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**A TEMPORARY ROUTE TO ADVANCEMENT?
THE CAREER OPPORTUNITIES FOR
LOW-SKILLED WORKERS IN
TEMPORARY EMPLOYMENT**

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**A Temporary Route to Advancement?
The Career Opportunities for Low-Skilled Workers in Temporary Employment**

by

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Introduction

The rapid growth of the temporary staffing industry in the 1990s poses a paradox to researchers interested in the labor market for low-skilled workers. During this period, the U.S. economy operated for several years at greater than what had been considered the rate of “full employment,” increasing employee bargaining power and job options. Even the lowest-skilled individuals in the economy were able to find jobs, helping millions to move from welfare into work. During this peak growth period, one of the most rapidly expanding sectors of employment was the temporary staffing industry. The primary existing framework for analyzing this industry, however, sees temps as the archetypal “contingent worker,” implying that these jobs are insecure and at the complete discretion of the employer, and thus typically not desirable from the employee perspective (Polivka, 1996). This chapter explores why low-skilled workers entered temporary employment when other jobs appeared plentiful, and the attendant impacts on their labor market outcomes, including:

- What are the reasons that low-skilled workers accept temporary jobs? To what extent is it an active preference or a last resort, given an inability to find a permanent position?
- Does temping change or enhance lower-skilled workers’ labor market outcomes through opportunities to upgrade their skills, get promotions/wage increases, and/or move into a permanent job?
- What factors explain which low-skilled temporary workers advance into higher-skill/higher-paying positions? How do the work settings in which they are placed affect their career outcomes?
- How does the experience of lower-skilled workers in temporary jobs compare with lower-skilled permanent employees in similar positions, or higher-skilled individuals doing temporary work?
- What strategies do firms use when employing low-skilled temporary workers to remain competitive in their markets? To what extent do those strategies improve both the competitiveness of employers and the outcomes for low-skilled temporary workers?

In this chapter we answer these questions and others via three types of analysis. We begin with a brief overview of trends in temporary employment and the composition and reasons for the growth in this

sector during the last decade. We then focus on the analysis of a unique data set, which consists of five-years of payroll records for several temporary employment agencies with hundreds of thousands individuals working for them. These data are matched with a detailed survey of a nationally representative sample of temporary employees at these agencies. The survey and archival analyses are followed by more detailed case studies of three firms that are large users of temporary workers. These case studies enable us to not only get more detail on the motivations and experiences of individuals in temporary work, but also to obtain insights into the effects of firms' employment strategies and human resource practices on the skills, career, and wage mobility of temporary vis-à-vis permanent employees. Two of the three cases allow us to compare and contrast temps' experiences with those of permanent workers at the same sites, something not possible from our temp agency data.

The results from these multiple data sources suggest that temporary workers are very diverse, with a wide range of skills, work experience, and varying employment objectives. We find that a high percentage of workers who temp for two weeks or more receive some form of labor market benefit: free training, a wage increase, and/or finding a permanent job. We also identify a number of potential ways in which temporary staffing firms could further enhance the career and labor market outcomes of lower-skilled workers. Finally, the cases illustrate how important the client firm policies and work environment are in determining whether temporary workers experience any upward mobility.

Overview of the Temporary Staffing Industry

Temporary jobs traditionally have been concentrated in clerical and lower-skill, low-wage industrial occupations. A significant shift occurred within temporary employment between 1989 and 1994, with white-collar positions (predominantly clerical and administrative) dropping from 58 to 49 percent of total temporary jobs, while blue collar occupations grew from 30 to 40%, with the largest growth coming in laborers and electronic assemblers (Bjurman, 1995). The concentration in lower-skilled occupations may have begun to change in the latter half of the 1990s, as U.S. firms moved away from traditional full-time, long-term employment toward the use of more flexible staffing arrangements,

including part-time workers, job-sharing, consultants, and independent contractors (Abraham and Taylor, 1996; Houseman, 2000). Temporary agencies expanded recruitment of the most highly skilled technical and professional workers in order to meet this demand (American Staffing Association, 2001).

One sign of the changes in the labor market is the difficulty of defining the opposite of a “temporary job.” It is not a permanent job: there are few if any of these left in the private sector. Nor is it a full-time job: temps often work 40 hours or more per week. It is often difficult to differentiate temporary employment from outsourced or contract work: many agencies staff, employ and manage whole segments of a client’s operations (e.g., call center, factory shop floor, office pool). In some cases the same individuals are in the jobs for years, only the employer changes from the client firm to the agency. However, as a result of the Supreme Court’s decision in the Microsoft case, many firms now insist the agency dismiss anyone working for a year to avoid co-employment claims (Prencipe, 2001).

Wage differentials are a main reason for the concerns raised about the growth of temporary jobs: average wages in temporary jobs for 1983-93 were about 22 percent lower than average wages in all permanent jobs. This differential narrows considerably when differences in education, experience, industry and occupation are controlled for – falling to as low as 3 percent (Segal and Sullivan, 1997a) for most temps, and fully disappearing for managerial and professional temps (Economic Policy Institute, 1997). Yet these analyses do not control for benefits, which temps rarely receive. Temporary workers are much more likely to be young, female, nonwhite, unmarried, and inexperienced than the rest of the work force, and spend more time out of the labor force and unemployed (Segal and Sullivan, 1997a).

Temporary jobs are typically transitional in nature. This is clear both from their definition, and from empirical evidence (Segal and Sullivan, 1997a; Houseman and Polivka, 2000; Farber, 2000). Segal and Sullivan (1997a) find that about one-quarter of temps appear to maintain that status from one year to the next in the Current Population Survey. Moreover, despite rapid rates of growth in the 1980s and 1990s, temps still make up a small fraction of all jobs in the U.S. economy at any point in time. By 1999, average daily employment in the temp industry stood at approximately 2.4 million people (Brogan, 2000).

Temporary jobs accounted for about 2 percent of all jobs in the mid-1990s and an even smaller fraction of primary jobs among multiple jobholders – only about 1 percent (BLS, 1999).

The number of people who temp during a year, however, is much larger. Segal and Sullivan (1997b) found that the percentage of people who temp over a one-year period is approximately twice as high as those who temp in a given quarter. Levenson and Finegold's (2001) analysis of agency data suggest an even greater rate of cycling in and out of temping, with the individuals employed at an agency on an average day representing only one fifth to one quarter of all the people employed by that agency throughout the year. If this pattern holds true for other temp agencies and individual temps, then scaling up average daily temp employment suggests a national figure of about 9.6 to 12 million people who likely worked as temps at some time during the year in 1999, or up to 10 percent of the labor force. However, this estimate most likely represents an upper bound on the true figure, since many individuals sign on at multiple agencies to improve their chances of finding work. Moreover, many people only spend a small fraction of the year working as temps. Segal and Sullivan's calculations imply a much smaller four percent of the labor force temp annually, but also suggest that because the composition of the temp workforce changes so much from year to year, that a fairly large segment of the American work force will temp at some point in their working lives.

For firms, recent research suggests that greater use of temps may be associated with superior financial performance. Nayar and Willinger's (2001) analysis of a set of firms matched on industry and total assets found that firms employing disproportionately large fractions of contingent workers had greater stock returns and better balance sheets in subsequent years. They attribute this to a causal impact of using contingent work on the bottom line. While that may be true within the range of use of contingent workers within their sample, it undoubtedly would not hold if taken to the extreme, i.e., only one regular employee (the CEO) with all others contingent. Thus, Nayar and Willinger may have found that heavier use of contingent work is simply correlated with other management practices, such as more rapid responses to changing markets, that lead to superior financial performance. Regardless, this new evidence on the benefits (to the company) of contingent work, coupled with the willingness of managers to adopt

any practice perceived to offer competitive advantage, suggests that, if anything, firms' desire to use temps will only increase moving forward, not decrease.

Career Patterns of Low-Skilled Agency Temps: Study Methods

Our data are drawn from multiple temporary agencies in the U.S. that account for a small but significant fraction of all U.S. temporary workers from 1995-2001.¹ The data cover temp assignments from every state, ensuring a geographically diverse picture of the industry that includes all major metropolitan areas. Our primary data consists of all the U.S. employment records, including wages and hours worked for each assignment. This enables an accurate portrait of the true length of assignment, the nature of work performed, and the relationship between both of these and the wage paid.

In order to help preserve anonymity for the temporary agencies, the exact number of observations for many of the calculations from the payroll data is not reported. However, in most cases there are well over 100,000 observations, ensuring a high degree of statistical precision. This holds even in cases where a cell may account for a relatively small fraction of the observations in the sample. Our discussion of the payroll records results is drawn from Levenson and Finegold (2001). We refer the reader to that paper for a detailed discussion of the payroll data and how those analyses were constructed.

Survey Design

The payroll data contain no information on the demographic characteristics of the temporary employees. To obtain this information and data on individuals' motivations, work experience, and attitudes, we conducted a written survey of a sub-sample of all employees at these agencies. In order to focus on individuals who might plausibly have been affected by temporary work and who might be willing to complete a survey, we surveyed only those who had temped for at least 80 hours in a six-month period prior to the survey. This excluded about one-third of temps at these agencies, introducing a bias in our analysis, since these longer duration temps are more likely to have had positive outcomes from temping.

The surveys were mailed approximately two months after the end of the six-month qualifying period. Thus, at one agency, the qualification period was August through January, and the survey was mailed at the end of March. A total of 27,098 surveys were mailed in 2000-01: 20,598 to industrial and clerical temps and 6,500 to professional/technical temps.² Included among the industrial and clerical group is an oversample of 5,250 temps who were more likely to have had fast wage increases during the qualification period.³ The remainder of the industrial clerical sample was drawn from a combination of random national sampling (from among all temps working at the agencies) and two-stage random sampling using a representative group of offices.⁴ In order to induce as high a response rate as possible, all survey respondents were entered in a drawing for a bonus payment.⁵

In all, 4,500 usable surveys were returned, for a 16.6 percent response rate.⁶ Among those who returned surveys, over 70 percent worked for the agency at which they were surveyed in the two months immediately following the qualification period but before the survey mailing date; in contrast only about 55 percent of those not responding worked for the agency during this period. This suggests that the transient nature of temp employment may have kept the response rate low.

This conclusion is bolstered by the results of follow-up phone calls that were made to a subset of the industrial and clerical temps who were sent surveys. The phone calls took place after a follow-up

¹ Unfortunately, we cannot report the precise percentage for confidentiality reasons.

² The proportion of professional/technical versus industrial/clerical temps is not necessarily indicative of their proportions among the population of temps at these agencies. The 6,500 number for the technical/professional group was chosen to ensure a sufficiently large enough set of returned surveys to facilitate statistical analysis. Confidentiality concerns prevent us from revealing what the population distributions are.

³ For technical reasons, when selecting the sample we could only construct the difference between the maximum and minimum wage earned during that period. We included in the oversample all those with at least a five percent difference in wages as those most likely to have had fast wage increases. Yet this group includes both those whose wages *fell* by at least five percent along with those whose wages *rose* by at least five percent. (The results in Table 5 suggest that the latter outnumber the former by a ratio of at least three to one.) When doing any causal analyses, we control for the respondents who came from this over-sample.

⁴ First a representative sample of 100 offices specializing in industrial and clerical assignments was selected. A random sample of 7,500 temps from within those offices was then drawn for inclusion in the sample after the national random sample. Thus the total number of temps sampled from these offices totaled 8,441. The response rate for those drawn from the office-based sample was virtually identical to that for the random national sample.

⁵ The amount of the payment varied across agencies. The results from two different pilot tests of the survey at one agency suggested that the bonus alone likely increased the response rate by three to four percentage points.

mailing and about eight weeks after the initial survey mailing date. The results suggested that when calculating the response rate an additional 22.5 percent of the survey non-respondents should be excluded from the total due to incorrect contact information. Doing so yields an adjusted response rate of 21.4 percent (4,500/21,001) for the entire sample. See Levenson and Finegold (2001) for details.

Because the temps included in the survey were sampled from archival wage records, we can use the wage records to compare the respondents and non-respondents. Specifically, during the qualification period, respondents on average had greater hours (538 versus 464), total income (\$7,385 versus \$5,794), and average hourly wages (\$12.61 versus \$11.37). Average growth in base pay was virtually identical for respondents and non-respondents (3.73 percent versus 3.21 percent). During the preceding four and a half years, the respondents similarly had larger values for hours (1,568 versus 1,137), total income (\$21,540 versus \$14,910), average hourly wages (\$12.32 versus \$11.18), and growth in base pay (13.17 percent versus 11.03 percent).⁷ Thus respondents were better paid and temped more hours than non-respondents.

Defining “Low-Skilled”

One of the problems that bedevils our study, like all contributions to this volume, is defining a “low-skilled” worker. Rather than settle on a single definition, we utilize the richness of our data to compare results from three different ways of conceptualizing “low skill”. The first and perhaps most common way of defining low skill is based on formal educational qualifications; using our survey data, we contrast the work histories and career outcomes of those who have no more than a high school diploma with those who have some college, and those with a BA or advanced degree. Our sample of temps has a wide range of qualifications, with almost one-third having no more formal education than a high school diploma, while about one-quarter have at least a four-year college degree. In addition, 18% of our sample were also students at the time of our survey. The problem with defining skills based on

⁶ For the analyses in this chapter, we excluded 329 respondents that we were unable to match with payroll records, dropping the N to 4,171.

⁷ These are all averages conditional on working (i.e., hours greater than zero).

educational level, however, is that the lack of national standards in U.S. education means that years of schooling are often a poor proxy for individuals' skills and abilities.

A second categorization of individuals' competencies comes from the agencies' payroll data which provide specific job codes for each assignment. We use these codes first to look at broad occupation categories that are consistent with the standard occupation classifications used by the government and other national data sets: 1) industrial, 2) office, and 3) technical/professional assignments, with the latter serving as a proxy for "high skill." For some specific occupations the payroll data also differentiate level of skill in a particular occupation (e.g., basic, intermediate, and advanced word processor); where we have sufficient data, we analyze skill differences along these dimensions as well.

The third way of defining "low-skilled" is one frequently used by labor economists: defining the value of people's skills based on the wages they command in the labor market. On this metric, we define "lower-skilled" or perhaps more aptly lower wage, as those with hourly wages of \$8.00 or less at the time of our survey in 1999-2000. This corresponds to roughly 120% of the poverty line for a three-person family, assuming the temp is the sole income earner, working full-time, for a full year at that wage. One problem with using wage as a measure for skills is that it is often a poor proxy: people with very similar skills and abilities may earn very different wages based on the type of organization where they are placed and other constraints they face in the labor market, or on preferences they may have for focusing on work versus other activities. In addition, this definition can lead to circular reasoning. One of the primary outcomes we are interested in is the wage level and wage growth of lower-skilled workers. Hence, when we use this definition, we are referring to "low-wage" rather than "low-skilled" workers.

In addition to these three broad ways of defining skill, we analyze other factors – such as prior work, computer and Internet experience – that may be considered part of the skills of temporary workers.

Characteristics of Low-Skilled Temps

Table 1a contains the demographic information on the survey respondents. The most obvious conclusion is that the survey respondents are drawn from quite varied backgrounds. The average age is 38

years old; women comprise a slight majority. Temping is part of a dual strategy for many: as noted, almost one-fifth attend school in addition to temping; a comparable number work another (non-temp) job at the same time. On average, temp income contributes more than half of total family income.

Table 1a: Demographics

	Total sample	EDUCATION			OCCUPATION			WAGE		Fast Wage Progressor Oversample
		Some high school or HS diploma	Trade certification, some college or AA degree	Bachelor degree or higher	Industrial	Clerical	Professional or Technical	Earning \$8/hour or less	Earning more than \$8/hour	
Number of Respondents	4171	1006	2042	1093	1105	1870	1169	1277	2867	915
Age (mean)	37.9	37.4	37.4	39.1	36.7	37.3	40.0	36.2	38.7	36.9
Female (%)	56.7	59.6	57.5	52.6	37.3	83.0	32.6	61.2	54.5	64.5
Student (%)	17.6	5.6	24.0	16.6	12.1	20.8	17.6	15.1	18.7	15.8
Working another job while temp (%)	18.6	16.2	18.7	20.9	20.2	18.3	17.8	19.1	18.5	20.4
Temp contribution to family income (mean) ¹	3.4	3.3	3.3	3.5	3.3	3.2	3.7	3.1	3.5	3.3
Wage <=\$8/hr (%)	30.8	55.7	29.4	9.9	61.6	28.5	5.4			46.3
Wage > \$8/hr (%)	69.2	44.3	70.6	90.1	38.4	71.5	94.6			53.7
Industrial (%)	26.7	54.9	23.0	6.8				53.3	14.8	44.8
Clerical (%)	45.1	36.3	52.1	40.9				41.7	46.6	53.4
Prof/Technical (%)	28.2	8.8	24.9	52.3				4.9	38.6	1.8

¹ Mean Score based on a 5-point scale: 1=Very Little, 2=Some, 3=About Half, 4=Most, 5=Nearly All

There were some significant differences in the educational background of temps in the broad occupational and wage categories (see Table 1b). Not surprisingly, office workers and professional temps had much higher levels of formal educational qualifications than those in industrial positions. Just over half of industrial temps had no post-secondary educational experience, while 75 percent of office temps and 87 percent of professional/technical temps had spent some time in college, with nearly half of all professional/technical temps possessing a 4-year college or advanced degree. Lower-wage temps were also much less educated – over half of those earning under \$8/hour had at most a high school degree and only 9% had completed a BA, compared to 22% and 35% respectively for those earning over \$8/hour. Yet 47% of low-wage temps had some college experience.

There were also some interesting differences in prior work experience of temps (see Table 1b). Professionals, higher-educated and higher-wage temps had spent a greater percentage of the three years prior to joining the agency in work. Perhaps surprisingly, professional and technical (37%) workers were slightly more likely than office (30%), industrial (33%), and higher-wage workers (34%) to have been

laid off than those earning under \$8/hour (31%). Less educated, lower-wage and industrial workers, however, were much more likely to have been unemployed and looking for work immediately prior to signing on, while office workers were more likely to be using temping to return to the workforce. Less-educated, low-wage and industrial workers also were less likely to own a computer or use the Internet. They also indicated (results not reported) that their prior work experience had done a poorer job of preparing them for their temporary assignments. This same pattern is apparent when we did comparisons within specific occupations – i.e., compared to basic computer operators, advanced ones had spent much more of the prior 3 years in paid work (89% v. 61%) and were much less likely to have lost a job.

Table 1b: Prior Education and Work Experience

	Total sample	EDUCATION			OCCUPATION			WAGE		Fast Wage Progressor Oversample
		Some high school or HS diploma	Trade certification, some college or AA degree	Bachelor degree or higher	Industrial	Clerical	Professional or Technical	Earning \$8/hour or less	Earning more than \$8/hour	
Number of Respondents	4171	1006	2042	1093	1105	1870	1169	1277	2867	915
Education (%)										
Some high school	4.6	18.9			14.0	1.3	0.9	10.9	1.8	6.5
High school diploma	19.7	81.1			36.4	18.2	6.6	33.3	13.8	27.6
Trade certification / apprenticeship	6.9		14.0		10.7	5.9	5.2	9.2	6.0	7.0
Some college	32.0		64.9		27.0	40.3	23.1	31.5	32.1	34.1
Associate degree	10.4		21.1		5.0	10.4	15.1	6.6	12.0	8.3
Bachelors degree	20.7			78.3	5.3	19.3	37.4	6.4	27.1	13.4
Graduate degree	5.7			21.7	1.5	4.6	11.6	2.1	7.4	3.1
% time working in 3 years prior to temping	77.1	72.4	79.1	77.9	75.1	74.4	83.1	72.1	79.2	73.9
Laid off in 3 years prior to temping (%)	32.8	32.3	33.8	30.9	33.3	29.6	37.0	30.7	33.5	31.5
Unemployed just prior to temping (%)	41.9	50.4	41.4	34.9	52.5	38.1	37.5	49.6	38.2	46.5
Own a computer (%)	66.7	42.4	69.0	85.2	39.4	69.6	87.8	46.2	75.8	54.8
Use the Internet (%)	71.6	44.4	74.8	91.1	41.3	78.0	89.9	47.8	82.1	60.1

How Temporary is Temporary Employment?

Temping is a very brief experience for many people: about one quarter of all temps work one week or less with these agencies, with five percent working a day or less. Temps who are paid less tend to

also work fewer hours.⁸ Most temps work only one or two assignments in a year. Only about 10 percent of all spells last at least 13 weeks, with a slight upward trend in spell length between 1995 and 1999.

Why the prevalence of short-term assignments? Temp agencies have relatively little control over the duration of each assignment. They might refuse to fill requests for very short assignments, e.g., less than one day, but they do so at significant risk to their profitability because many good customers submit requests for both long- and short-duration assignments. Moreover, interviews with the company representatives revealed that the exact duration of an assignment usually is *not* known when the assignment is filled. A temp agency will request an estimated duration from its customer, but, more often than not, this is not known or is an underestimate. So even though an assignment with an expected duration of a day or less might seem unprofitable *ex ante*, a realized duration of longer than one day *ex post* frequently may make such assignments profitable. Short assignments can also serve as a screening mechanism to identify the better temporary employees; in these cases, an individual who is not a good fit for the job may work only one day, but the position could then be filled by someone else.

Despite the fact that temporary jobs are by definition short-term in nature, several factors suggest that long-term employment in the temporary staffing industry is a possible career path for some workers. Firms' continuing movement to project-oriented modes of production means that certain jobs may be available only to those willing to work as temps and independent contractors. As one of our case studies shows, temp agencies are beginning to play a broader role in the labor market as they take on the management of entire functions or facilities that their customers wish to outsource. Temporary employment also may be a viable option for workers looking to improve their skills through the free training provided by many agencies (Autor, Levy, and Murnane, 1999), particularly because the low skilled may not have access to training in permanent jobs, since most U.S. firms concentrate their training budgets on those who are most highly educated (Lynch and Black, 1998).

⁸ This is partly due to greater overtime pay among those who work more hours. But a certain proportion is due to

Employment Objectives

The disparate backgrounds of the survey respondents suggest that they likely have different motivations for temping. We analyzed individuals' primary reason for temping along two dimensions: whether someone looks at temping worth pursuing on its own merits ("temps") or as a means to getting a different job ("perms"), and whether their outlook is immediate ("short-term") or more open-ended ("long-term/selective"), yielding four different categories of temps:

- Short-term temps: want to find short-term work as a temp (14% of sample)
- Long-term temps: want to find good temp assignments on an ongoing basis (25%)
- Short-term perms: want to use temp assignments to find a permanent job as quickly as possible (23%)
- Selective perms: want to use temping to find the right permanent positions to meet their needs (38%)

Thus, just over 60% of our sample view temporary work as a way to locate a permanent job.

We find the selective perm group to be the most interesting in certain respects. In the face of rising litigation costs for firing regular workers, firms may be increasing their use of temp assignments to audition workers for regular jobs (Autor, 2000; Houseman, 2000). Thus, for employees seeking these core jobs, working first as a temp may be the only way to get hired. In many cases the temps are screening as well, using their assignments to decide for which firm/manager they want to work (for more on this strategy, see our survey results below on those temps we classify as "selective perms"). The fact that they say they want to find the "right" permanent position indicates a potential for sticking with temping over an extended period. In contrast, the Bureau of Labor Statistics classification of involuntary temps does not recognize the duration aspect of temping, grouping together short-term and selective perms because they both hope that temping will lead to a permanent job (Levenson, 2000). Yet the selective perms' longer-term outlook suggests that they are more likely to take advantage of training and other skill-building opportunities while temping.

higher base pay as well.

While “long-term temporaries” may seem like an oxymoron, this type of arrangement appears to be a good fit for certain types of workers. These include college students who want to earn extra money while in school, and those – typically women – whose childcare and family responsibilities make temporary assignments viable as an alternative to regular, part-time jobs.

Individuals in lower-skilled, industrial occupations are far more likely to view temping as primarily a route to permanent employment (73%) than office (53%) or professional (61%) temps. In particular, they are more eager to get a permanent job as quickly as possible (32% vs. 18% and 22% respectively) (see Table 2). They are also more likely to agree that “temporary work is the only work I could find.” Similar patterns exist using our other definitions of low-skilled workers: those with a 4-year college or advanced degree are much more likely to prefer temporary over permanent work (51%) than those with some college (38%) or no college (30%). Low-wage temps are also more likely to want the first permanent job they can get (27% vs. 21%) and less likely to want to temp on an ongoing basis (27 vs. 22%) than those earning over \$8/hour.

There are two aspects of the employment objectives that bear noting. First, the survey asked retrospectively about the person’s reason for becoming a temp. Thus there is a significant potential for bias due to *ex post* updating. This is of particular concern for those who signed up looking to temp for only a short time yet who ended up temping longer than they expected, and for those who initially were only looking for a permanent job but later came to appreciate the positive aspects of temping. Second, the respondents were forced to choose only one response out of four. Yet many people undoubtedly had multiple reasons for temping. So someone whose primary motivation is to find the right permanent job, for example, likely also wants good temp assignments until they secure that job. Thus the categories more accurately describe shades of difference in motivation across individuals.

Table 2: Employment Objectives

		EDUCATION	OCCUPATION	WAGE
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Reason for temping (%)	Total sample	Some HS or HS diploma	Trade certification, some college or Associate degree	Bachelor degree or higher	Industrial	Clerical	Professional or Technical	Earning \$8/hour or less	Earning more than \$8/hour
Number of Respondents	4171	1006	2042	1093	1105	1870	1169	1277	2867
Short-term temping	13.8	9.0	13.1	19.6	9.8	17.6	11.8	13.8	13.9
Long-term temping	25.5	21.4	24.6	31.0	17.7	29.0	27.7	21.7	27.3
Short-term perm	22.6	30.0	21.7	17.6	31.6	17.7	21.6	26.9	20.6
Selective perm	38.0	39.5	40.6	31.8	41.0	35.6	39.0	37.5	38.2

Career Progression – Skill Development

Human capital theory predicts that firms will not pay for employee training in general skills because, by definition, these are the skills that individuals can then take to other employers to earn a higher wage (Becker, 1964). At first glance, this logic would appear to apply particularly strongly to temporary agencies given their very high employee turnover rate. And yet the temporary agencies in our sample, like others in the sector (Autor, 1999), provide their employees with free training in a range of transferable skills – from typing and introductory office skills to advanced computer programming. They appear to do so because the returns to the firm from such training are high: the costs are low (the training is all computer or video-based and individuals are not paid while training) and the payback is rapid (the firm can charge a higher margin on more qualified individuals). Agencies also offer free training to prepare people for positions where there is a shortage of qualified individuals, including the specific skills requested by an employer (e.g., Microsoft Office 2000), and to provide an inducement for individuals to sign on with their agency. In our study, however, only 4 percent of temps indicated that training was their “main reason” for signing on, although, this was a slightly more important motivation for lower-wage and less-educated workers.

In theory, free training is available to all temps we studied. Yet in practice only about one quarter of our sample participated in agency-provided training. The level of participation can be explained in two stages (see Table 3): first, less than half (43%) of all the individuals who signed on at the agency report that they were offered free training, and then, only just over half of those offered training (54%) elect to

take it. By comparison, about 21 percent of the general workforce reports receiving training from their employer in a given year (National Center for Education Statistics, 1995).

Table 3: Training Participation

	Total sample	EDUCATION			OCCUPATION			WAGE	
		Some HS or HS diploma	Trade certification, some college or Associate degree	Bachelor degree or higher	Industrial	Clerical	Professional or Technical	\$8/ hour or less	\$8/ hour or more
Number of Respondents	4171	1006	2042	1093	1105	1870	1169	1277	2867
Offered Training (%)	42.9	37.1	45.0	44.1	30.9	50.0	42.6	38.1	44.9
Took Training (%)	53.7	54.0	55.6	50.6	52.3	59.2	44.4	55.6	53.0
Mean Hours of Training	21.0	25.7	20.7	18.5	30.4	17.3	21.3	29.6	17.1

Lower-wage individuals were less likely to be offered training (38% vs. 45%), but were more likely to take it when it was offered (56% vs. 53%) and took significantly more training per year than their higher-paid counterparts (19 vs. 9 hours). A similar pattern holds for education levels, although in this case it is those with intermediate qualifications (56%) who are slightly more likely to take training when offered than their peers with less (54%) or more years of education (51%). Individuals in industrial positions were also much less likely to be offered training (31%) than those in technical and professional occupations (50% vs. 43%), due in part to the greater CBT offerings from the agencies for those in white-collar positions. Office (59%) and industrial (52%) were more likely to participate in training when it was offered, than professional temps (44%), and those industrial temps who got training spent significantly more hours in training (30 hours/year) than either office (17) or professional temps (21). Within specific occupations we find that the more advanced workers – whether key data entry, secretaries or computer operators – were more likely to be offered training and recorded significantly more hours of training.

A number of factors appear to contribute to the relatively low participation rate in free training:

- Some offices had an unwritten policy that temps had to work at least 40 hours on agency assignments before becoming eligible for the training.
- Access to the computer-based training was often limited, since smaller offices typically had only one computer where individuals could train, which was also used for skill assessments and other office

tasks; Internet-based training, which could have greatly expanded access to courses, was only just being introduced by one of the agencies at the time of our data gathering in 1999-2000.

- Much of the CBT curriculum was not modularized, requiring individuals to complete half- or a full-day training in order to be certified as having passed the course.
- Generally, temps had to take the training on their own time, whereas most permanent employees are paid by their firm to participate in job-related training.
- Many lower-skilled individuals may not have been able to afford the transportation costs of getting to the training and the opportunity cost of spending full days in training without pay, although the slightly higher training take-up by those earning under \$8/hour suggests this is not a principal barrier.

Our regression results indicate that skill and education levels are related to training received, though the size of the effect is modest and the R^2 is low (see Table 4). Individuals without college education were less likely to be offered training, but showed no difference in participation or hours than their more educated counterparts. Those with greater prior experience on computers were more likely to be offered training, but took significantly fewer hours of training. When we repeat this analysis replacing the education proxy for skill with wages (results not shown), we find that low-wage workers were also less likely to be offered training, but took more hours when they did participate. This raises the question of whether the temporary agencies' staff fully understood and actively promoted the training they provided to low-skilled temps, the group who perhaps could benefit from it the most (see impact of training on wage growth in Table 6).

Formal training, however, is only one way in which individuals' skills may be enhanced through temping. Our respondents in general were fairly positive about the extent that temporary work had improved their skills, rating it 3.7 on a five-point scale (where 1 = Not at all, 5 = Very great extent). All categories of temporary workers rated the opportunities "to learn from other people at the workplace" and "to learn new things on the job" as significantly higher than the opportunity to learn through training.

Table 4: Factors Affecting Training Participation

	Offered Training ¹	Training Participation ¹	Hours of Training
Low Education	-.05**	-.03	1.27
Computer Experience	.02***	-.03***	-3.08***
Age	.00	.00	-.07
Female	.08***	.08***	-4.33**
Also a Student	.01	.00	-1.26
Long-term Temporary	.07**	.13***	4.51*
Short-term Permanent	-.02	.07	8.64***
Long-term Permanent	.06**	.11***	4.14
Fast Wage Progressor Oversample	.04*	.03	2.08
Pseudo R ² (columns 1 & 2) ¹ ; R ² (column 3)	.02	.01	.03
¹ The offered training and training participation results are from binary probits; the values in columns 1 and 2 are changes in the probability of the dependent variable from a one unit change in the independent variable.	Key: * = (p ≤ .10) ** = (p ≤ .05) *** = (p ≤ .01)		

Labor Market Outcomes: Wage Growth and Obtaining a Permanent Job

Overall, a significant fraction of the temps we surveyed – the group who spent two or more weeks in temporary work – experienced positive career outcomes, defined as finding a permanent job or significant wage growth (ten percent or more) in the year the person worked the largest number of hours as a temp (see Table 5).⁹ The fourth row of Table 5 gives the percentage of those having one or both of these outcomes. It is less than the sum of the first two columns because some people in each “reason for temping” group both had fast wage growth and found a permanent job.

Less-educated, lower-wage, and industrial temps were more likely to have found a permanent job than their counterparts at the time of our survey. Likewise, clerks and customer service representatives with basic skills were more likely to have found a permanent job than their advanced skill counterparts. Industrial and lower-wage temps, however, were somewhat less likely to have located this job through the agency than office or professional temps. In contrast, the least educated were most reliant on the agency for finding a permanent job, perhaps suggesting that they had weaker personal job search networks. It should be noted that the fixed time frame design for the survey means that the percentage of our sample

⁹ We do not know the wage or duration of the permanent job temps move into, so are not able to determine whether this represents improved earnings or longer-term career prospects.

finding a permanent job is a lower bound: others who were temping at the time of the survey undoubtedly found permanent jobs subsequently. Anyone using temping to supplement a “regular” job should be excluded from this group as well.¹⁰

Table 5: Career Outcomes

	Total sample	EDUCATION ¹			OCCUPATION ¹			WAGE ¹		
		Some HS, or HS diploma	Trade certification, some college or Associate degree	Bachelor degree or higher	Industrial	Clerical	Professional or Technical	\$8/ hour or less	More than \$8 / hour	Fast Wage Progressor Oversample
Number of Respondents	4171	698	1596	944	697	1384	1153	856	2378	915
Permanent job (%)	31.1	34.4	31.1	31.6	36.7	32.2	29.0	35.6	30.7	28.1
Perm job via temp assignments (%)	17.0	22.3	17.0	15.8	20.9	18.2	15.6	19.0	17.4	14.2
10%+ wage growth (%)	30.2	28.9	25.9	21.9	25.4	29.7	20.7	21.7	27.0	47.3
Perm job and/or 10%+ wage growth (%)	53.9	57.4	50.4	47.1	55.1	54.3	44.8	51.9	50.8	64.7
Negative wage growth (%)	11.1	10.1	9.1	6.1	11.5	10.0	4.6	12.4	7.0	20.7

¹ Data exclude Oversample.

On the flip side, not everyone who found a permanent job indicated that the job came via a temp assignment with the agency. Only about one quarter of short-term temps and long-term temps who found perm jobs did so via a temp assignment with the agency. A much higher fraction – about half – of both short-term perms and selective perms who found permanent jobs said that the agency was directly responsible, which is consistent with their stated reasons for becoming a temp.¹¹

Better-educated temps earned a higher wage (see Table 1a): 90% of college graduates earned over \$8/hour compared to 71% with some college experience and 44% of high school graduates or dropouts. Not surprisingly, the average wage of office and industrial temps was much lower than that of technical and professional temps. They also had slower wage growth during this period (Levenson and Finegold, 2001), which is consistent with industry reports of much faster growth in the demand for professional workers (American Staffing Association, 2001). Despite this, gains in average and median wages for most

¹⁰ The questionnaire’s wording was “I have accepted a permanent job and am no longer taking temporary assignments.” Only those indicating “yes” to this question were coded as having found a permanent job.

¹¹ Specifically, if they said “yes” to accepting a permanent job and no longer temping, they were asked whether the permanent job was obtained through an assignment with the agency.

occupations outpaced inflation during this period, mirroring trends in average wages in the economy (Mishel, et al., 2001). For example, median nominal annual wage rises in some lower-skilled temporary occupations were 6 percent for administrative/secretary/receptionist, 5 percent for casual laborers, and 6 percent for drivers (Levenson and Finegold, 2001).

Not surprisingly, the amount of time individuals spend in temporary work is directly related to their likelihood of obtaining a raise. Those who work for only short periods of time per year experienced virtually no wage growth on average: only about one percent for those working one quarter or less. Wage growth among those who work for more than a quarter, but no more than 900 hours during the year was about 4 percent; while wage growth for those working the longest (900+ hours) averaged 7-8 percent between the first and last weeks worked during the year. More than twenty percent of those who work from a quarter to 900 hours, and more than twenty-five percent of those who work more than 900 hours had raises of greater than ten percent. Just about half of all temps with such large wage growth within a year achieve that through working on only one assignment, whereas the other half do so while working on two or more assignments (Levenson and Finegold, 2001).

Table 6 presents regression analysis that seeks to identify the factors associated with finding a permanent job and with (significant) wage growth. In each case three specifications are reported:

- (i) the base regression with our primary low-skill descriptor – educational attainment; also included are demographic controls for age, gender and student status (first and fourth columns);
- (ii) that specification augmented with the other two low-skill descriptors – low-wage status and industrial or clerical temp assignments (second and fifth columns);
- (iii) the further inclusion of whether training was taken and other skill-, preference-, and experience-related factors that might influence labor market outcomes (third and sixth columns).

Table 6: Explaining Career Outcomes

	Permanent Job ¹	10%+ Wage Growth ¹
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Low Education	.01	-.01	.00	.01	.03	.03
Wage at time of survey (\leq \$8/hr versus $>$ \$8)		.00	.02		-.07***	-.07***
Occupation (Clerical versus others)		.02	.03		.07***	.06***
Occupation (Industrial versus others)		.04*	.05*		.04*	.03
Age	-.01***	-.01***	-.01***	.00	.00	.00*
Female	.00	.00	.01	-.03*	-.05***	-.05***
Also a Student	-.11***	-.10***	-.09***	.02	.01	.02
Training Taken			-.04**			.04**
Working another job while temping			-.05**			.03
Contribution of temp income to family income			.01			.00
% time working in 3 years prior to temping			.00***			.00
Laid off in 3 years prior to temping			.00			-.01
Unemployed immediately prior to temping			.03**			.00
Computer Experience			-.01			.00
Own a Computer			.05***			-.01
Use the Internet			-.01			-.03
Fast Wage Progressor Oversample	-.05***	-.06***	-.06***	.13***	.13***	.13***
Pseudo R ²	.03	.03	.04	.02	.02	.03
¹ Results from binary probit estimation. The values in the table are changes in the probability of the dependent variable from a one-unit change in the independent variable.	Key: * = ($p \leq .10$) ** = ($p \leq .05$) *** = ($p \leq .01$)					

The results indicate that clerical workers, those earning over \$8/hour, and those who took training were significantly more likely to obtain a significant wage increase. However, female temps were less likely to have significant wage increases. In order to determine the net impact of the factors in Table 6 on significant wage growth, we construct profiles of those of central interest to this volume: low-education, low-wage, industrial (male)/clerical (female) temps. Thus, low-education, low-wage, clerical female and industrial male temps were about 3 percent less and 1 percent less likely, respectively, than other temps to experience significant wage growth, all else equal. Taking training worked to offset those disadvantages, bringing low-skill women about even with other temps (1 percent more likely to have significant wage growth), and giving low-skill men a slight edge (3 percent more likely).

The only skill-related measure that was significantly correlated with finding a permanent job (in terms of both statistical and economic significance) was working in industrial assignments. However, the effect was only significant at a ten percent level of confidence, below the cutoff (five percent level of

confidence) many researchers use to determine statistical relevance. Thus, unlike for wage growth, skill does not appear to play as large a role in helping to determine finding a permanent job.

Interestingly, taking training was *negatively* associated with finding a non-temp job.¹² We do not think this has the paradoxical implication that training makes someone less attractive to prospective employers. Rather, this likely represents a timing issue: anyone reporting finding a permanent job had to do so by the time of the survey, which in some cases was within 3-4 months of the person's first temp assignment. Taking training likely is a signal that the person either postponed finding a permanent job while focusing on skill building and/or opted for training after realizing that their preferred permanent job would not materialize immediately. This would produce the observed negative relationship in Table 6.

Finally, it should be noted that we do not know precisely why the wage increases occur. Some explanations we observed in different firms include (a) successful completion of the screening period, (b) pre-negotiated increases based on tenure and successful performance, (c) improved matching, (d) skill building, and (e) the random nature of temp assignments. Improved matching occurs when the person accepts an initial assignment (or assignments) with the agency as quickly as possible to earn money right away. The same dynamic is at work during a screening period, only in this case it is the temp agency or client firm that might restrict access to higher-paying assignments until the person has proven himself or herself in an initial lower-paying assignment. In some large-scale partnerships between agencies and their customers, there is a regular schedule of wage increases based on time in the position and successful performance.

A final look into the nature of employment and advancement as a temp is provided in the last row of Table 5. This shows that wages declined for roughly 11 percent of temps in each group in the year they worked the most hours (out of 1999 or 2000). This is not surprising if one considers that some temps may feel the need to take whatever assignment is available. Negative wage growth may also indicate a lucky

¹² Note that "working another job while temping" is negatively correlated (column three). Because of the way the survey questions were worded, it likely is the case that these people were using temping primarily to supplement income from their main job. For them, "finding a permanent job" probably equated to finding a *different* permanent

initial assignment (or unlucky ending assignment) during the year. In this sense it is important to remember that wages and skill are not synonymous. If so, then we should discount the column two number accordingly. One way is to assume that the degree of randomness that produces wage growth is comparable in both directions, negative and positive. This would reduce the fraction of temps with rapid positive wage growth by about one third.¹³

Case Studies: Site Selection and Data Collection

While the analyses above provide valuable insights into the patterns of wage and career mobility associated with temping, they only describe the experiences of temps through their eyes. They lack the perspectives of the second and third actors in this particular set of employment relationships: temporary staffing agencies and the client firms to which the temps are assigned. From the data analyzed thus far, we know little about why and how firms use temporary agencies and temporary employees, why temps in certain settings experience wage and career progression, and how the experiences of temporary employees compare to those of permanent employees engaged in the same work.

We used the third phase of our research, the case studies, to explore these issues in three very different firms. To maintain anonymity, we refer to them as “Office Supplies,” “HealthTech,” and “We Deliver.” The site selection was structured to focus on clients that employed large numbers of lower-skilled temps, but differed significantly in the work settings and the types of temps used. In each case, the client has a formal contract with a temporary agency in our study, and a person who manages the account. Each case featured a combination of structured telephone and on-site interviews, a visit to the work site, and a survey of the temps working at each site (see Appendix).

job than their current one. If so, then the negative correlation means they were less likely to leave their current main job than other temps (who were working only temp assignments) were to find a permanent job in the first place.

¹³ However, this likely is an overadjustment, as the fourth column includes all temps with *any* negative wage growth, no matter how small, whereas the second column includes only those with positive wage growth of *at least ten percent*. The fraction of temps with negative wage growth of at least ten percent is undoubtedly much smaller than the figures in the fourth column. Similarly, the fraction of temps with any positive wage growth is undoubtedly much larger than the figures in the second column.

Upon completion of the interviews and site visits, all temporary staff employed by each client were asked to complete an expanded version of the questionnaire we administered to the larger sample of temps. The case study questionnaire included additional questions on the design of the temp's job (e.g., level of autonomy, control over work, intrinsic job rewards) and on the relationship between temps and permanent employees. The response rates to the survey ranged from 15% to 50%; the number of respondents ranged from 93 to 138. The response rates were lower for the two cases where respondents were instructed to mail back the questionnaire.¹⁴ At the other site, respondents handed them back to the on-site temporary agency representative in a sealed, blank envelope (to preserve anonymity). As an incentive to participate, all case study survey respondents were entered into a drawing for a \$500 bonus.

Before discussing the wage, skill, and career outcomes of temps in these companies, we offer a brief description of each case study site. Statistical profiles of all three can be found in the Appendix.

A. Office Supplies: Adjusting for a Cyclical Workload

Office Supplies is a global manufacturer and supplier of office products. Our site was a manufacturing facility located in a rural area of the southern part of the U.S. This site runs three shifts, typically with about 150 temps/shift, to produce two product lines. However, because the production volume varies widely throughout the year, there have been times during which as many as 800 temps worked at the site. Office Supplies uses temporary employees primarily to achieve high levels of flexibility in its headcount. Due to the unpredictable and customized nature of orders for its products, headcount can grow or decline by several hundred within a 2-3 week period. Using temps allows Office Supplies not only to protect the jobs of core workers, but also to save up to 50 percent on its labor costs and to try to avoid the stigma of being a firm that lays off its own employees. Temps are also used to a lesser extent at the facility to fill in for absent or vacationing permanent employees.

¹⁴ At these two sites we surveyed all temps who had worked at the client within the prior year, including those no longer on assignment there. In these cases, we asked them to reference their time working at the particular client in question in case their current or subsequent assignments were elsewhere.

The jobs filled by temps at Office Supplies are typical of industrial temporary assignments: machine operator, forklift driver, bailer, casual laborer, receptionist, data entry, and computer technician. While the work environment is clean and excellent safety precautions are taken, the work itself is highly routine. Both temps and permanent employees are rotated from job to job to relieve stress and minimize injuries. Temps and permanent employees work side-by-side in teams on the same production process.

The temps at Office Supplies are predominately African American women. Many are single mothers, and 10-15 percent came from welfare-to-work programs. Another 25-30 percent are college students, most of whom work during the summer – the peak production season for this facility. Of the three case study sites, Office Supplies temps were the least educated, with 37 percent of those completing our survey having only a high school diploma or less education. Nearly two-thirds (65%) were unemployed and looking for work before taking the assignment. Using our typology of temporary employees, the largest group (34%) consisted of “short-term perms,” wanting to find a permanent job as quickly as possible. Another sizeable group (31%) was “selective perms,” looking for the right permanent position. With the lack of good alternate jobs locally and relatively good working conditions at this site, almost all of these temps would take a permanent job at Office Supplies if offered.

B. HealthTech: Internal Temp Pool of Workers

HealthTech is a rapidly growing manufacturer of medical technologies and provider of services to the health care industry. We surveyed temporary employees used by HealthTech at its central offices near a major Midwestern city, where it has thousands of employees. The company is widely known for its family-friendly policies and was once recognized as the state’s “Employer of the Year.”

In 1996, HealthTech discontinued a long-standing internal “overload” pool of permanent employees, outsourcing them to a temp agency. Today, between 140 and 230 temps are used at various sites across the central office’s multiple buildings throughout the year. Like Office Supplies, HealthTech uses temps to protect its core employees and achieve flexibility in its headcount. According to one HealthTech manager, it “gives us the flexibility to manage the size of the organization.” Temps are used

when managers are unable to increase their permanent headcount. Using temps yields relatively small direct cost savings for HealthTech, but helps lower the official turnover, as changes in temps are not counted in these statistics. Temps are also used to screen candidates for permanent jobs, although there is no formal company-wide policy on the matter.

Temp assignments are typically short-term jobs such as filling in for employees out sick or on leave. For example, a temp may do clerical work for 3 days, then pack boxes for 2 days. Some jobs involve project work lasting 6 months or more. The types of assignments vary widely, from the most common, clerical (e.g., receptionists, administrative assistants, customer service representatives, mail clerks), to industrial (e.g., packers, shippers, and drivers) to technical (e.g., laboratory workers). The work environment is clean and attractive, and the workdays are not unusually long. The nature of the work varies greatly by assignment, from monotonous and stressful for warehouse temps, to routine with a fair amount of autonomy for clerical workers, to lab work with some variety. In many assignments, temps work in teams or workgroups with permanent employees. Requests for temps are decentralized and made separately by individual managers and departments.

A large proportion of the temps who go to work at HealthTech are interested in a permanent job with the company. (One manager estimated the level to be about 85 percent.¹⁵) In fact, the temporary agency recruits using HealthTech's name rather than its own in advertisements for open positions. Many of the temps interested in permanent jobs at HealthTech are able to make that transition. Thus, a relatively high proportion of those who were working as temps at the time of the study preferred temporary work as either a short- or long-term option (28 and 36 percent, respectively, in our survey). Only 20 percent were unemployed and looking for permanent work before taking the assignment at HealthTech. Like Office Supplies, the temps were mostly female (90 percent) and about a fifth were students at the time. They were the most highly educated of the three cases we studied: only 15 percent had a high school diploma

¹⁵ We are unable to give an estimate from either our survey or our interviews with temporary employees because many of those interested in permanent jobs as temps had likely already been hired.

or less, while 28 percent had a college degree or higher. They were also the most computer savvy: 83 percent owned a home PC and 87 percent used the Internet.

C. We Deliver: The Managed Services Model

We Deliver is a major deliverer of packaged materials in the United States and worldwide. The site we examined was located on the outskirts of a moderately large metropolitan area in the southeastern part of the United States. Until recently, this particular location was an outbound call center responsible for processing “Cash-on-Delivery” or COD payments. As a result of advances in digital check processing, the work at the location had recently transitioned to handling “exceptions” to the standard payment procedures, with less call center-type work.

At the time of our study, We Deliver’s had about 270 people working on site, of whom only eight were permanent employees of We Deliver. The temporary employees were supplied by a single temporary agency using a model called “managed services.” We included this case primarily because anecdotal evidence suggests that increasing numbers of firms, especially large employers, are entering these arrangements with temporary agencies, and, as we show later, the experiences and attitudes of temps in this setting are somewhat different from temps in other types of arrangements.

Under the managed services model, the temporary staffing agency essentially acts as an outsourced human resources (HR) function for the organization. Typically, the arrangement is limited to a particular location, division, or type of work (e.g., a firm’s mailroom, warehouse, call centers, or training facilities.) The temporary agency often provides on-site managers who handle recruitment, selection, scheduling, discipline, coaching, performance reviews, employee motivation and compensation programs for the temporary employees. Agency staff work closely with the client’s management team to identify ways to increase productivity, quality, and retention.¹⁶

We Deliver entered a managed services contract with its temporary agency in 1996 when it began consolidating and automating COD call center operations. The firm’s primary motivation for using temps

was to achieve cost reductions, particularly in the area of benefits. Although non-unionized, We Deliver offers excellent benefits to its permanent employees to compete with its unionized competitors. Because wages constitute up to 80 percent of We Deliver's costs at the facility, according to the senior manager, "if we can outsource our entire employment costs to a temporary agency and avoid paying benefits, it's a winner." We Deliver managers also saw temps as a way to minimize risk while automating the COD process, since they could quickly release the temps if needed.¹⁷

In 2001, the work shifted away from order processing toward exceptions handling. At the time of our study, temp jobs at We Deliver were mostly clerical. Although some entailed outbound calling, most involved data entry, problem resolution, check verification, customer service, or package tracking. Some jobs were relatively routine (e.g., check verification) while others offered a great deal of variety (e.g., problem resolution). Although organized into departments, most temps worked independently; teamwork occurred only on an impromptu basis. Temps who had been promoted to a supervisory level supervised the day-to-day work. The whole temporary staff was managed by the agency's on-site manager. The other permanent agency employee on-site is a training coordinator. All work occurs between 5:30 a.m. and 8:00 p.m., with no work on weekends. The working environment is pleasant, modern, and clean.

As in the other cases, most of the temps at We Deliver (89% in our survey) were women. More than 75% had some college education. A majority had a PC at home (61%) and used the Internet (72%). Many were single parents looking for a flexible work schedule; about 20% were students. The vast majority was looking for permanent work and classified themselves as either "short-term perms" or "selective perms" (36 and 53%, respectively). Like HealthTech, many came to We Deliver expecting a permanent job in large part because the agency used We Deliver's name in recruiting. In our focus group interviews, nearly every single temp wanted to obtain a permanent position at We Deliver.

¹⁶ The temp agency at each of the other cases provided dedicated staff to manage the account with the client. However, in those cases their role was limited to traditional HR functions, not production and work design issues.

¹⁷ Company representatives at We Deliver expressed no concern that the use of temps could have also increased the risk that the conversion would fail because of their relative lack of experience and knowledge about We Deliver's processes and products.

Skill, Wage, and Career Growth Opportunities

Our analyses of the agency data from across the U.S. found that many temporary employees who remain with the agency for two weeks or more experience wage progression, skill development, and/or find a permanent job. In the case studies, we examine how employers and temp agencies influence the attainment of these outcomes. We find that the degree to which these outcomes are attained is not uniform across settings. It is heavily influenced by factors such as employers' motivations and strategies for using temps, the type of work, the working environment and organization of work, local labor market conditions, and the degree of latitude managers have in decisions about temps and their work.

Skill Development

Skill development ranked in the top five out of seventeen possible features temps want from their assignments at all three sites (See Table A2). Yet for less-educated temps at HealthTech and We Deliver, skill development was a lower priority: temps with no more than a high school diploma at these sites rated skill development in the bottom half of the list of features. At HealthTech and We Deliver, about three-quarters said they were offered training, much higher than our national survey average of 43% (See Tables 3 and A3). By contrast, only 36% of temps at Office Supplies reported being offered training, which was still higher than the national survey average for industrial temps of only 31 percent.

Skill development opportunities at We Deliver were clearly the most extensive and widely utilized. Of the three cases, temps at We Deliver had the greatest participation in the training when offered to them (over 93%), and the rate did not differ by level of education. In fact, less-educated temps were the most likely to indicate having received an opportunity to enhance their skills through formal training. The high level of training participation no doubt resulted from the extensive training curriculum customized by the temporary agency for We Deliver. The agency provided a dedicated on-site trainer and training center with a variety of courses. In the first 3-6 months, temps received orientation and courses in basic computer skills, phone skills, Windows, and We Deliver's computer systems. Temps could also elect to take courses on supervisory skills, coaching, and listening skills.

As a signal of its commitment to retaining its temporary workforce, We Deliver encouraged the agency to occupy any idle time that temps might have with paid training time. This was especially important at the time of our interviews, as the workload had been lower than anticipated. Not all temps felt they were fully employed and preferred to receive more hours than time off. They were pleased to have an opportunity to further develop their skills, while also being paid for a full workweek.

In addition to its formal training program, the temporary agency for We Deliver also offered a mentoring program developed in 1999. According to a temporary agency memo, the mentoring program provided new temps “with accurate information concerning policies, procedures and benefits in a personable, one-on-one manner” using coaches “who are well versed in our operation, dedicated to [temporary agency] and proven to have an excellent work ethic.” The purpose of the program was explicit: to combat “turnover, absenteeism, tardiness, failure to complete full shift, and no-call no-shows.” While the program appeared well designed, the temps we interviewed reported little familiarity with the program, and those who knew of it reported very little contact with their mentors.

Formal opportunities for skill development at Office Supplies were the most limited of the three. The temps we interviewed at the site claimed that new temps received very little formal training (2-3 days, consisting mostly of simple orientation material) and that they frequently had to push for additional learning opportunities. Indeed, in our survey, only about 25 percent of temps claimed to have taken training offered by the temporary agency. Our interviews with managers suggested that Office Supplies supplied a higher level of training, with about 80 percent of entry-level temps getting one week of training, while the rest received 2 to 4 weeks. A great deal of this training appeared to occur informally, on the job, and was conducted by Office Supplies team leaders. New skills were most likely acquired as temps rotated from one job to the next on their team. Since much of this training was specific to the work at Office Supplies, it is not surprising that their temps out of all three case sites were least like to agree that they had obtained marketable skills (see Table A3).

At HealthTech, a large proportion of temps said they were offered training by their temp agency and 61 percent took advantage of it, but the median hours of training among those taking it was extremely

low (5 hours). The lower volume of training at HealthTech may be partly due to the fact that some temps said that they were overqualified for their assignments and did not need the training they were offered. This was especially true if they were in technical or professional assignments, consistent with the lowest training participation rates for this group on our agency-wide surveys. Unlike Office Supplies, HealthTech did not offer any formal training to its temps, preferring to leave such training to the temporary agency. Our survey results from HealthTech confirm this: temps at HealthTech were the least likely to agree that they had had opportunities to enhance their skills through formal training.

Another factor in the low reported hours of training is that much of it likely was focused on orientating temps on HealthTech's e-mail system. This training was provided by the agency as a prerequisite for any temp working at HealthTech. But anyone who had used the e-mail system on previous assignments – a large percentage given HealthTech's penchant for requesting temps with HealthTech experience – undoubtedly needed only a refresher on how to use the system if at all.

Wage and Career Progression

Just as our three case study sites varied in the amount of skill development temps received, the opportunities for wage growth and/or career advancement differed, too. Since the two forms of mobility are related, yet distinct, we discuss them together and draw distinctions as needed. While it was not evident which site offered the best combination of wage and career growth, by most measures, Office Supplies trailed the other two sites in both areas.

From the temps' standpoint, there was a clear and strong preference for wage growth over career mobility. As shown in Table A2, competitive pay was the single most important benefit sought by temps at all three sites, far outranking any of the 16 other outcomes covered in our survey. At We Deliver, the preference for good pay was accompanied by a strong desire for good benefits. Rapid advancement (i.e., career mobility) was not one of the top five benefits sought by temps at any of the sites; instead, many were focused on moving from a temporary to a "permanent" job. Whether the permanent job offered any chance of future career mobility appeared to be less crucial than just getting out of temporary work.

Of the three cases, HealthTech offered the greatest earning opportunities. Temporary assignments at HealthTech had the highest starting wage range (\$9.50 - \$15.00 per hour). Temps were eligible for wage increases at their annual performance reviews, at which time their wages could rise by as much as 4-5 percent. Nor did HealthTech set a maximum wage for temps. The wage rates were set either by the HealthTech manager placing the order or the agency's on-site manager, with a contractually agreed mark-up rate charged by the agency. The HealthTech temps were most likely to report fair pay and benefits (see Table A3).

The evidence on career progression at HealthTech is mixed. Our interviews suggested a high conversion rate to permanent employee status. Managers at HealthTech, for instance, reported that anywhere from 33 to 70 percent of perms used to be temps, depending on the department. Over one quarter of the HealthTech temps we surveyed had landed a permanent job by the time of the survey, although the job may not have been with Health Tech. At the same time, however, the temps we surveyed at HealthTech, in particular those with a high school degree or less, were the least likely to agree that they had received chances to move into higher-level positions. This apparent discrepancy may be a result of a relatively high conversion rate, which was highest for temps with the most education. Those who were still temps at the time of the survey were more likely to report fewer advancement opportunities.

HealthTech managers reported that temps wanting a permanent job left within 3-6 months if they had not found one at the company, and those seeking to be long-term temps were the most successful temps (in their eyes). The latter observation seemed to apply primarily to clerical and administrative temps, who have substantially more opportunities for career growth. While more the exception than the rule, some of the more advanced administrative assistants had developed this into a career job. They had years of experience temping at HealthTech, were highly sought after for fill-in jobs throughout the company (particularly when senior executives' assistants were absent), and repeatedly turned down permanent job offers. Their high level of performance guaranteed them ongoing employment and greater variety, as they moved among departments, building extensive personal networks within the firm.

In many ways, the rates of wage and career mobility at We Deliver were similar to those at HealthTech, with one major difference: while 28 percent of those surveyed at We Deliver reported getting permanent jobs, none were at We Deliver. This finding was not unexpected because there were few permanent jobs at the facility. Temps at We Deliver appeared to have extensive skill development opportunities, acquired relatively marketable skills, and frequently list We Deliver's widely-known name as their employer when applying for jobs. An overwhelming majority of those accepting permanent jobs reported that they were obtained because of their temporary work assignments (83 percent; see Table A3).

To compensate for the lack of permanent job opportunities on site, We Deliver's temporary agency offered "career pathing." Career pathing created an internal labor market by offering temporary employees a sense of career mobility within the call center. In We Deliver, the career ladder ran from Associate to Coach to Supervisor. In addition to the career ladder, the temporary agency provided a formal set of periodic performance reviews (at 30/60/90 days, and then 6-month intervals). The performance reviews were linked to opportunities for wage increases and/or promotions to higher levels. The temporary agency created this development plan primarily as a means of addressing clients' concerns with the high level of turnover often found in call centers, which may run 60-70 percent or more annually. (At We Deliver, the voluntary turnover rate averaged between 1.5 and 1.8 percent per week). Although career pathing is more commonly used in call centers with high-skilled temps, a senior manager of the temporary agency indicated that as much as 25 percent of the lower-wage call centers it manages had adopted career pathing. Despite the career pathing, responses about career opportunities to our survey by We Deliver temps were no different than those at the other two sites. This may be because the actual amount of mobility has been fairly limited: out of 260 temporary positions at the site, only nine were supervisors and 15 to 20 were coaches.

We Deliver also provided opportunities for wage progression. Temps started at \$8.25/hour, and they were eligible for raises of 20-50 cents at 6 months, then every 12 months thereafter, with no maximum wage. Temps could also receive up to a \$1/hour raise with the recommendation of their supervisor. However, a recent wage rate study of the local labor market by the agency found that their

wages lagged behind similar jobs elsewhere. The temps at We Deliver were keenly aware that neither their wages nor their benefit packages were comparable to those of permanent We Deliver employees.

Starting wages at Office Supplies were by far the lowest of the three sites (\$5.50-5.75 per hour depending on shift). Wage growth was also on a smaller scale: temps could receive 25-50 cent increases at performance reviews every three months, but wages were capped at \$6.75-7.00 per hour. Temps typically reached the wage cap in 6 months. Most notably, temps with a high school degree or less reported significantly more satisfaction with opportunities to increase pay and benefits. Wage mobility also occurred for a relatively large minority of temps coming from welfare-to-work programs simply because they obtained a position temping with Office Supplies.

In addition to finding some wage growth at Office Supplies for less-educated temps, we also found that they had more opportunities for upward mobility across temp assignments within the company. Temps with less education were more likely to say they had chances to move to higher-level positions. The primary route of advancement for more-educated temps was landing a permanent job at Office Supplies. According to one manager, about 60% of the firm's current permanent workforce used to be temps. He estimated that each year about 20% of temps became permanent employees. The actual percent may have been lower: only 16 percent of the temps we surveyed reported moving into a permanent job, and only a small fraction of those jobs came through their temporary assignments (see Table A3).

Explaining Variations in Skill, Wage, and Career Growth

As our cases illustrate, there is no single reason why temps experience skill, wage, and/or career growth. Rather, the explanations lie in the tangled nexus of the objectives and needs that all three actors bring to the employment relationship. To some extent, the variations can be attributed to the temp's employer (i.e., the client), and to a lesser extent, the temporary agency, and the temp him- or herself.

All three firms used temps as some part of a core-periphery staffing strategy, but there were variations in approach. Office Supplies, for instance, was reluctant to invest in the costs of developing the skills of a workforce in a highly cyclical business. Instead, they relied on a good working environment

compared to other firms in the area and the possibility of a permanent job to attract temps and to keep them coming back. Wage growth was limited to keeping people with lower wages and less education employed during the short period of time for which they were needed. At HealthTech the motivations for using temps varied across the firm. In many cases, temps were used to screen potential candidates for non-temp positions. Through temping, HealthTech was able to provide people with relevant HealthTech experience before they were hired and only then provide them with formal training. Where temps were used for short-term work, little development or wage growth occurred. Only in a few cases involving mostly long-term clerical temps did HealthTech provide wage and career growth to retain them.

We Deliver, meanwhile, used temps as a semi-permanent workforce to handle a variable workload. Skill development was provided both as a retention tool and to develop supervisors for the temps. The development opportunities gave temps a sense of upward mobility that is better than what most temps experience, but short of what similar permanent employees experience. Wage progression was also used to retain the workforce, but only begrudgingly. As the senior We Deliver site manager put it, “Wage progression is not an outcome I desire, but a necessary one to keep employees from turning over.” However, We Deliver’s management also recognized that offering skill and wage mobility could be a double-edged sword. We Deliver walks the fine line between retaining temps who want permanent work through good jobs and skill/wage growth on the one hand, and frustrating them by not offering permanent jobs. With the skills temps gained at We Deliver, many easily found work elsewhere.

Another source of variation in temps’ labor market outcomes is the type of work (job characteristics) they perform. This was clearest in the case of We Deliver. The senior manager at the facility believed that wage progression and career growth were effective and economical as long as the work was relatively low-skilled, such as the COD processing that used to be performed at the site. But, as the new tasks required more highly skilled employees, he was concerned about the cost of providing them with acceptable skills and wages, especially for skills and experience useful elsewhere.

According to our survey, temps in industrial jobs, like those at Office Supplies, typically were the least likely to be offered formal training by the agency. Indeed, higher percentages of temps were offered

training at HealthTech and We Deliver, largely because their agencies' training was geared to office and technical skills. Instead, employees in industrial jobs, whether temporary or permanent, have long learned skills on the job, either informally or formally through apprenticeships.

Another aspect of the client's organization – the presence of firm internal labor markets – was especially important for temps' employment outcomes. At We Deliver, an internal ladder offered temps not only skill mobility and a sense of advancement, but also wage growth and, ultimately, opportunities for permanent jobs elsewhere. In contrast, no internal job ladders were available for temps at Office Supplies. At HealthTech, job ladders existed for only a small group of long-term temps, with the rest having no chance for advancement unless they were able to obtain permanent jobs relatively quickly. Teamwork, while often regarded as a form of work organization that benefits employees (Mohrman, Cohen and Mohrman, 1995), appeared to be less important in explaining variation across the sites. Temps worked in teams at all three sites, but to varying degrees: temps at Office Supplies were almost always in teams, while teamwork was very informal at We Deliver. The only exception may have been at Office Supplies, where job rotation across team positions to alleviate stress and boredom sometimes offered informal on-the-job skill development.

The fourth source of variation in mobility in our three cases arose from the local labor market conditions. At time of our data collection (2000-2001), U.S. unemployment rates were the lowest in decades, and all three cases had relatively tight labor markets. Yet, their labor markets differed in important ways. Office Supplies, for example, was located in a rural area in which there were few good jobs with large employers. As a result, temps were willing to travel up to 60 miles to take temp jobs at Office Supplies and to work for low wages. As one temp said, "It's better than no job at all." HealthTech, on the other hand, was located near a major city with unemployment under 4 percent, and while the temp agency recruited temps from a 30-50 mile radius, the typical commute was only 10 miles. HealthTech was successful in attracting and retaining temporary workers by paying above-market wages, providing a good working environment, having a compelling mission, and an excellent reputation as a family-friendly employer. Skill development and advancement, by contrast, were not used as drawing cards. We

Deliver's labor market was similar to HealthTech's in terms of size and the level of unemployment. The most notable difference was its location on the outskirts of the city which made it attractive to workers from the surrounding, impoverished rural areas. We Deliver's greatest challenge was keeping wages competitive with the labor market. As wages began to lag, its temp agency reported having to recruit in new ways, for example, posting job ads at local post offices, churches, and even fast food restaurants. In addition, turnover and absenteeism had risen slightly between 1999 and 2001. We Deliver's career development opportunities appeared to be a strategy to compensate for below-market starting wages.

Finally, some of the differences we observed may have resulted from the degree of managerial discretion about temps and their work. HealthTech stood out in this regard due its decentralized use of temporary employees. Individual managers at HealthTech decided how and when to use temps, starting wages and raises, and growth opportunities, including whether to hire temps permanently for open positions. Because the agency and We Deliver's management negotiated wage rates and career paths, pay and career mobility decisions were relatively standardized and administered by the agency. Initial skill development received by the temps had also been standardized. In theory, Office Supplies' management of temps was also highly centralized, but it was clear that individual supervisors and managers had much room for maneuvering "under the radar" and playing favorites in growth opportunities.

Comparing Permanent and Temporary Workers

The Office Supplies and HealthTech cases allowed us to examine the temporary and permanent employees side by side doing similar work. In this final case study section, we take a brief look at their relative levels of performance, the social relations between the two sets of workers, and how those relations were influenced by differences in opportunities for wage and career mobility at the two sites.

Broshack and Davis-Blake (1999) have observed that there are few studies on the relationship between permanent and temporary employees, and that these have focused on attitudes to the detriment of research on behaviors (e.g., Van Dyne & Ang, 1998; Geary, 1992; Feldman, Doeringhaus, & Turnley, 1994; Rogers, 1995). Their research on temporary and permanent employees at two U.S. locations of a

multinational financial services firm found that, contrary to their hypotheses, “temporary workers were more productive than regular workers and continued this pattern even after their conversion to permanent status” (p. 16). However, temporary workers reported engaging in fewer extra-role behaviors than regular employees. They attributed these results to three factors: 1) temporary work acts as an effective mechanism for matching workers to jobs; 2) temporary workers are motivated to exert greater effort due to their desire to demonstrate their competence and qualifications; and 3) workers gain valuable skills and knowledge during temporary work that serve them when converting to permanent status.

Perceived Differences in Performance

Although we were unable to quantify differences in performance between temps and permanent employees in the sites we studied, we were able to obtain the perspectives of these two groups of employees and their managers on their relative performance. At Office Supplies, managers reported no clear pattern in the performance of temps versus perms. However, perms strongly believed that temps did not work as hard, due to differences in pay levels. On the other hand, temps felt that perms “ride on the backs of temps” and that temps got blamed unjustly for mistakes or problems with production.

The views of managers at HealthTech, meanwhile, varied greatly from one department to another. In several cases, managers felt that temps were less productive and reliable, and showed less pride in their work. Other managers, however, reported that temps were often overqualified for their positions and outperformed perms doing similar work. Yet others qualified their response, indicating that temps willing to work long term were most productive. On average, they tended to agree that temps were more productive once they converted to permanent status. Our focus groups with temporary and permanent employees at HealthTech, however, surfaced no strong opinions on their relative performance levels.

Differences in Social Relations

Temporary and permanent workers at HealthTech clearly had much better relations than at Office Supplies. HealthTech temps were more likely to report being treated fairly and with respect by managers. They indicated that they were seen as being part of the same team and their suggestions were equally

valued. They reported closer working relationships with their co-workers and were more likely to indicate getting along with each other. They were also more likely to say they were called upon for consultation by their co-workers, though they were less likely to seek information from their co-workers.

The greater tension between permanent and temporary workers at Office Supplies was partly a reflection of the differences in labor market outcomes for low-skilled temps at the two sites. Temps at Office Supplies had fewer opportunities to obtain a permanent job with the company than at HealthTech. The size of the core workforce at Office Supplies was stable, while HealthTech was growing relatively rapidly and frequently used temps as a means of screening employees for new permanent positions. In essence, temps at Office Supplies were competing with permanent employees for a fixed pool of jobs, while HealthTech perms did not feel their jobs were threatened by temps. The short-term nature of many of the temp jobs at Office Supplies added a further sense of urgency to obtaining a permanent job because temps in those jobs could not see beyond the next day or week.

Limitations of the Study and Conclusions

Our study reveals important new insights about the skills of the temporary workforce and the relationship between temps' skills, employment objectives, work experiences and labor market outcomes. We have explored these relationships via multiple methodologies: archival payroll data, survey, and case studies. Before summarizing our key findings, it is important to note the limitations of our study.

With the exception of two of our cases, we do not have a control group of low-skilled permanent employees to compare directly with low-skilled temps' experiences and labor market outcomes. In addition, while our quantitative analyses are based on data from a very large, national sample of temporary employees, the sample is drawn from only a small number of temporary agencies. Although we believe the temporary agencies we studied to be typical of most agencies that employ low-skilled workers, we must be cautious in generalizing our results to all agencies. Furthermore, our survey results are only applicable to understanding the experiences of individuals who spent a significant time (two weeks or more) working as temps. This group is far more likely to experience wage growth or receive

training than the approximately one-third of individuals who signed on with an agency but then temped for less than two weeks. Since those who had positive outcomes were more likely to return the questionnaire, this introduced additional positive bias in our survey results.

These limitations aside, we find that more workers than previously recognized appear to sign on as temps, but for about one third of this workforce, particularly those in the lowest-paying jobs, working with a temporary agency is a very brief experience, totaling less than 80 hours. We also find that temps may be better educated than previously recognized – over 80% of all office temps and nearly half of industrial temps have some post-high school education. And while the most rapidly growing segment of temporary work has been highly skilled and relatively high-paying technical and professional occupations, nearly half of those earning \$8/hour or less in our sample have some college education.

In addition, the study suggests significant differences in why lower-skilled workers become temps and what happens to them when they do. Less-educated and lower-paid workers are far more likely to report signing on with a temporary agency to get the first permanent job they can find, and are less likely to want good temp assignments on an ongoing basis. They also move more rapidly into permanent jobs, but less often with the help of the agency than their higher-skilled peers.

We also find that the free training many temporary agencies now offer is associated with a growth in wages, but that such training is unlikely to be a major source of skill development for lower-skilled individuals anytime soon. Less than half of temps in our survey reported being offered the free training that the agencies in theory provided, and just over half of those offered (or 23% of the whole sample) took any training during the previous 12 months. The typical temp received only 2.7 hours of training in that period, a miniscule amount compared with the 24 hours of employer-provided training that the typical permanent employee receives in the United States (Van Buren and Erksine, 2002).

Lower-educated temps, on average, were less likely to be offered training and to report formal training as a priority, but were more likely to take the training if offered. This suggests that temporary agencies could do significantly more to raise the awareness of free training and make it easier for individuals to participate by modularizing their courses and making them available online, innovations

that are already underway in some agencies. Even if these innovations take hold, however, they are likely to be targeted at office and professional workers, who have greater computer and Internet access and for whom these CBT courses are most relevant. In the near term, the most common source of skill enhancement for most temps — as is true for most permanent employees — likely will continue to be informal learning from co-workers or experience garnered through moving from one job to the next.

Our case studies suggest a potential for temporary agencies to play a larger role in workforce development in the United States. But it is the preferences of each client, not the temp agency, that play the most critical role in determining the opportunities temp work offers to lower-skilled workers. At We Deliver, the agency worked closely with the firm to provide formal training and career development, with the result that lower-educated temps were more likely to receive formal training, and the training was structured, taken on company time, and supported with mentoring. There is a dark side to this case, however, as jobs which previously offered full benefits and greater security were shifted into ongoing, temporary positions with no prospect for individuals to move into permanent positions at We Deliver. In contrast, at Office Supplies, temporary workers had little opportunity for training, wage growth or career progression while temping, but the agency made it possible for very low-skilled individuals to move from welfare into a work setting where many were then able to find a permanent job.

There is a minority of lower-skilled workers for whom the growing role of temp agencies offers a clear benefit. This is the group for whom temping is preferred employment either because they like the variety of assignments and flexibility that temping offers and/or they are constrained from taking a regular job by family or school-related responsibilities. In addition, the free training offered by many agencies and the on-the-job learning provide development opportunities to lower-skilled workers who otherwise might have more constrained access or no access at all. These opportunities are available both to those who want ongoing work as temps as well as those seeking permanent jobs.

Taken together, these results suggest that the growing role of temp agencies as intermediaries in the economy has been a double-edged sword for low-skilled workers. On the one hand, temp agencies clearly have helped provide job opportunities to millions of unemployed people who otherwise might

have not found jobs without an intervening spell of unemployment. Katz and Krueger's (1999) evidence suggests that the role of temp agencies may have lowered the natural rate of unemployment in the 1990s by improving the match between jobs and job seekers. On the other hand, the better temp agencies get at playing the intermediary role, the easier it is for companies to delay or avoid altogether hiring permanent workers, shifting jobs that used to be part of their core workforce into temporary or contract positions. More research is needed to quantify the net social welfare impact of these effects.

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APPENDIX: Case Study Methods and Descriptive Statistics

In each case, we conducted:

1. Telephone and face-to-face interviews with the temporary agency representative(s) with overall responsibility for managing the client's account to determine how the agency met the needs of both the client and the temps, and its motivations for entering the relationship with the client.
2. A face-to-face interview with the manager responsible for decisions around use of temporary employees to understand the client's staffing strategy.
3. Face-to-face interviews with one or more managers at the client who regularly oversee and work with temporary employees to obtain more detail on the employment setting, the design and structure of temporary work, and the skill, wage, and career opportunities of the temporary employees.
4. Focus-group interviews with 6-12 temps employed by the client to get their perspectives on the work and how that work meets their needs and expectations.
5. In cases where temporary employees worked side-by-side with permanent employees doing the same work, we also conducted focus-group interviews with 6-12 permanent employees to understand their views of working with temps and compare their skill, wage, and career opportunities.

Table A: Regression Variable Descriptions and Summary Statistics

Variable name in table	Variable description	Mean (Std. Dev.)	Minimum- Maximum
Offered Training	Respondents who were offered the opportunity to take training	0.4 (.49)	0-1
Training Participation	Respondents who took training, conditional on being offered	0.5 (.50)	0-1
Hours of Training	Number of training hours respondent received in past year	21.0 (37.02)	1-400
Permanent Job	Respondent obtained a permanent job	0.3 (.46)	0-1
Fast Wage Growth	Respondent experienced fast wage growth in year of max hours 1999 or 2000	0.2 (.42)	0-1
Low Education	Respondent has some high school education or a high school diploma	0.2 (.43)	0-1
Computer Experience	Respondent's level of prior computer experience (ranging from no experience to advanced experience)	3.3 (1.25)	1-5
Age	Age of respondent	37.9 (13.14)	17-82
Female	Female respondents	0.6 (.50)	0-1
Also a Student	Respondent was also a student while at agency	0.1 (.35)	0-1
Long-term Temporary	Reason for joining temp agency was to find long-term temporary work	0.3 (.44)	0-1
Short-term Permanent	Reason for joining temp agency was to find short-term permanent work	0.2 (.42)	0-1
Long-term Permanent	Reason for joining temp agency was to find long-term permanent work	0.4 (.49)	0-1
Fast Wage Progressor Oversample	Respondent is part of the oversample of fast wage progressors	0.2 (.41)	0-1
Wage at time of survey	Respondent makes \$8/hour or less versus more than \$8/hour	0.3 (.46)	0-1
Occupation (Clerical versus others)	Respondent's occupation is in the clerical field	0.4 (.50)	0-1
Occupation (Industrial versus others)	Respondent's occupation is in the industrial field	0.3 (.44)	0-1
Training Taken	Respondents who took training (no missing values)	0.2 (.42)	0-1
Working another job while at Agency	Respondent was in another paid job while at agency	0.2 (.36)	0-1
Contribution of temp income to family income	Amount of overall family income coming from temp work (ranging from very little to nearly all)	3.4 (1.40)	1-5
% Time working in 3 years prior to joining Agency	% Time respondent was in paid work in the 3 years prior to joining the agency	77.1 (29.21)	0-100
Laid off in 3 years prior to joining Agency	Respondent was laid off in the 3 years prior to joining the agency	0.3 (.47)	0-1
Unemployed immediately prior to joining Agency	Respondent was unemployed immediately prior to joining agency	0.4 (.49)	0-1
Own a Computer	Respondent owns a computer	0.7 (.47)	0-1
Use the Internet	Respondent uses the Internet	0.7 (.45)	0-1

Case Study Statistical Tables

Table A1: Descriptive Information on Case Study Survey Respondents

Case Study Site:	Office Supplies	HealthTech	We Deliver
Number of Temps Employed	450 – 800	140 - 230	220 - 260
Number of Valid Survey Responses	111	93	138
Survey Response Rate (%)	14.7	40.6	50.0
% Female	72.5	89.3	88.9
Mean Age (Years)	30.6	40.5	30.8
Mean # of Dependents	1.40	1.01	1.19
% Student	29.4	21.3	19.1
% with High School or Less Education	37.3	15.2	22.8
% with College Degree or Higher	10.9	28.3	14.7
% Owning a Computer	48.2	82.8	61.0
% Using the Internet	45.0	87.1	72.1
% Not in Paid Work, But Looking	65.1	19.8	29.4
<i>Objectives:</i>			
• % Short-term Temps	11.1	28.1	2.9
• % Long-term Temps	23.2	36.0	8.8
• % Short-term Perms	34.3	5.6	35.8
• % Selective Perms	31.5	30.3	52.6

Table A2: Wage, Skill and Career Growth Preferences

Case Study Site:	Office Supplies	HealthTech	We Deliver
Individual Preferences ^a			
• Competitive pay.	1.35	1.12	1.72
• Good benefits.	0.68	0.29	0.92
• Opportunity to obtain a permanent job.	0.66	0.44	0.86
• Long-term assignments.	0.68	0.32	0.33
• Skill development.	0.35	0.32	0.31
• Rapid advancement.	0.28	0.08	0.28
• Control over when and where I work.	0.05	0.63	0.03

^a Score: 3 = Most Important, 2 = Second, 1 = Third Most Important, 0 = Not listed.

Table A3: Wage, Skill and Career Growth Outcomes

Case Study Site:	Office Supplies	HealthTech	We Deliver
Training			
% Offered Training	36.4	73.9	77.4
% Taking Training (of Those Offered)	66.7	60.9	93.4
Median Hours of Training (of Those Taking)	15.0	5.0	27.5
Skills Obtained^a	3.43	3.77	3.79
• Skills that are very marketable.	3.41	3.71	3.72
• Skills that are very specific to the organization(s) where I worked.	3.45	3.82	3.85
Development / Job Matching Scale^a	3.69	3.78	3.93
• Opportunity to enhance my skills through training.	3.36	3.14	3.72
• Opportunity to learn from other people at the workplace.	3.95	4.10	4.07
• Opportunity to learn new things on the job.	4.00	3.99	4.04
• Work that is closely matched to my skills and abilities.	3.45	3.78	3.84
• Interesting work.	3.67	3.91	3.98
Pay Equity / Advancement Scale^a	2.76	2.98	2.69
• Pay and benefits that are fair relative to other temporary or contract workers doing similar work.	2.94	3.47	2.97
• Pay and benefits that are fair relative to the work that I have performed.	2.82	3.37	2.74
• Pay and benefits that are fair compared to permanent workers doing similar jobs.	2.18	2.68	2.17
• Chance to move into a higher level position.	2.84	2.46	2.72
• Chance to progress into better assignments.	3.00	2.86	2.83
• Not Scaled: Chance to increase my pay and benefits.	2.66	2.73	2.85
Permanent Job			
• % accepting permanent job and no longer temping (at time of survey; location of job not known)	15.7	26.9	27.9
• Of above, % obtaining permanent job through temp assignments (at time of survey)	7.5	42.3	82.6
^a Scale: 1 = Not At All, 3 = Some Extent, 5 = Very Great Extent.			