



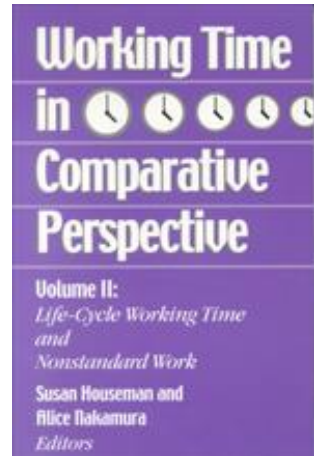
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Large Companies and the Changing Use of Temporary Workers Trends and Impacts on Financial Measures of Performance

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Over the past decade, there has been a large increase in the number of people employed in temporary work. For instance, in July of 1996, the number of employees in the Standard Industrial Classification code for “help supply services” (7,363) was estimated in the U.S. Bureau of Labor Statistics (BLS) Establishment Survey as 2.38 million people (U.S. BLS 1996)—an increase from 0.6 percent of the labor force in 1985 to 2.0 percent in mid 1996.¹ In the early 1990s, many analysts believed that this was a phenomenon born of the last recession that would reverse itself in the subsequent expansion. Instead, this trend has continued at varying pace throughout the decade. BLS projects that the somewhat larger category of “personnel supply” will be the seventh-fastest growing industry between 1994 and 2005, with growth projected at 58 percent (Staffing Industry Analysts 1996).

This chapter uses the results from a random survey of human resource executives from large companies around the country to consider why companies are changing their uses of temporary workers. The chapter then correlates the intensity of temporary use with financial measures of profitability. The sample is quite small, so it is more suggestive than definitive. Remarkably, some statistically significant correlations do arise even within this small sample. Although it is impossible to deduce causality from correlation, the results somewhat suggest that strategic uses of temporaries may increase operating margins and company value.

The study also considers a case study of two firms in a narrowly defined manufacturing industry. These firms radically increased their

use of temporaries, hiring all entry-level production workers as temporaries who then—if successful—transition into permanent employment after three months. Financial measures of performance after the policy change indicate that the companies either did equally well or worse than the previous period, suggesting that this use of temporaries was either neutral or harmful to the companies' bottom lines.

DESCRIPTION OF SURVEY

The focus of this section is large companies' usage of temporary employees. In the first phase of our research, we conducted in-depth, open-ended interviews with human resource executives from several large companies to get a sense of the role of temporary staff within their organizations. We also spoke to a large number of executives from within the staffing industry to get their perspectives and insights into industry trends. We defined temporary workers as those paid by a temporary agency or temporaries directly hired by their company. We specifically asked them to exclude all others, including contract workers.²

Although chosen primarily for their accessibility rather than for aspects of their temporary usage, these preliminary interviews were not in any way a representative, random sample. To obtain a representative sample of large companies, we chose companies randomly from the *Fortune* 500 Industrials and other *Fortune* lists (banking, savings, financial, retail, service, transportation, and utilities) and identified a senior human resource executive in that company, generally the human resource vice president.

Through a letter, we solicited these companies' participation in an extended telephone interview and asked for a contact within the company most familiar with the company's use of temporaries. We followed up with telephone calls in June 1995, conducting 35 30-minute interviews from this sample. This represents a response rate of 22 percent. Of the nonrespondents, 29 refused in writing or over the phone to participate in the research, generally because of time constraints or company policy not to participate in surveys.³ In the other cases, we failed to reach the appropriate person after several phone calls.

Given the high level of the executives whom we were contacting, a low response rate is expected. A crucial question is whether there is any nonresponse bias in the responses. The most likely bias would be that companies with innovative temporary policies are more likely to respond. While this is a possibility, the factors arguing against this bias are the nature of the reasons given for nonresponse and the fact that the most common case of nonresponse was simply failure to make any contact with the relevant person.

The actual respondent from each company was a person familiar with the company's use of temporaries. When the company's use of temporaries was decentralized, we were generally put in contact with someone who was familiar with only a portion of the company's temporaries, typically those used at corporate headquarters. Respondents ranged from senior vice presidents to employment specialists. In the completed telephone interviews, we followed a seven-page script/questionnaire that included both open-ended and forced-choice questions.⁴ The small size of this sample means that any hypothesis test is likely to be rejected unless differences are quite large.

One of the companies surveyed was a southern U.S. fibers/textiles firm. We discovered that this company had made a sudden shift toward the exclusive use of temporaries for all entry-level production jobs. In order to conduct a time-series event study of this firm, we conducted a telephone survey of seven other comparable firms, i.e., nonunionized, southern, publicly traded companies in the fiber/textiles industry. This additional sample was taken from the Compustat listing of companies in three similar four-digit industry codes. We identified 12 companies (other than our original one) that had headquarters in southern states. Of these, we were able to interview seven.

RESULTS: CHANGES IN THE ROLE OF TEMPORARIES

Labor force surveys indicate an increase in the number of temporary workers in the United States. This increase is evident in our sample of large firms as well. Along with the changing numbers of temps, there were also changes in other aspects of temp usage. As the first row of Table 1 indicates, the increased usage of temporaries was by no

Table 1 Percentage of Sample Who Changed Use of Temporaries

	Increased >100%	Increased somewhat (10%–100%)	Small or no change (<10% change)	Decreased a lot (>10%)
[Over the past 3 to 5 years, have you increased or decreased the number of temporaries that you hire?] Does this represent a change in the percent of total employment?	8.6	28.6	37.1	25.7
Has the length of stay of temps changed over the past 3 to 5 years?	0.0	38.2	52.9	8.8
In the past 3 to 5 years, have there been changes in the percent of (full-time regular) hires who began working at your company as a temp? ^a	9.4	18.8	71.9	0.0
	% changed			
[In what kinds of situations does your company use temps?] Has this changed over the past 3 to 5 years?	44.1			
[What kinds of jobs do you use temporaries for?] Has this changed over the past 3 to 5 years?	46.8			
Have you used this same source of temps over the past 3 to 5 years, or does this represent a change? ^b	50.0			

NOTE: Wording in brackets varies from the actual questions used in the survey.

^a Wording different from actual question, which culminated a series of questions about the number of temps hired permanently and the number of total employees hired into comparable jobs.

^b This number excluded changes in vendors' identities that weren't accompanied by other changes in the source, such as a change in the number of agencies used.

means universal. The proportion of firms that substantially increased their use of temps (37 percent) is just equal to the proportion with a small or no change. While each of these categories is larger than the proportion that decreased their use of temps, fully one-quarter of the firms in the sample did substantially decrease their use of temps.

At the extreme, some companies have moved to hiring only, or primarily, temporaries for large numbers of jobs within their companies. We observed two variants of this policy. In one, temporary workers may stay only a limited length of time, which in some companies is as long as two years. In the second variant, temporaries who perform well transfer over to regular jobs after some period, often specified up front. Reading the business press and talking to human resource (HR) executives, we identified quite a few companies that are hiring only temporaries for large classes of jobs. These include Dell Computer, Hewlett-Packard, DEC, and Microsoft. At Dell, approximately 3,000 of the company's 10,000 employees are temporary. At Hewlett-Packard and DEC, 30–35 percent of their manufacturing jobs are being done by temporary employees. Many of these publicized examples are at newer, rapidly growing, and changing organizations. What is particularly surprising, however, is that even in a sample of 35 randomly chosen companies, we found two companies that are hiring only temporaries into a large class of entry-level jobs.

The changing role of temps is evidenced not only in their numbers, but also in their roles. Other surveys have documented shifts in the occupational distribution of temporaries. The typical image of a temporary as a “Kelly Girl,” a female secretary, characterized a majority of temporaries 20 years ago but no longer does. By 1994, only 40 percent of the payroll for temporary help services went to office/clerical occupations (Steinberg 1994). In our sample, we found that while almost all companies used temps for secretarial/clerical positions, 80 percent also used temporaries for other kinds of jobs. One source of growth highlighted in surveys such as the National Association of Temporary Service's (NATS) is in the “light industrial” category, including production work and unskilled manual labor. Forty percent of the companies in our survey use temps for these occupations. In fact, Blank (1998) found that the temporary help industry has approximately the same proportion of people in blue-collar occupations as does the general labor force. Given the fact that blue-collar temporaries tend to be unskilled, we can infer that a much higher proportion of temps are in unskilled blue-collar jobs than in the general labor force.

Table 1 also shows the number of companies that changed their use of temps in other ways. Ninety-four percent of our sample changed their use of temporaries in one of the ways listed in the six rows of

Table 1. Forty percent changed more than three of these six aspects of temporary use.

Forty-four percent of the companies indicated that they are using temporaries in different kinds of situations than they had previously. Table 2 lists the kinds of situations in which these companies report using temporaries. The situation that best fits the traditional view of a temporary is someone hired as a replacement for a temporary absence. Most companies continue to use temps for this purpose. Several employers reported expansion of this need due to changing medical and family leave policies.

The business press has adjured companies to use temps as part of a “strategic staffing” plan (e.g., Denka 1994). In essence, a strategic staffing plan is one where employment policies are seen as a part of a company’s strategic plan and where alternatives to full-time regular staffing are actively considered at a general level rather than as ad hoc or reactive decisions. The list of situations in our sample in which large companies use temporaries suggests that companies are in fact using “strategic staffing,” or at least claiming to. Practically all (91 percent) use temporaries not just for temporary replacement of absences but also as a deliberately chosen alternative to permanent employment designed to further the firm’s profitability. Other than absence replacement, the other reasons listed in Table 2 suggest that companies see temporary labor as a solution to two kinds of variance in labor demand: foreseen variance and unforeseen and uncertain variance.

Table 2 Situations in Which Large Companies Use Temporaries

Reasons for hiring temporaries	% of companies
Replacement or temporary absences, medical leave	88.6
Temporary projects	88.2
To bypass head-count restrictions	51.4
Seasonal fluctuations	50.0
New projects	48.6
To screen for permanent jobs	31.4
Downsizing, termination	25.7
Buffer against layoffs	22.9

One major source of foreseen variance is temporary or special projects. The largest use of temporaries reported in the survey is to staff temporary projects, where “temporary” projects can last as long as two years or more. Temporary projects include start-ups, e.g., for new stores or new computer systems. Rather than hiring a regular employee and, upon completion of the project, either finding them alternative positions or paying them a severance package, companies are turning to temporary employees who do not impose the same future responsibilities.

Many companies with labor demands that fluctuate considerably over the year are decreasing labor costs by using temporaries seasonally. For instance, temporaries are being used to harvest fruit in Florida and to process the February rush of annual proxy statements for a large investment bank. One HR manager explained, “We don’t staff for peaks any longer.” Half of the sample use temporaries for seasonal fluctuations. Both the seasonal needs and temporary projects introduce fully anticipated variance into labor demand. Temps are a logical solution.

When companies face uncertainties about future employment needs, they also sometimes use temporaries to address these uncertainties. Twenty percent of our sample use temporaries when they are uncertain whether new products will take off or what their need will be for a new endeavor. For 23 percent of the companies, temps are being used to provide a buffer to protect the jobs of core, regular employees in the event of unforeseen shifts in product demand.

To an economist, these uses of temporaries do not seem surprising. In fact, it seems more surprising that temporaries were not always used to solve problems of variance and uncertainty.

Temporary Assignments as a Recruiting and Hiring Mechanism

A final major motivation for the use of temps is the avoidance of many of the costs of poor job matches. In all jobs, both the employer and the new employee take time to learn about whether this job is a good match. Unsuccessful matches tend to be terminated by one party or the other. There are many costs of mismatches that fall on the employer, the employee, and society. Some of these costs can be avoided by having new entrants begin in the company as an employee

of a temporary agency. First, risk to the employee is lower. If this job does not work out, the employee is given another placement by the temporary agency.⁵ For the employer, severance pay, long dismissal procedures, and increased unemployment compensation premia are avoided. Moreover, managers don't have to be put in the difficult emotional position of firing someone, or of being responsible for someone's loss of livelihood. Recruiting costs, such as attracting candidates or conducting drug and criminal screens, are not lost when a particular match does not work out. Societally, unemployment compensation is not incurred when the temporary is reassigned. Finally, in some of the companies we interviewed, it was clear that temporary agencies often had "economies of scale" in recruiting and could simply attract and process candidates more efficiently than some companies. On the other hand, the use of temporaries as a hiring mechanism may be a way for companies to change the implicit or explicit employment contracts with potential employees or to evade government policies.⁶

In our sample, 94 percent of companies responded that they have permanently hired people who began as temporaries. The survey also provides some evidence of increasing use of temps as a hiring mechanism. Thirty-one percent of companies reported that their permanent hiring of temporaries has increased over the past five years. Not a single company responded that their permanent hiring of temporaries has decreased.

This increased hiring is also being documented by temporary agencies. Manpower reports that in 1993, they themselves transitioned 150,000 temps into regular jobs. One mid-sized temporary agency with whom we talked has done an informal poll and found that between 30 and 35 percent of their assignments could change to permanent. In a 1994 National Association of Temporary Staffing (NATS) survey, more than one-third of temporary employees reported being offered a regular job by a firm for which they had an assignment (NATS 1994). In a more recent NATSS survey of former temporaries, 21 percent had found permanent jobs as a result of their temporary position.⁷

Permanent hiring of temporaries occurs in two conceptually different ways—temp-to-hire and temp-to-perm. In the former, the hiring is an unforeseen and unplanned consequence: supervisors are impressed by a temp, or temps get inside tracks to a job listed within the company.

This hiring of temporary employees generally tends to be a small but not inconsequential part of a company's total hiring. Of companies that did not do temp-to-perm, on average only 24 percent of new employees in the jobs comparable to those staffed by temps began as temps.

In temp-to-perm, companies hire temporaries with the intention of transitioning them into regular employment if the match is successful. Thirty-one percent of companies responded that one reason they hire temps is to screen for permanent employees (Table 2). In these companies, on average more than half of people hired into these specific job categories began as temps. As one sample respondent put it, "Now, even low-level supervisors know this is another way to recruit, one of their bag of tricks. In the past, it was not a concept they knew of or thought of."

Temp-to-perm will be a profit-maximizing strategy when temporary agencies are able to attract an ample supply of qualified candidates, and when an extended trial period is a particularly helpful way to screen candidates. Not surprisingly, then, in our interviews with companies, we saw temp-to-perm most commonly used for "light industrial," i.e., relatively unskilled blue-collar jobs—where work habits tend to be of prime importance in determining the success of an employee—and in white-collar jobs that are based on speed and accuracy, such as billing and telephone operators. For one company, the supply of light-industrial employees available through temporary companies was greater than the company itself could otherwise recruit.⁸

The screening aspect of this process is quite clear from the interviews. Only workers who "work out" become regular employees. If temporaries can provide a way of screening employees that incurs less mobility costs, it seems clearly Pareto superior. Once again, economists are more challenged to explain why these methods were not used previously, rather than to explain why they are being used now. The answer is not to be found in labor market tightness. The unemployment rate at the time was 5.5 percent, neither particularly high nor particularly low.

Temporaries and Downsizing

The survey provides some evidence that decreased firm demand for labor, due either to slow sales or to cost-cutting in the face of increased competition, is correlated with an increased use of temporaries. A test of the correlation between downsizing and changes in their proportional use of temps is significant at the 20 percent level. Of the 53 percent of companies in our sample that reported some downsizing in the past five years, fully 78 percent changed their proportional use of temporaries, while only 50 percent of companies that did not downsize changed their usage. A recent survey by Olsten cited in *Business Wire* (1996) found that slightly more than half of firms that report downsizing say that they use temps to address staffing issues.

However, different companies make very different kinds of decisions about temporaries while downsizing. Downsizing companies are more likely to both increase and decrease their use of temporaries than companies who did not downsize. Of downsizing firms, 50 percent increased their use of temps while 28 percent decreased them; among the other companies, 31 percent increased their use of temps while 19 percent decreased them.⁹

The small sample that report downsizing does not lend itself to statistical analysis. If we consider these 16 companies as case studies, we come up with suggestions of the kinds of factors that have led at least some companies to modify their temporary usage during periods of contraction. If temps are used to protect full-time employees from layoffs, we would expect the number of temps to fall drastically during downsizing. While this occurred in some companies, in our small sample the numbers indicate that decreased use of temps was less common than increased use.

One factor that was repeatedly mentioned for increased use of temps was the presence of head-count restrictions—limits imposed on line managers on the number of people allowed on payroll (Table 2). Head-count restrictions are a common mechanism used by central management to control costs incurred by line managers. A head count has the advantage of being an easily measurable cost item that is not affected by conditions outside the line manager's control, such as fluctuating market wage rates or materials prices. However, as companies move to greater usage of temporaries and part-time workers, head-

count restrictions should adjust to reflect these new institutions. While it may be profit-maximizing for companies to impose head-count restrictions on permanent employees to limit their permanent employment, head-count restrictions should not create managerial incentives to hire temporaries into jobs that are most profitably staffed by permanent employees.

In some companies we interviewed, head-count restrictions included temps; in others, the restrictions applied only to permanent employees, and consequently managers used temps to evade these restrictions. In fact, 53 percent of our sample said that avoiding head-count restrictions (presumably of permanent employees) *was* a factor in its use of temps. Of the nine companies that chose to increase their (proportional) usage of temporaries during a contraction of employment, six attributed the growth in their use of temporaries at least partially to head-count restrictions. An HR manager in one company, for instance, reported that a hiring freeze has led line managers to hire a temp when an extra person was needed. In another company, the interviewed HR executive told how line managers had to “play games with head count when, head-count considerations aside, regular hiring would have made much more sense.” These examples suggest that head-count restrictions introduced inefficiencies. However, head-count restrictions on permanent employees may be optimal for the company that wanted “to keep their future long-run commitment to new employees low.”

Hourly Labor Costs and the Increasing Use of Temps

The previous sections suggest that temporary workers are increasingly being used to promote efficiency in a variety of ways and thus raise profitability. An additional way that temporaries might impact profitability is through their direct costs. Temporaries receive lower benefits than their “permanent” counterparts. In our sample, all but two companies say that benefit levels for temps are lower than for regular employees, with the vast majority placing them much lower or nonexistent.¹⁰ Other authors have also documented the low benefit coverage for temporary workers, including BLS (1995) and Axel (1995).

The hourly rates reviewed by the temporaries are sometimes lower than the regular employees they replace but sometimes higher, both in our survey and in comprehensive labor force surveys, such as the CPS data analyzed in Segal and Sullivan (1995). However, companies pay a large margin to cover temporary agencies' costs. Totaling the savings in benefits, different hourly rates, and agencies' margins, do companies save on hourly compensation costs when they use temporaries? Sixty-three percent of companies believe that they do, with half of the others believing that either there is no saving or that temps cost more than regular employees.

Yet, even for many of the companies that save on compensation costs, respondents volunteer the information that costs do not enter into their decisions to use temporaries. One executive seemed quizzical when I asked him about direct cost savings and said, "We don't look at it that way."

Does Productivity and Product Quality Suffer?

Hour for hour, ignoring slack periods when permanent workers may be underutilized, do temporaries work as efficiently as permanent workers and produce similar quality products? Only extensive case studies can really answer this question. Companies differed on their perceptions of the overall productivity of temporaries. Seventeen percent of the companies listed the temporary's lack of commitment among the three biggest problems with temporary employees. One respondent noted a perception among his supervisors that temporary employees were not as qualified, but wondered whether this was due to the fact that the supervisor did not feel "ownership" of these employees.

Yet many employers mentioned the increasing skill and quality levels of temporaries. In fact, several employers believe that temporaries often worked harder than regular employees because they hoped thereby to obtain a permanent placement. Both our survey and a recent *Conference Board* survey (Axel 1995) found that the most frequently mentioned difficulty with temporary workers was that they lacked the skills and training to do the job. In our survey, 23 percent of employers mentioned this.

These mixed perceptions suggest a high variation among temporaries, with average quality varying from company to company as well as from market to market, depending on supply/demand conditions in the specific occupational labor market, as well as on the skill of the temporary agency in screening applicants.

Have Things Really Changed?

It is instructive to compare our survey with the survey of HR executives conducted in 1986 by Katharine Abraham and the Bureau of National Affairs (Abraham 1988). That survey included a somewhat different universe, including some smaller companies along with the large sample of large firms. In addition, that survey explicitly included on-call workers. Nevertheless, there are many similar results in the two surveys. Executives in 1986 also used temporaries for special projects, seasonal needs, and to provide a buffer for regular staff against downturns in demand, long before HR executives were using the term “strategic staffing” for policies regarding temporaries. The proportion using temporaries for at least one of those purposes was lower in that earlier survey, although only marginally so.

Twenty-three percent of the companies in the 1986 survey said that one reason they use temps was to “identify good candidates for regular jobs,” similar to the proportion in our 1995 sample that use temp-to-perm, or the proportion in the recent *Conference Board* survey (Axel 1995) that respond that they use temps to screen candidates for future employment.

Since the universes are different, trends can only be suggestive. Yet it is striking that in these aspects, the two surveys point to little change between 1986 and 1995, despite claims of the survey’s HR executives to the contrary. However, there are some significant differences between the surveys that may suggest real differences in temporary usage. Thus, there is a difference between surveys in temporaries as a proportion of the companies’ total employment. The mean of this proportion in the 1986 sample was 1.5 percent, while the mean in the present sample is 2.3 percent. A much larger difference is evident at the extreme: 2 percent of the companies in the 1986 survey reported using 10 percent temps or more, while in our sample, 9 percent of companies used 10 percent or more.

The second major difference seen is the length of stay of temporaries. In the 1986 survey, only 7 percent of the companies reported that the mean duration of the typical assignment was three months or greater. In our survey, 40 percent reported typical lengths in this range, while a recent NATS survey found that 55 percent of temporary assignments last 11 weeks or more (NATS 1994). Thus, the two surveys are suggestive of a recent shift toward usage of more temporaries and of temporaries for longer periods, although research on directly comparable samples is necessary to confirm this result.

Finally, we note that although the same number of companies report that they use temps to identify good candidates for regular jobs or for purposes like special projects or seasonal fluctuations, it does not preclude the possibility of major changes in the ways companies conceive and decide both the temp-to-perm and “strategic staffing” uses of temps. Moreover, the increase in the number and use-intensity of temps suggest that although the number of companies using temps for these purposes may not have changed, the extent that they use temps in these ways undoubtedly has.

RESULTS: THE USE OF TEMPORARIES AND FINANCIAL MEASURES OF PERFORMANCE

If temporaries improve a firm’s performance, we should see this reflected in the company’s profits or other financial measures. This impact could, at least hypothetically, be measured by a cross-sectional comparison of the performance of companies that differ in their use of temporaries. Alternatively, it could be measured by comparing the financial performance for companies (or industries) before and after a change in their use of temporaries. In this section, we pursue both methods.

The cross-sectional analysis will be plagued by two different kinds of conceptual problems, causality and heterogeneity issues. A positive correlation between the use of temporaries and financial success might indicate that the use of temporaries increases a company’s profitability. However, it could instead indicate that companies that are likely to be

profitable (e.g., dynamic, growing companies) choose or need to turn to temporaries for some of their staffing needs.

The great degree of heterogeneity of companies on a wide variety of other dimensions is likely to make this exercise akin to searching for a needle in a haystack. Research has shown that it is extremely difficult to detect financial impacts of changes in human resource practices.¹¹ Additionally, temporaries are used in many different ways and situations, and they are not likely to have similar impacts in all contexts.

A time-series analysis of companies can avoid some aspects of these problems. First, by comparing periods before and after a change in policy, we can mitigate the causality issue. Second, by looking at individual companies (relative to industry trends) we can remove some of the heterogeneity. Pursuing the analogy, the time-series analysis is akin to finding a button in a haystack: there are still many confounding issues, but we have slightly increased the likelihood of finding some impact.

We have chosen to look at three measures of financial performance. Market price per share (P) summarizes all publicly available information and expectations for the company. However, the share price will reflect all of the activities of the firm, such as acquisitions, making it an extremely noisy series for measuring the impact of temporary policy. We also examine variables that attempt to measure the ongoing profitability of the enterprise: earnings and operating margin (OPM). Earnings are measured as primary earnings per share (EPS) before extraordinary items, i.e., one-time events such as acquisitions and divestitures. OPM is the ratio between operating income and sales. This ratio measures the impact of cost of goods sold (COGS) and sales, general, and administrative expenses (SGA), which include labor costs, on the company's profitability. Although neither of these measures are affected by events like acquisitions, they are affected by changes in accounting practices.

Cross-Sectional Analysis

For the 35 different companies in our sample, we correlated a variety of aspects of temporary usage with the financial variables, the latter

considered both in 1994 levels and in five-year (1989–1994) changes.¹² The results can be summarized succinctly.

- 1) A seven-value index of changing usage of temps, from large cuts in the use of temps to large increases, is generally unrelated to all financial variables with the following exception: companies that had high earnings per share¹³ at the beginning of the five-year period were significantly more likely to increase their temporary usage ($P = 0.02$). A two-value index of whether or not a company substantially increased its use of temps was also correlated with increasing share prices ($P = 0.10$).
- 2) The correlation between temps as a proportion of total employment and the change in share price over the five-year period was positive and highly significant ($P = 0.01$); the proportion of temps was also positively related to the change in EPS over the period at a lower significance level ($P = 0.17$). However, it was not correlated with levels of either EPS or OPM, nor with the change in OPM.
- 3) We constructed an index for increased use of temporaries as a strategic staffing plan by counting the number of “strategic” changes the company made, including increasing use of temporaries, changing sources of temporaries, changing situations in which use temporaries, increasing the length of temporaries’ stays, increasing hiring of temporaries as permanent employees, and changing the occupations in which temporaries are hired. This “strategic temp changes” variable was positively correlated with various measures of firms’ profitability in 1994, although only at marginal significance levels (with OPM $P = 0.10$; with EPS $P = 0.07$). However, it was not correlated with the *change* in share price, OPM, or EPS.
- 4) Many specific increases in strategic temp usage may have been positively correlated with the level of OPM in 1994, although the significance levels were marginal: changing occupations ($P = 0.11$); changing situations where use temps ($P = 0.22$); increasing permanent hiring through temps ($P = 0.28$).

Overall these findings suggest that the use of temporaries, particularly in “strategic” ways, is correlated with positive financial outcomes. Certain “strategic” changes in policies regarding temps may have led to high OPMs. High and/or increasing use of temps may have led to increasing share prices during the early 1990s. Alternatively, the causality may have run in the opposite direction. For instance, companies with high operating margins may have been more likely to make “strategic” changes in their use of temps.

The latter direction of causality is suggested by the fact that companies with high EPS at the beginning of the period later increased their temp usage. On the other hand, changes in temp usage is not correlated with other beginning financial values, such as OPM.

Time-Series Case Studies

In our random survey, we identified one company in the South’s fibers/textiles industry that made a sudden shift towards the exclusive use of temporaries for all entry level production jobs. These temporaries are moved into permanent jobs after three months if they “work out.” We then surveyed seven other comparable firms, i.e., nonunionized, southern publicly-owned companies in the fiber/textiles industry. Of these seven, one company had suddenly increased its usage of temporaries for entry-level jobs.

All of these eight companies faced tight labor markets. In the face of this tight supply, they were forced to hire poorer quality employees than they usually did. The temp-to-perm option allowed them to screen workers in a situation where screening was particularly important. The two companies that chose this option believed that the temporary agencies could do a better job of attracting workers in a tight labor market than could the company itself. The companies that had not chosen to use temp-to-perm tended to cite company-culture kinds of reasons, such as “It builds good will,” and “We have pride in our people and value long-term relationships.”

We calculated financial measures for these two companies, denoted A and B, using the other six companies as controls. By studying these companies with radical changes in their use of temporaries, we increased the likelihood of the policy having an impact. By narrowly defining both industry and region, we eliminated some of the variation

across firms, increasing the likelihood of detecting any effect. For each company, we estimated time series regressions on quarterly data for the change in the log of share price and the change in earnings per share (EPS):

$$(1) \ln(P_t / P_{t-1}) = \beta_0 + \beta_1 D_t + \beta_2 \ln(P_{c,t} / P_{c,t-1}) + \sum \beta_i Q_i + e$$

$$(2) \Delta EPS_t / S_t = \beta_0 + \beta_1 D_t + \beta_2 \Delta EPS_{c,t} / S_{c,t-1} + \sum \beta_i Q_i + e$$

where S_t is a scaling factor to account for differences in share price,¹⁴ $P_{c,t}$ is the average share price at time t for the six control companies, $EPS_{c,t}$ is the average EPS at time t for the six control companies, D_t is a dummy variable that takes the value 1 for all quarters after the change in policy, and Q_i are seasonal dummy variables.¹⁵ The sample period was from March 1984 through March 1996. However, when the earlier period fit particularly poorly, estimations are reported for the period of March 1988 through March 1996. The results are presented in Tables 3 and 4.

Company A's large change in temporary usage occurred in the beginning of 1995. The results indicate that this point did not mark a watershed in either share price or EPS. Thus, the post-change dummy variable is not distinguishable from 0 in any of the four equations (with t -statistic always considerably less than 1.0). An F -test of the hypothesis that the pre-change years accurately fits the post-change quarters could not be rejected ($F = 0.39$, P -value = 0.85 for the share price model; $F = 0.19$, P -value = 0.96 for the EPS model).¹⁶

Graphs corroborate that the 1995–1996 quarters look remarkably similar to previous periods. A model based only on trends in comparable companies and quarterly dummies fits the timing of both share price and EPS swings.¹⁷ The graph of the EPS indicates a slight change in the seasonality of the series in the mid 1990s: the change in earnings is somewhat less variable than it had been previously and the peak has moved from the third to the first quarter. However, the change seems to have occurred in 1994, prior to the specific introduction of temporaries, and can be traced to a major change in product mix discussed in the company's annual report.

Company B changed its temping policies in the fall of 1994. During 1995, this company did worse than would be predicted based on

Table 3 Case Study: Impact of Large Increase in Temporary Usage in a Large Fiber/Fabric Manufacturing Company's Production Workers—Company A^a

Dependent variable	$\ln(P_t / P_{t-1})$		$\Delta \text{EPS}/P_{t-1}$	
	1984:2– 1996:1	1988:1– 1996:1	1984:2– 1996:1	1984:2– 1996:1
Time period				
No. of observations	48	33	48	48
Dummy for temp change	0.014 (0.069)	0.039 (0.065)	0.003 (0.011)	0.002 (0.009)
Average for 6 control companies	0.377 (0.222)	0.607 (0.236)	0.020 (0.072)	-0.010 (0.055)
Constant	-0.030 (0.042)	-0.041 (0.047)	-0.017 (0.007)	-0.018 (0.005)
Q1	0.046 (0.061)	0.035 (0.065)	0.007 (0.010)	0.009 (0.008)
Q2	0.110 (0.059)	0.120 (0.066)	0.031 (0.010)	0.034 (0.007)
Q3	-0.029 (0.058)	-0.053 (0.065)	0.030 (0.009)	0.031 (0.007)
R^2 adj.	0.19	0.21	0.21	0.53
Durbin-Watson statistics	1.86	2.05	2.69	1.82
MA ^b terms?	No	Yes	No	Yes

^a Standard errors in parentheses.

^b Three-quarter moving average.

Table 4 Case Study: Impact of Large Increase in Temporary Usage in a Large Fiber/Fabric Manufacturing Company's Production Workers—Company B^a

Dependent variable	ln(P_t / P_{t-1})		Δ EPS/ P_{t-1}	
	1984:3– 1996:1	1988:1– 1996:1	1984:3– 1996:1	1988:1– 1996:1
Time period				
No. of observations	47	33	47	33
Dummy for temp change	-0.135 (0.111)	-0.133 (0.074)	-0.007 (0.013)	-0.006 (0.003)
Average for 6 control companies	0.817 (0.388)	0.224 (0.292)	0.075 (0.095)	-0.004 (0.020)
Constant	0.073 (0.075)	0.100 (0.060)	0.009 (0.009)	0.003 (0.075)
Q1	-0.016 (0.106)	-0.041 (0.071)	-0.027 (0.013)	-0.016 (0.106)
Q2	-0.004 (0.105)	-0.086 (0.082)	-0.013 (0.013)	-0.004 (0.105)
Q3	-0.050 (0.103)	-0.140 (0.082)	0.018 (0.012)	-0.050 (0.103)
R^2 adj.	0.05	0.20	0.16	0.59
Durbin-Watson statistics	2.05	1.93	1.32	2.01
MA ^b terms?	Yes	Yes	No	No

^a Standard errors in parentheses.

^b Three-quarter moving average.

seasonality and the six control companies. Thus, in the best of the two-share price equations reported in Table 4, the t -statistic of the postchange dummy variable is -1.79 (significant at the 10 percent level). The F -test of whether the latter period fits the earlier model is $F = 1.59$, which has a P -value of 0.20. Similarly, the actual EPS/P_{t-1} is lower than what would be predicted based on industry trends and seasonality (t -statistic = -2.17). The F -test for the similarity of the postchange period is 6.94 ($P = 0.0003$). Annual reports suggest that the company was being affected by a wide variety of other factors in

1995, including several major acquisitions and major capital outlays for modernized production facilities.

Thus, in these two companies, the period of intensive use of temporaries as a hiring device was accompanied by very different profitability. In one, the radical HR change could not be detected in share price or earnings, except that perhaps we saw a slightly dampened variability in earnings. In Company B, the radical HR change accompanied other aggressive changes in the company's assets and direction. Thus while Company B fared far worse during the period of increased use of temporaries, it is difficult to attribute this to the HR policy change.

CONCLUSIONS AND FUTURE DIRECTIONS

This chapter finds that many large companies surveyed are using temporaries in different ways than they had previously. Many are hiring more temporaries and are hiring them to serve different purposes than previously. Temps are being hired not just to replace temporary absences, but also as a strategic solution to both foreseen and unforeseen variability in labor demand. As a result, temps are being hired to a wider variety of jobs, and are staying at assignments for longer periods of time. Moreover, temporary help is being increasingly used as a recruiting and screening mechanism to find permanent employees. Additional research is warranted to document these changes among a larger sample of companies of varying sizes.

Both individual companies and labor market researchers find it difficult to find a measurable impact of HR policies on profitability or costs. The cross-sectional results here suggest that there may be some correlation between strategic use of temporaries and positive financial outcomes. While this is in no way indicative of causality, they provide a beginning shred of evidence that "strategic staffing" may increase operating margins and company value.

On the other hand, the time-series case study suggests either no impact or a negative impact for manufacturing companies choosing to hire all entry-level production workers as temps. The somewhat contradictory conclusions from the cross-sectional and time-series estimates are in no way mutually exclusive: a selective use of temporaries might

be profitable while a more blanket approach might be counter-productive. However, the time-series results for two companies primarily corroborate the general fact that the financial impact of even major changes in HR policies tends to be eclipsed by other changes occurring within companies.

Nevertheless, executives at large companies who have increased their usage of temporaries are convinced that it has increased their profitability, particularly by giving them additional flexibility. The overall rising usage of temporaries in a wider variety of jobs and situations is a testament to their conviction in the financial benefits of temps.

It seems clear that, absent government intervention, this growth of temporaries in the workforce will continue. Many factors, from global competition to the need for flexibility and the quick availability of qualified personnel, drive this change. In light of these changes, both companies and government should reexamine whether policies written for more static and permanent labor markets make sense in the light of these changes. Researchers should assist this process of reexamination by studying the impact of these changes on companies, on individuals, and on labor market outcomes.

Notes

1. Alternatively, a February 1995 supplement to the Current Population Survey estimated that 1.0 percent of employed workers were paid by temporary help agencies, while an additional 1.7 percent of the employed were on-call workers and day laborers, for a total of 2.7 percent of the workforce in temporary work. This measure, however, excludes direct-hire temporaries but may include some non-temporaries who work for temporary agencies. The Bureau of Labor Statistics also estimated various definitions of contingent workers. The broadest definition encompassing all workers who don't expect their jobs to last, including contract workers and self-employed, comprised 4.9 percent of total employed.
2. We did not explicitly mention on-call workers, although we did ask respondents to include people hired for temporary work from in-house listings of available temporary workers.
3. One executive was able to schedule an appointment six months hence but no sooner.
4. Because of confidentiality agreements, we are not using company names in this chapter. When company names appear, the information is not from our sample itself but from public sources.

5. Owners of temporary agencies have told us that while they do not ignore the employee's unsuccessful experience, neither does a single unsuccessful match lead an agency to drop an employee from its roster.
6. Thus, rather than using temporaries to avoid severance pay or to avoid paying benefits, companies could change their own policies for the probationary period. Seen this way, the movement toward using temps as probationary workers may simply be an expedient way for companies to, in effect, renegotiate the contracts of new employees. Moreover, the use of temporaries in this way may allow companies to avoid government policies such as unemployment compensation experience-rating or the threat of suit for discriminatory practices if dismissed during the probationary period. The case law regarding coemployment of temporary workers is still evolving.
7. Reported in *Staffing Industry Report*, January 1996. Note that NATSS changed its name between these two surveys to National Association of Temporary and Staffing Services.
8. This occurred in the textile/fiber company that is the focus of our case study later in this chapter (Company A).
9. A χ^2 test of downsizing versus increasing, decreasing, or keeping temps steady is significant at the 24 percent level.
10. One of these two companies has a pool of in-house temps that tend, de facto, to be continually employed.
11. When HR policies have been shown to have impacts, it is usually when many aspects of management change simultaneously. Similarly, we would be most likely to find an impact when the firm is simultaneously adopting an entire "strategic staffing" approach.
12. The surveys in the cross-section were all carried out in 1995, and asked about changes in the previous three to five years.
13. All earnings-per-share numbers are standardized by the share price.
14. Two scaling factors were considered: the share price (P_{t-1}) and the average share price of the company over the sample period (P_{avg}). While reported results use the former, all results are similar for both measures. Another way to think of these earnings measures is as a return on equity, where the return is based on actual share price rather than "book value." OPM was not available for quarterly data.
15. Quarterly dummies are included in the share price as well as in EPS equations to capture the January effect. Note also that when Durbin-Watson statistics indicated serial correlation, we included three-quarter moving average terms, which fit better than autoregressive terms.
16. Results using the alternative EPS measure are similar to those reported here both in the case of Company A and Company B.
17. Company A's share price variability is greater than for the six firms' average share price, as would be expected, because a portfolio with offsetting idiosyncratic risks will exhibit lower return variability than a single investment.

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