed hiring and training costs. In the case of agency temporaries, firms often must pay high overhead charges to the agency.

Finally, it should be noted that even if employers do not report using flexible staffing arrangements to save on wage and benefits costs, this does not imply that such savings are unimportant in determining their use. When employers say they use flexible staffing arrangements to accommodate workload fluctuations or staff absences, the prevailing cost of these arrangements is implied, and if that cost were to increase—for instance because employers had to extend these workers benefits and employers bore some of the costs of the benefits mandate—flexible arrangements would become less attractive as a way of handling such circumstances.[19]

---

percent of the former study to between 10 and 20 percent in the latter.

[19]Theoretically, the cost of a mandated benefit may be fully absorbed by workers in the form of lower wages if labor markets are characterized by perfect competition. Even with competitive labor markets, however, the costs of the benefits will not be fully shifted onto workers if workers do not fully value the benefit or if minimum wage laws prevent wages from declining. If labor markets are characterized by imperfect competition and the mandate increases labor's bargaining power, firms are likely to absorb at least some of the mandate's costs. I provide a summary of the theoretical literature on mandated benefits in Houseman (1998b).

The Determinants of Employer Use of Flexible Staffing

The role of benefit cost savings, along with other factors, in determining flexible staffing use is explored further through multivariate analysis. I first model the employer's decision whether or not to use a particular type of flexible staffing arrangement. To do this, probit models, in which the dependent variable equals one if a particular type of flexible arrangement is used in the establishment and zero if it is not, are estimated. Separate probit equations are estimated for each of the five types of flexible staffing arrangements in the survey.

Explanatory variables include the logarithm of employment in the establishment; dummy variables to control for region in which the establishment is located; the occupational distribution of employment (nine occupations) in the establishment's detailed industry; the establishment's industry (five sectors); the fraction of the establishment's employees who are unionized; a dummy variable indicating whether the establishment is in a rural location; the average unemployment rate in 1995 in the establishment's locality; measures of seasonal and cyclical fluctuations of employment in the establishment's industry relative to seasonal and cyclical fluctuation in aggregate employment; and a dummy variable set equal to one if the establishment offers both pension and health insurance benefits (termed "good" benefits) to regular full-time workers. In addition, in the models for part-time and on-call workers, a dummy variable equal to one if the establishment's hours of operation are amenable to being covered with full-time shifts is included. The appendix contains a more detailed discussion of variable definitions.

The sign on the logarithm of employment is expected to be positive; all else the same, larger establishments are more likely to have a need arise for, and thus to have used, at least one worker in a flexible arrangement. The predicted effect of percent unionized on the use of flexible

arrangements is ambiguous. On the one hand, unions are likely to oppose employers' use of certain types of flexible arrangements. On the other hand, unions typically raise the wages and benefits of members, giving employers a greater incentive to use certain flexible staffing arrangements. A dummy variable indicating that the establishment is located outside a metropolitan area was included as an explanatory variable, because it is possible that labor markets for flexible arrangements are less developed in rural areas. This is particularly likely to be true for temporary help agencies, which exist only in places with sufficient demand for their services.

The unemployment rate is intended to capture the degree of slack in the local labor market, and its predicted effect on use of flexible staffing arrangements is ambiguous. On the demand side, employers who use a particular flexible arrangement to fill vacancies until a regular worker is hired or to accommodate cyclical fluctuations in workload are likely to demand more workers in flexible arrangements at any given relative wage when labor markets are tight. On the supply side, if workers prefer regular arrangements, as CPS data indicate is true for a majority of workers in several flexible staffing arrangements, workers are less likely to accept employment in flexible arrangements at any given relative wage when labor markets are tight.

Establishments subject to large seasonal and cyclical fluctuations in demand are expected to use relatively more agency temporaries and short-term hires. Finally, if savings on benefit costs is an important determinant of use of flexible arrangements, then employers offering good benefits to regular full-time workers should be more likely to use these arrangements than employers not offering good benefits.

Table 8 presents selected results of the probit models. As expected, the establishment's employment size is positively related to the probability it uses flexible arrangements, with the exception of part-time workers, which are used in most establishments, large and small. Establishments with weekly hours of operation that can be easily divided into full-time shifts are significantly less likely to hire part-time workers.

Except for contracting out, the percent of the workforce unionized is negatively related to the use of flexible arrangements, significantly so for agency temporaries and part-time workers.[20] Contracting out has been a particularly contentious issue between unions and management in recent years, and it is noteworthy that unionization is not associated with less outsourcing.

As expected, the measure of seasonality has a large, significant positive effect on the probability that an employer uses agency temporaries and short-term hires. The degree of seasonality has a significant negative effect on the probability that an establishment contracts out some functions.[21]

One of the most interesting findings in these models is the positive, significant coefficient on the "good benefits" dummy variable in the temporary help agency, part-time, and on-call worker equations, indicating that savings on benefit costs are an important determinant of whether an employer uses these arrangements. Some employers may be using these flexible staffing arrangements primarily to avoid paying benefits to certain groups of workers. Alternatively,

[20]However, the latter, in particular, may reflect a reverse causation. Workplaces with a high proportion of part-time workers are generally thought to be hard to unionize.

[21]Because of the seasonality and cyclicality variables are estimated variables, their standard errors are biased and thus hypothesis tests on the statistical significance of these variables may be inaccurate. See Murphy and Topel (1985).

savings on benefits costs may make the use of these arrangements a more attractive option for handling workload fluctuations, staff absences, or other circumstances.

Information on the magnitude of the employer's use of agency temporaries, short-term hires, part-time, and on-call workers is available from the survey. The intensity of the employers' use of these workers, as reported in Tables 3 and 4 above, is used as the dependent variable in regression models with the same set of explanatory variables as were used in the probit models. Because the measure of intensity is censored at zero, these equations were estimated using tobit models. Selected results from the tobit models are reported in Table 9.

While there are many similarities in the findings of the tobit and probit models, there are some interesting differences. Because large firms are more likely to have a need for at least one worker in a particular flexible staffing arrangement, it was predicted, and confirmed for most staffing arrangements in the probit models, that employer size would be positively related to use. This same logic does not carry over to the intensity with which employers use flexible staffing arrangements, and, in fact, the employer size variable is not statistically significant in the short-term hire and on-call worker tobit equations and is even negative and significant in the part-time worker tobit equation. It is quite interesting that employer size is positively related to the intensity of use of agency temporaries, and is consistent with anecdotal evidence of heavy use of temporary help agencies by large companies. In addition, the proportion unionized is not negatively related to the intensity with which employers use agency temporaries and short-term hires, indicating that while unions may be effective in blocking firms from using these arrangements, if they are used, unions do not limit their use.

The unemployment rate and industry cyclicality variables, while insignificant in all of the probit models, are negative and significant and positive and significant, respectively, in the agency temporary tobit model. These findings suggest that employers use temporary help agencies to fill vacancies in tight labor markets or to fill temporary positions during periods of strong demand. They are consistent with the fact that, in aggregate data, temporary help employment is more cyclically sensitive than total wage and salary employment.

As in the probit models, the industry seasonality variable is positive and significant in the agency temporary and short-term hire tobit model and the full-time shift variable is negative and significant in the part-time worker tobit model. Finally, the good benefits variable is positive and significant in the agency temporary and on-call worker tobit models, indicating that benefit cost savings is an important determinant not only of whether an employer uses these arrangements but also of how much it uses them.

It is interesting to compare the results of this analysis with analyses of data from employer surveys conducted in the early and mid-1980s. Abraham (1990) reports the results of similar tobit models on the intensity of an establishment's use of temporary workers, using data for 1985 from the BNA survey. The dependent variable in her model is the sum of the intensity of use of agency temporaries and short-term hires. Consistent with the results from this survey, Abraham found that the intensity of a firm's use of temporary workers was positively and significantly related to measures of seasonal and cyclical fluctuation. She also found a significant negative effect of the percent unionized on the intensity of use of temporary workers and a positive, significant effect of percent unionized on the probability that a firm uses independent contractors. I also found a

significant negative effect of percent unionized in the agency temporary and short-term hires probit model.

One of the most interesting results in this paper is the positive and significant sign of the coefficients on the "good" benefits variable in several probit and tobit models. Although they do not use regression analysis, Mangum, Mayall and Nelson (1985) note a positive relationship between firms' use of agency temporaries, short-term hires, and on-call workers and the level of benefits provided, based on data from their nationwide mail survey in six industries. Arguing that companies with high per unit labor costs, reflecting high wage norms, would have a greater incentive to move work outside of their internal labor market, Abraham includes in her tobit model a dummy variable equal to one if the business reported that its pay and benefits package was in the top 10 percent of the local area distribution. The coefficient on this variable was insignificant, although, as Abraham speculates, its lack of significance may reflect the selected nature of her sample: medium and large companies belonging to a national employers' association. There may be little variation in the pay and benefits packages offered by these employers.

IV. Conclusion

Use of flexible staffing arrangements is common. Overall, 72 percent of the establishments in the survey use part-time workers and 78 percent use some other form of flexible staffing arrangement. Part-time and on-call workers often represent a large share of an organization's workforce. And while agency temporaries and short-term hires represent a relatively small addition to regular employment in most organizations, comparison with the results

of a survey conducted a decade earlier suggest that the intensity with which employers use agency temporaries has grown. Moreover, the survey data show that many more temporary jobs are created in the economy over the course of a year than exist at any point in time. Thus, while about four percent of wage and salary workers hold temporary jobs at any point in time, it is likely that a much larger share experience some spell of temporary employment during a year.

The survey results also reveal a widespread perception among employers that employment in flexible staffing arrangements will grow. Two-thirds of respondents agreed with the statement that organizations in their industry would increase the use of flexible staffing arrangements, such as agency temporaries, short-term hires, on-call workers, part-timers, and contract workers, in the next five years.

The implications of the large and possibly growing number in flexible staffing arrangements depend in large part on why employers use these arrangements. The fact that workers in flexible staffing arrangements often receive low wages, few benefits, or little job security is of little concern if workers in these arrangements prefer their schedules and are willing to trade off compensation and job security for such flexibility. There is some evidence for this in the case of part-time workers. In the Upjohn survey, over half of the employers stated that accommodating employees' desires for short hours was an important reason for using part-time workers, and, in the CPS, the overwhelming majority of part-time workers indicate they prefer part-time hours. However, in the CPS, over half of on-call workers and short-term hires and over two-thirds of agency temporaries state that they would prefer regular jobs, indicating considerable mismatch between employer and employee preferences for these arrangements.

Such a mismatch would be of little concern if employers use these arrangements primarily to screen workers for regular positions. However, such screening appears important only in the case of agency temporaries, and employers cited this factor far less often than others as a reason for hiring agency temporaries. Moreover, while many employers report that they occasionally or sometimes promote workers in flexible staffing arrangements into regular positions, few report often promoting these workers. Some states have begun to refer unemployment insurance and welfare recipients to temporary help agencies, with the implicit assumption that these placements will provide avenues for permanent jobs (Jobs for the Future, 1997; Bugarin, 1998). While it is possible that temporary placements will provide workers with valuable job experience that will help them find permanent jobs with other employers, a minority are likely to find permanent jobs with the client firms.[22]

Instead of screening, employers most commonly cite traditional reasons for using agency temporaries, short-term hires, on-call workers, and regular part-time workers: they need to temporarily fill in for staff who are absent or leave, or they need to accommodate fluctuations in their workload. Results from the multivariate analysis confirm the importance of these traditional factors. Thus, employers primarily use flexible staffing arrangements because they need workers for fewer hours or for a temporary period of time. In the latter case, the jobs intrinsically have little security.

Although few employers say they use workers in flexible staffing arrangements in order to save on wage and benefits costs, employers typically do save, primarily on benefits costs, by using these arrangements. Employers that offer pension and health insurance benefits to their regular

[22]Whether or not disadvantaged workers are better off being referred to a temporary help agency than receiving alternative services needs to be studied, ideally through a random assignment experiment.

full-time staff are especially likely to use various types of flexible staffing arrangements and to use them more intensively. Non-discrimination provisions in ERISA and the IRS tax code generally do not apply to workers in flexible staffing arrangements, because they have short working hours or short tenure or because they are deemed another company's employees. Thus, employers do not have to—and generally choose not to—offer these workers health insurance and pension benefits when they provide them to their regular full-time staff. The survey findings suggest that while perhaps relatively few employers explicitly use flexible staffing arrangements to circumvent benefits regulations, the lower benefits costs make such arrangements more attractive as an option for dealing with other situations like staff absences, vacancies, and workload fluctuations. Thus, current laws have the, probably unintended, effect of increasing employer demand for flexible staffing arrangements. However, any changes designed to correct this distortion and increase benefits coverage of workers in flexible staffing arrangements could reduce employment among these workers or have other adverse consequences.

References

Abraham, Katharine G. 1988. "Flexible Staffing Arrangements and Employers' Short-term Adjustment Strategies." In Robert A. Hart, ed., *Employment, Unemployment and Labor Utilization*: 288-311. Boston: Unwin Hyman.

——. 1990. "Restructuring the Employment Relationship: The Growth of Market-Mediated Work Arrangements." In Katharine Abraham and Robert McKersie, eds., *New Developments in the Labor Market: Toward a New Institutional Paradigm*: 85-120. Cambridge, MA: MIT Press.

Abraham, Katharine G. and Susan K. Taylor. 1996. "Firms' Use of Outside Contractors: Theory and Evidence." *Journal of Labor Economics* 14(3): 394-424.

Autor, David H. 2000. "Outsourcing at Will: Unjust Dismissal Doctrine and the Growth of Temporary Help Employment." Unpublished paper.

Axel, Helen. 1995. *HR Executive Review: Contingent Employment* 3(2). New York, NY: The Conference Board.

Blank, Rebecca M. 1990. "Are Part-Time Jobs Bad Jobs?" In Gary Burtless, ed., *A Future of Lousy Jobs? The Changing Structure of U.S. Wages:* 123-164. Washington, D.C.: Brookings Institution.

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

Bureau of National Affairs, Inc. 1994. *Staffing and Scheduling Strategies*. Personnel Policies Forum Survey No. 152. Washington, DC: The Bureau of National Affairs, Inc.

Christensen, Kathleen. 1995. *Contingent Work Arrangements in Family-Sensitive Corporations.* Center on Work and Family, Boston University.

Collins, Michael J. 1999. "A Primer on the Self-Insured Health Plan Nondiscrimination Rules." *Journal of Pension Planning and Compliance* 25(2).

McDonnell, Ken and Paul Fronstin. 1999. *EBRI Health Benefits Databook*. Washington, DC: Employee Benefit Research Institute.

Freedman, Audrey. 1996. "Contingent Work and the Role of Labor Market Intermediaries." In Garth Mangum and Stephen Mangum, eds. *Of Heart and Mind: Social Policy Essays in Honor of Sar A. Levitan*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Haisken-Denew, John P. and Christopher M. Schmidt. 1997. "Interindustry and Interregion Differentials: Mechanics and Interpretation." *Review of Economics and Statistics* LXXIX(3): 516-520.

Houseman, Susan. 1997. *Temporary, Part-Time, and Contract Employment: A Report on the W.E. Upjohn Institute's Employer Survey on Flexible Staffing Arrangements.* Report prepared for the U.S. Department of Labor, Office of the Assistant Secretary for Policy.

——. 1998a. "Labor Standards in Alternative Work Arrangements." *Labor Law Journal* 49(7): 1135-1142.

——. 1998b. "The Effects of Employer Mandates." in *Generating Jobs*. edited by Richard B. Freeman and Peter Gottschalk. New York: Russell Sage Foundation.

Houseman, Susan N. and Anne E. Polivka. Forthcoming. "The Implications of Flexible Staffing Arrangements for Job Security." In *On the Job: Is Long-Term Employment a Thing of the Past?* Edited by David Neumark. New York: Russell Sage Foundation.

Hotchkiss, Julia, L. 1991. "The Definition of Part-Time Employment: A Switching Regression Model with Unknown Sample Selection." in *International Economic Review* 32(4), 899-917.

Jobs for the Future. 1997. *Skills Assessment, Job Placement, and Training: What Can Be Learned from the Temporary Help/Staffing Industry? An Overview of the Industry and a Case Study of Manpower Inc.* Boston: Jobs for the Future.

Kahn, Shulamit. 1996. "The Impact of Large Companies' Increased Use of Temporary Workers on Financial Measures of Performance." Presented at the Changes in Working Time in Canada and the United States Conference, June 13-15, 1996 in Ottawa, Canada.

Kalleberg, Arne L., Jeremy Reynolds, and Peter V. Marsden. 1999. "Externalizing Employment: Flexible Staffing Arrangements in U.S. Organizations." Unpublished paper, University of North Carolina at Chapel Hill.

Krueger, Alan B. 1991. "The Evolution of Unjust-Dismissal Legislation in the United States." *Industrial and Labor Relations Review* 44 (4): 644-60.

Kruger, Alan B. and Lawrence H. Summers. 1988. "Efficiency Wages and the Inter-Industry Wage Structure." *Econometrica* 56(2): 259-293.

Lettau, Michael K. 1997. "Compensation in Part-Time Jobs versus Full-Time Jobs: What if the Job is the Same? *Economic Letters* 56: 101-106.

Mangum, Garth, Donald Mayall, and Kristin Nelson. 1985. "The Temporary Help Industry: A Response to the Dual Internal Labor Market." *Industrial and Labor Relations Review* 38 (4): 599-611.

Miller, Walter W. 2000. "Self-Insured Medical Plans: Cost Savings for Employers, But Design Must Consider Nondiscrimination Standards." *Journal of Taxation of Employee Benefits* 7(5).

Murphy, Kevin M. and Robert H. Topel. 1985. "Estimation and Inference in Two-Step Econometric Models." *Journal of Business and Statistics* 3(4): 370-379.

Polivka, Anne E. and Stephen M. Miller. 1998. "The CPS After the Redesign: Refocusing the Economic Lens." In *Labor Statistics Measurement Issues*, edited by John Haltiwanger, et al. Chicago: University of Chicago Press.

Segal, Lewis M. and Daniel G. Sullivan. 1997. "The Growth of Temporary Services Work." *Journal of Economic Perspectives* 11 (2): 117-36.

——. 1998. "Wage Differentials for Temporary Services Work: Evidence from Administrative Data." Federal Reserve Bank of Chicago Working Paper, WP-98-23.

U. S. Department of Labor, Advisory Council on Employee Welfare and Pension Benefit Plans. 1999. *Report of the Working Group on the Benefit Implications of the Growth of a Contingent Workforce*, (November 10). http://www.dol.gov/dol/pwba/public/adcoun/contrpt.htm.

Appendix

All interviews were conducted over the telephone by the Kercher Center for Social Research at Western Michigan University in July and August of 1996. The sample was drawn from a comprehensive list of establishments in the continental United States maintained by American Business Information, Inc. (ABI). All establishments were included in the random sample, except for those in public administration, SIC code 9. The sample includes some public entities, such as public schools, which are classified in educational services. ABI provided us with a random sample of establishments within each of seven strata as defined by the establishments' employment size: 5–9 employees, 10–19 employees, 20–49 employees, 50–99 employees, 100–249 employees, 250–499 employees, and 500 or more employees. The number of establishments sampled within each strata is in proportion to its share of private sector employment in the economy in 1995.

Before being administered the telephone interview, surveyed establishments were contacted at least twice. First, a phone call was made to identify the person in the establishment most knowledgeable about its employment practices. This was typically a human resources director at large establishments and the owner or manager at small establishments. If hiring decisions were made off-site, the appropriate person at the establishment's regional or corporate headquarters was interviewed; in these cases, however, the information collected only pertained to the establishment originally sampled. Once the appropriate person was identified, a letter was mailed to that person explaining the purpose of the survey, describing the types of information that would be collected in the survey, and carefully defining the types of flexible arrangements

covered in the survey. The percent of those contacted who agreed to be interviewed was 51 percent.

The typical telephone interview lasted 15 to 20 minutes, and the number of respondents unable, or unwilling, to provide answers was very small for all but one question. (Many respondents did not know their fringe benefits costs as a percent of payroll cost.) During the course of the telephone interviews, interviewers made note of any question respondents were unable to answer over the phone. If respondents agreed, they were then faxed those questions and asked for written responses. As noted above, however, the percent of respondents unable to answer a particular question was generally very small.

Questions in the section of the survey on contract workers were limited to collecting information on whether the establishment had used contract workers since 1990 and on trends in contracting out since 1990. Because of the diversity of functions that may be contracted out for any given organization, we felt it would be difficult to get accurate data on the extent to which each establishment contracts out work without greatly lengthening the survey.

Several variables in the multivariate analysis were created using data from other sources. The occupational share variables were constructed using data from the 1995 BLS Occupational Employment Survey, an employer survey conducted every three years. One hundred seventy 3-digit SIC code industries are represented in the Upjohn sample. For 83 of these industries, occupational share data at the 3-digit SIC code level are available; for 74, only data at the 2-digit level are available; and for 13, only data at the 1-digit level are available.

For establishments located in metropolitan areas, the average unemployment rate for 1995 of that metropolitan area was used as a measure of local employment conditions. For establishments in rural areas, the state unemployment rate was used.

Measures of seasonality and cyclicality were derived from a regression of the logarithm of monthly employment in the establishment's 3-digit SIC code industry on the logarithm of monthly aggregate employment, time, time-squared, and 12 month dummies. The sum of the coefficients on the month dummy variables was restricted to equal zero. (See Haisken-DeNew and Schmidt, 1997.) Seasonality was defined as the standard deviation of the coefficients on the month dummy variables from this regression, adjusted to take into account the fact that the coefficients are estimates. More precisely, the standard deviation of the estimated month dummy coefficients was calculated as

$$\sqrt{r(\hat{\hat{a}}) - \sum_{i=1}^{K} \frac{\hat{\hat{o}}_i^2}{K}} +$$

where K= 12. (See Krueger and Summers (1988) for a discussion of this correction.) The higher the standard deviation, the greater the seasonality in the establishment's industry. The cyclicality measure is defined as the coefficient on the change in aggregate payroll employment from that regression. Controlling for seasonal fluctuations and time trends, the coefficient on aggregate payroll employment will be less than one if employment in the establishment's industry is less cyclical than aggregate employment and greater than one if it is more cyclical.

Table 1. Definitions of Flexible Staffing Arrangements Used in Survey

Temporary Help Agency Workers	Individuals who work at the establishment but who are paid through an employment agency and are not on the organization's payroll.
Short-Term Hires	Individuals who are employed directly by the organization for a limited and specific period of time. Short-term hires include workers hired for the December holiday season or during the summer and they may work part-time hours.
Regular Part-Time Workers	Individuals on the organization's payroll who work less than a full work week and who are not short-term hires. "On-call" workers who are used only on an as-needed basis are also excluded from this definition.
On-Call Workers	Individuals, who are often part of an on-call worker pool, who are called in to work only as needed. They can be scheduled for several days or weeks in a row. Regular workers who are "on call" for possible work during unusual hours are not included.
Contract Workers	Individuals who are employed by another organization to perform tasks or duties as specifically contracted by the organization. Contract workers may be used for carrying out administrative duties or providing business support such as security, engineering, maintenance, sales, data processing, and food service. Contractors may also be used to perform activities that are core to the business's operations.

Table 2. Use of Flexible Staffing Arrangements, by Establishment Size and Industry

	Percent of Survey Establishments that Use:					Number of Observations
	Temporary Help Agency Workers	Short-Term Hires	Part-Time Workers	On-Call Workers	Contract Workers	
Establishment Size						
5 - 9 employees	13	27	65	16	29	63
10 - 19 employees	24	37	75	13	27	68
20 - 49 employees	37	30	73	19	40	93
50 - 99 employees	52	43	72	32	45	75
100 - 249 employees	58	38	69	30	45	89
250 - 499 employees	51	42	78	39	51	51
500 + employees	71	48	71	38	64	111
Industry						
Agriculture	50	63	38	13	25	8
Mining/Construction	56	33	33	11	61	18
Manufacturing	72	23	41	13	54	78
Transportation, Public Utilities, and Communications	50	39	79	21	54	28
Trade	37	38	78	16	34	164
Services	44	42	82	44	47	225
All Establishments	46	38	72	27	44	550

Table 3. Intensity of Use of Agency Temporaries and Short-Term Hires Among Establishments Using These Arrangements[a]

	Establishments Using					
	Agency Temporaries			Short-Term Hires		
Percentage of Users with Intensity in Range of	Upjohn Institute Survey, 1995	BNA Survey, 1985	Weighted Results, Upjohn Institute Survey, 1995	Upjohn Institute Survey, 1995	BNA Survey, 1985	Weighted Results, Upjohn Institute Survey, 1995
< 0.5%	52	76	45	47	55	69
0.5% up to 1.0%	14	11	13	10	23	8
1.0% up to 2.0%	8	4	11	11	11	2
2.0% up to 5.0%	17	4	22	16	8	13
5.0% up to 10%	5	3	6	7	3	1
10.0% up to 15%	1	1	2	1	0	1
15.0% +	3	1	2	9	0	7

[a] Intensity of use for the Upjohn survey is defined as the average number in the flexible arrangement as a percent of regular employment (full-time plus part-time). The average number of agency temporaries and short-term hires was computed by multiplying the number of workers in the arrangement the establishment used in 1995 by the fraction of the year, on average, they were used. The BNA estimates come from Abraham (1988, Table 14.1). The Upjohn estimates in the 3rd column of each panel were weighted to approximate the size and industry distribution of the BNA sample.

Table 4. Intensity of Use of Part-Time and On-Call Workers Among Establishments Using These Arrangements[a]

Percentage of Users with Intensity in Range of	Among Establishments Using:	
	Part-Time	On-Call
< 10%	34	43
10% up to 25%	25	24
25% up to 50%	22	11
50% up to 75%	11	5
75% +	8	17

[a] Intensity of use is calculated as the number of part-time or on-call workers as a percent of regular (part-time plus full-time) workers.

Table 5. Reasons for Using Flexible Work Arrangements (percent citing factor as important)

	Agency Temporaries	Short-Term Hires	Part-Time Workers	On-Call Workers
Reasons related to specific staffing or scheduling needs:				
Fill vacancy until regular employee is hired	46.6	20.5	--	26.0
Fill in for absent regular employee who is sick, on vacation, or on family medical leave	47.0	30.0	--	69.3
Seasonal needs	28.1	54.8	--	29.3
Provide needed assistance during peak-time hours of the day or week	14.2	--	62.4	37.3
Provide needed assistance at times of unexpected increases in business	52.2	31.0	--	50.7
Special projects	36.0	37.6	20.8	26.0
Provide needed assistance during hours not covered by full-time shifts	--	--	48.7	--
Other reasons:				
Screen job candidates for regular jobs	21.3	9.0	14.7	8.0
Save on wage and/or benefit costs	11.5	8.1	21.3	6.0
Provided needed assistance during company restructuring or merger	7.5	6.2	--	6.0
Fill positions with temporary agency workers for more than one year	5.1	--	--	--
Save on training costs	5.1	--	--	--
Special expertise possessed by this type of worker	10.3	15.7	--	16.0
Accommodate employees' wishes for part-time hours	--	--	54.1	--
Unable to find qualified full-time workers	--	--	11.4	–
Sample Size	253	210	394	150

Table 6. Comparison of Wage and Benefit Costs

Percent of Establishments Responding that the Hourly Pay Cost of Workers in Flexible Arrangements is Generally Higher, Generally Lower, or About the Same as the Hourly Pay Cost of Regular Employees in Similar Positions

	Higher	Lower	About the Same	Don't Know
Agency Temporaries[a]	62.1	13.4	21.7	2.8
Short-Term Hires	8.7	21.7	66.7	2.9
Part-Time Workers	4.6	19.8	74.6	1.0
On-Call Workers	16.7	18.7	61.3	3.3

Percent of Establishments Responding that the Hourly Pay Plus Benefits Costs of Workers in Flexible Arrangements is Generally Higher, Generally Lower, or About the Same as the Hourly Pay Plus Benefits Costs of Regular Employees in Similar Positions

	Higher	Lower	About the Same	Don't Know
Agency Temporaries[a]	19.4	38.3	38.3	4.0
Short-Term Hires	2.9	59.4	29.7	8.0
Part-Time Workers	2.8	62.9	31.5	2.8
On-Call Workers	5.3	72.7	19.3	2.7

[a]For agency temporaries, the comparison was between the hourly billed rate for temporary help agency workers and the hourly pay or hourly pay plus benefits cost of regular employees in comparable positions.

Table 7. Provision of Benefits, by Type of Worker

Among Employers with:	Agency Temporaries		Direct-hire Temporaries		Part-time Employees			On-call Workers		Full-time Employees
Percent Offering Benefits to:	Agency Temporaries	Full Time Employees	Direct-hire Temporaries	Full-time Employees	To Any Part-time Employees	To 50% or More Part-time Employees	Full-time Employees	On-Call Workers	Full Time Employees	Full-time Employees
Benefits:										
Paid Vacation and Holidays	NA	98.8	11.0	95.7	53.7	48.3	94.9	15.3	98.7	95.8
Paid Sick Leave	NA	84.6	5.7	82.4	35.8	32.0	79.2	11.3	88.0	83.5
Pension Benefits	NA	79.8	3.8	71.4	37.6	30.2	67.3	14.0	78.7	78.5
Profit or Gain Sharing	NA	47.8	NA	37.1	16.0	13.1	34.5	6.0	36.7	37.6
Health Insurance	NA	97.6	9.5	93.8	38.9	34.2	88.8	13.3	96.0	89.8
Any of Above Benefits	NA	99.6	16.2	97.6	66.7	60.2	96.2	24.7	99.3	96.5

Table 8. The Determinants of Whether an Employer Uses Flexible Staffing Arrangements: Selected Results From Probit Models[a]

	Mean (std. deviation)	Agency Temporaries	Short-Term Hires	Part-Time Workers	On-Call Workers	Contract Workers
ln(employment)	4.430	0.247***	0.112***	0.044	0.136***	0.177***
	(1.746)	(0.043)	(0.040)	(0.045)	(0.043)	(0.041)
		[0.097]	[0.042]	[0.013]	[0.043]	[0.070]
Proportion unionized	0.125	-0.529**	-0.446*	-0.769***	-0.356	0.308
	(0.292)	(0.256)	(0.243)	(0.268)	(0.259)	(0.235)
		[-0.208]	[-0.168]	[-0.220]	[-0.112]	[0.121]
Rural	0.227	-0.308*	0.192	-0.062	-0.096	0.142
	(0.419)	(0.170)	(0.155)	(0.177)	(0.177)	(0.157)
		[-0.119]	[0.074]	[-0.018]	[-0.030]	[0.056]
Area unemployment rate	5.075	-0.060	-0.019	0.009	-0.073	0.034
	(1.622)	(0.057)	(0.049)	(0.053)	(0.060)	(0.053)
		[-0.024]	[-0.007]	[0.003]	[-0.023]	[0.013]
Industry seasonality	0.027	3.831*	6.223***	-1.953	0.458	-7.000***
	(0.038)	(2.277)	(2.110)	(2.374)	(2.442)	(2.374)
		[1.508]	[2.348]	[-0.559]	[0.144]	[-2.755]
Industry cyclicality	0.943	0.082	0.006	-0.121	0.092	0.062
	(0.992)	(0.084)	(0.082)	(0.087)	(0.090)	(0.080)
		[0.032]	[0.002]	[-0.035]	[0.029]	[0.024]
Good benefits	0.653	0.652***	0.156	0.332*	0.374**	-0.012
	(0.476)	(0.160)	(0.152)	(0.170)	(0.169)	(0.151)
		[0.247]	[0.058]	[0.099]	[0.113]	[-0.005]
Full-time shift	0.435			-0.315**	-0.168	
	(0.496)			(0.160)	(0.162)	
				[-0.092]	[-0.053)	

[a] Standard errors are in parentheses. Three asterisks indicate significance at the 1 percent level of confidence; two asterisks at the 5 percent level; and one asterisk at the 10 percent level. The marginal effect of a one-unit change in a variable on the probability of using a particular type of flexible arrangement, evaluated at the means of the independent variables, is shown in brackets. For dummy variables, the marginal effect is calculated as the change in the dummy variable from 0 to 1 on the probability of using the flexible arrangement. Regional dummy variables, industry dummy variables, and the employment share in each of nine occupations for the establishments' detailed industry were included in all models, but are not reported in the table.

Table 9. The Determinants of the Magnitude of Employers' Use of Flexible Arrangements: Selected Results From Tobit Models[a]

	Mean (std. deviation)	Agency Temporaries	Short-Term Hires	Part-Time Workers	On-Call Workers
ln(employment)	4.387	0.027**	0.018	-0.035***	0.046
	(1.713)	(0.011)	(0.015)	(0.009)	(0.036)
Proportion unionized	0.130	-0.098	-0.001	-0.104*	-0.308
	(0.295)	(0.064)	(0.087)	(0.055)	(0.214)
Rural	0.228	-0.064	0.021	-0.005	-0.105
	(0.420)	(0.041)	(0.056)	(0.034)	(0.136)
Area unemployment rate	5.065	-0.033**	0.018	-0.005	-0.016
	(1.571)	(0.015)	(0.018)	(0.011)	(0.054)
Industry seasonality	0.027	1.212**	1.754**	-0.134	0.531
	(0.038)	(0.555)	(0.740)	(0.472)	(1.985)
Industry cyclicality	0.948	0.041**	0.044	-0.035*	0.033
	(0.991)	(0.020)	(0.030)	(0.018)	(0.073)
Good benefits	0.657	0.132***	0.072	0.048	0.274**
	(0.475)	(0.041)	(0.056)	(0.034)	(0.142)
Full-time shift	0.436			-0.120***	-0.180
	(0.496)			(0.033)	(0.130)

[a] Standard errors are in parentheses. Three asterisks indicate significance at the 1 percent level of confidence; two asterisks at the 5 percent level; and one asterisk at the 10 percent level. Regional dummy variables, industry dummy variables and the employment share in each of nine occupations were included in all models, but are not reported in the table. The dependent variable in the models is the intensity with which an employer uses the arrangement. For agency temporaries and short-term hires this is defined as the average number in that arrangement as a percent of regular employment (full-time plus part-time). The average number of agency temporaries and short-term hires is computed by multiplying the number of workers in the arrangement used in 1995 by the fraction of the year, on average, they were used. For part-time and on-call workers, intensity of use is calculated as the number of part-time or on-call workers as a percent of regular (part-time plus full-time) workers.