

WORKING PAPER SERIES

Boundaryless Organizations and Boundaryless Careers: A New Market for High-Skilled Temporary Work

Janet H. Marler
George T. Milkovich
Melissa W. Barringer

Working Paper 98-01



Boundaryless Organizations and Boundaryless Careers: A New Market for High-Skilled Temporary Work

Janet H. Marler

School of Industrial and Labor Relations
Center for Advanced Human Resource Studies
393 Ives Hall
Cornell University
Ithaca, NY 14853-3901
jhm15@cornell.edu
607 272-4510
607 272-4501 (fax)

George T. Milkovich

School of Industrial and Labor Relations
Center for Advanced Human Resource Studies
393 Ives Hall
Cornell University
Ithaca, NY 14853-3901
gtm1@cornell.edu
607 255-4470
607 255-1836 (fax)

Melissa W. Barringer

Isenberg School of Management
University of Massachusetts
Amherst, MA 01003
mwb@mgmt.umass.edu
413 545-5628
413 545-3858 (fax)

Working Paper 98-01

<http://www.ilr.cornell.edu/cahrs>

This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research available to others interested in preliminary form to encourage discussion and suggestions.

ABSTRACT

A typology of four different groups of temporary workers (transitional, traditional, career, boundaryless) is derived from economic, strategic, and human resource theories. Based on a survey of 276 temporary workers, we find support for distinguishing between high-skilled boundaryless temporaries and the three other types using multinomial logistic analysis.

Keywords: Contingent work; Contract workers; High-skilled temporaries.

Temporary services employment has grown at an annual rate of over 11 percent since 1972, far exceeding growth of overall employment which grew at a rate of 2 percent (Segal & Sullivan, 1997). Explanations for this growth include the usual factors, increased competitive pressures on labor costs, volatility in product markets, decline of long term permanent jobs, downsizing and restructuring of organizations. A review of the theoretical and empirical evidence, however, reveals a more complex and interesting story, particularly as it applies to the appearance and growth of high skill temporary employees.

A common view in the literature is that temporary workers are locked into a labor market underclass, with low wages, no benefits, negligible job security, little training and no possibility of advancement (Segal & Sullivan, 1997). The growth of the temporary help service (THS) industry, therefore, is concerning because it reflects an increasing labor market segmentation. Another view is that the temporary help service (THS) industry is improving labor market efficiency, buffering a greater variety of workers from the possibility of unemployment and simultaneously facilitating employment (Lenz, 1996). Both views may be correct.

The evidence suggests that growth in temporary help services is occurring in two areas, low skill blue and high skill white collar work (Dieshenhouse, 1993; Golden & Appelbaum, 1992; Segal, 1996; Segal & Sullivan, 1997). The proportion of white collar temporary jobs has grown, from 20% of the THS industry's payroll in 1981 to 30% in 1991 (Dieshenhouse, 1993). Temporary workers are a more heterogeneous group than in the past.

Most studies to date have investigated the reasons for and prevalence of lower skilled work (Davis-Blake & Uzzi, 1993; Golden & Appelbaum, 1992; Houseman, 1997). Few studies have examined the nature and growth of high skilled temporary work. Recent studies have described temporary employee characteristics and attitudes (Hippel, Mangum, Greenberger, Heneman, & Skoglund, 1997; Pearce, 1993; Segal & Sullivan, 1997). Segal and Sullivan (1997) analyze two national data sets for trends in the temporary help services (THS) industry and compare blue, pink and white collar¹ temporary workers. They report these groups have significantly different wages. What these studies don't make clear, however, is why skilled workers forsake long term employment and job security for temporary assignments. This paper addresses this question. It contributes to the literature on temporary work by developing a

¹ Segal and Sullivan define pink collar jobs as those that fall into the CPS occupation codes for administrative support. Blue collar jobs include those in farming, forestry, fishing, precision production, craft and repair, machine operators, assemblers, transportation and material movers, handlers, equipment cleaners, helpers and laborers. White collar workers comprised those occupations coded as executive administrative and managerial and professionals.

theoretical explanation for the appearance and growth of high skilled contract workers and provides empirical evidence concerning the characteristics of these workers compared to low skilled temporary workers.

We suggest that the increased use of high skilled temporary employees can be explained by three factors: 1) organization's competitive strategies that are simultaneously emphasizing cost control and specialization through externalizing work (Appelbaum & Batt, 1994; Pfeffer & Baron, 1988), 2) temporary help agencies that facilitate this strategy by lowering the cost of specialized temporary labor, and 3) an increasing acceptance of boundaryless careers (Arthur & Rousseau, 1996). We develop hypotheses regarding higher skilled temporary workers around a comparison of high and lower skilled temporary workers that we derive from human capital theory (Becker, 1992), a resource-based typology (Snell & Lepak, forthcoming), the concept of boundaryless careers (Arthur & Rousseau, 1996; Baker & Aldrich, 1996) and labor supply theory (Killingsworth, 1983). Our findings are based on a sample of 276 individual temporary employee responses.

The paper is divided into three sections. The first section develops theoretical arguments for several hypotheses. Section two outlines the methodology and data. Section three contains the results of the empirical analyses, a discussion, and conclusion.

THEORY AND LITERATURE REVIEW

Several theories from the economic, strategic, and human resource literature shed light on why individuals, particularly high skilled workers, might prefer temporary work, and why others might not.

Human Capital Theory

According to human capital theory (Becker, 1992; Mincer, 1974) individuals who invest in their own skill development by, for example, attending college or participating in a lengthy apprenticeship, expect to earn higher salaries to justify the out-of pocket costs of education, the foregone earnings, and effort required for their investment. The investment is made in expectation of higher earnings over a substantial period of time. If an individual expects, however, that their earnings differential will be low or that the period over which this will be earned is short (for example, a woman who expects to stay home to raise a family, or elderly workers in dead end jobs) the likelihood that they will make a large investment in their human capital declines.

Accordingly, it is unlikely therefore, that individuals will invest in skill development in order to work at temporary jobs. The uncertainty of such jobs jeopardizes the payback for any

skill investment. Based on this theory, one would expect workers who supply labor to temporary help agencies to have low skills. Generally, the empirical evidence supports this prediction. Data from the 1995 CPS indicate that the majority of these workers are women (53%), younger than traditional workers, and less educated (Cohany, 1996).

Human capital theory also postulates the conditions under which organizations choose to invest in developing employee skills (Becker, 1992). Few employers will invest in general skills training (those skills that are standardized and can be easily duplicated in the market) and if they do, only if the employee bears the costs through lower wages (See Bishop, 1994 for a review). If employees do not bear the investment cost they could leave for higher wages elsewhere, and the original employer would be unable to recoup its training costs.

Organization specific training, in contrast, involves developing skills that are valuable only to the organization. Unlike general training, the employee shares both the benefits (e.g. higher wages after training) and costs (e.g. lower wages during training) of training. Employees who are specifically trained will therefore prefer to stay within a firm where these skills earn higher wages. Temporaries without firm specific skills are expected to be less productive, and typically do not stay long enough to earn higher wage rates for sharing the cost of specific training. Consequently, human capital theory implies that few workers should be interested in working in temporary positions. Most will seek positions where specific skills can be learned, used, and appropriately valued.

The data from the 1995 CPS seem to confirm these predictions. They indicate that over 40% of temporary workers were looking for permanent work arrangements (Cohany, 1996) and that most temporary work assignments require low skills, with approximately 75% of temporary employees performing blue and pink collar work (Segal & Sullivan, 1997).

What accounts, then, for the remaining 25% of temporary workers that perform managerial, professional, and technical work, when, theoretically temporary work arrangements are too short to accrue returns on specific training investments and too risky to inspire substantial investments in general skills? We suggest two answers. The first relates to organizations' competitive strategy and the second, to the growth of intermediary institutions which reduce the risks of temporary work for both the organization and the contract employee.

Competitive Strategy and THS Agencies

Snell & Lepak (forthcoming) applying resource-based theory to employee staffing decisions (Barney, 1997; Wright, McMahan, & McWilliams, 1994), argue that organizations enhance their value by deciding which human resource capabilities remain within the firm

(specific skills) and which are acquired in the market (general skills). The knowledge, skills and abilities that contribute to a firm's unique capabilities should be developed within the firm and those that don't should be acquired on demand in the external labor market.

Snell & Lepak (forthcoming) suggest human resource capabilities can be characterized by two dimensions: contribution to firm value and uniqueness of human capital. Using this framework, they define four staffing options: 1) develop internally, 2) acquire externally and keep, 3) out-source, and 4) partner. The two staffing options that are high on the value dimension (develop internally and acquire and keep) represent human resource capabilities that should reside within the firm. These capabilities should be developed by human resource practices emphasizing what Tsui, Pearce, Porter, and Tripoli (1997) refer to as a mutual investment where both employer and employee make open-ended and long term investments in each other.

Capabilities categorized as low value, which Snell & Lepak label "out-source" and "partner" employment modes, do not justify the same level of commitment and are best acquired in an external market. This logic is also consistent with the transaction cost model (Williamson, 1990; 1981). Transactions that are neither unique, nor asset specific, can easily be imitated and supplied in the market. With many market alternatives, a more costly bureaucratic internal labor market is not justified. By the same token, capabilities that are too specialized are needed too infrequently to justify incurring full-time employment costs which include, in addition to compensation, overhead associated with recruiting, compensation and benefit administration, training, performance evaluation, and so on. When economies of scale are not achieved, these skills are better acquired in the external labor market on as needed basis.

Under this regime, organizations "buy" more skills in the external labor market by externalizing certain employment relationships (Pfeffer & Barron, 1988; Abraham & Taylor, 1996). Increased use of temporary help services are examples of choosing to "out-source" or "partner". Out-sourcing represents acquiring low value, low unique skills, akin to hiring temporary office staff. Partnering involves engaging someone with unique skills but for a short period of time, such as a temporary software engineer. This increased demand for external sources of skill creates economies of scale for organizations in the THS industry, lowering their costs (Segal & Sullivan, 1997). A larger THS industry with more client firms can spread recruiting and training costs over several temporary work assignments, reducing their cost per

placement. As the scale effects reduce costs, lower prices further increases the attractiveness of externalizing work.

THS industry growth provides the promise of work continuity that is necessary to induce workers with significant human capital to consider temporary assignments. With increasing demand for temporary workers, the risks associated with temporary job insecurity diminish. Individuals with specialized skills can be more assured of a string of opportunities which mitigates a major disadvantage that has served to inhibit highly skilled individuals from considering temporary work. Fortune Magazine recently described the THS agency role: "The growth and increasing sophistication of the temporary- employment industry is creating a national trading floor for talent...Just as an exchange floor provides a fluid, efficient forum for clearing the market for stocks, gold and pork bellies, the temp industry is becoming a clearinghouse for buyers and sellers of skills. The economic consequences of the phenomenon is a more flexible and efficient job market. It is also creating opportunities for workers and employees (Lenz, 1996: p599)."

The temporary help industry has grown enormously. Between 1975 and 1987 the number of THS companies in the United States grew from 3,133 to 10,611 (Carnoy, Castells, & Benner, 1997) and twenty percent of new jobs created between 1991 and 1993 in the United States were temporary jobs (Hippel et al., 1997). Without the presence of temporary help agencies, the supply of individual workers for temporary assignments would be predictably of lower general skills. In contrast, an increase in the quantity of temporary help agencies increases the liquidity of the temporary help labor market, making it more attractive to high skill workers because there are many more opportunities.

The Boundaryless Career

Boundaryless, virtual, or networked organizations reflect organizational strategies to externalize work (Defillippi & Arthur, 1996; Pfeffer & Baron, 1988). Boundaryless organizations, however, may have an employee counterpart, boundaryless careers (Baker & Aldrich, 1996). Rather than careers that involve a sequence of jobs within one internal labor market, some individuals careers are becoming boundaryless, reflecting career paths that go beyond the boundaries of single employment settings (Defillippi & Arthur, 1996). The notion of the boundaryless career, however, still elicits cool receptions from loyal single-firm careerists (See Hecksher, 1995) and is contrary to the expectations upon which mutual investment employee-organizational relationship is based (Tsui et al., 1997).

Counter to this negative image, Baker and Aldrich (1996) enrich the concept of boundaryless careers by defining it in three dimensional terms: 1) number of employers, 2) extent of knowledge accumulation, and 3) the role of personal identity. The extent of knowledge accumulation represents the degree of market valued skills and knowledge (general skills) that an individual gains through multiple work experiences. This dimension corresponds to human capital theory where skill development (general or firm specific) evolves from work experience and training, both of which influence opportunities for further development and wage growth. Knowledge accumulation suggests certain jobs across multiple firms will facilitate the accumulation of skills that are useful and transferable, thereby increasing an individual's marketability and earnings potential. The accumulation of skills may be particularly favorable for individuals trained in certain recognized and codified occupations, such as accountants, lawyers, architects, where general skills can be augmented with multiple firm specific experiences (Tolbert, 1996).

The role of personal identity is also important as it recognizes how a career can be identity enhancing, particularly in work settings that facilitate working toward challenging but attainable goals and which build on a sense of who they are (Baker & Aldrich, 1996). Individuals with boundaryless careers view multiple employer experiences in a positive light because they support skill development, enhance personal satisfaction, and shifts career control to the employee.

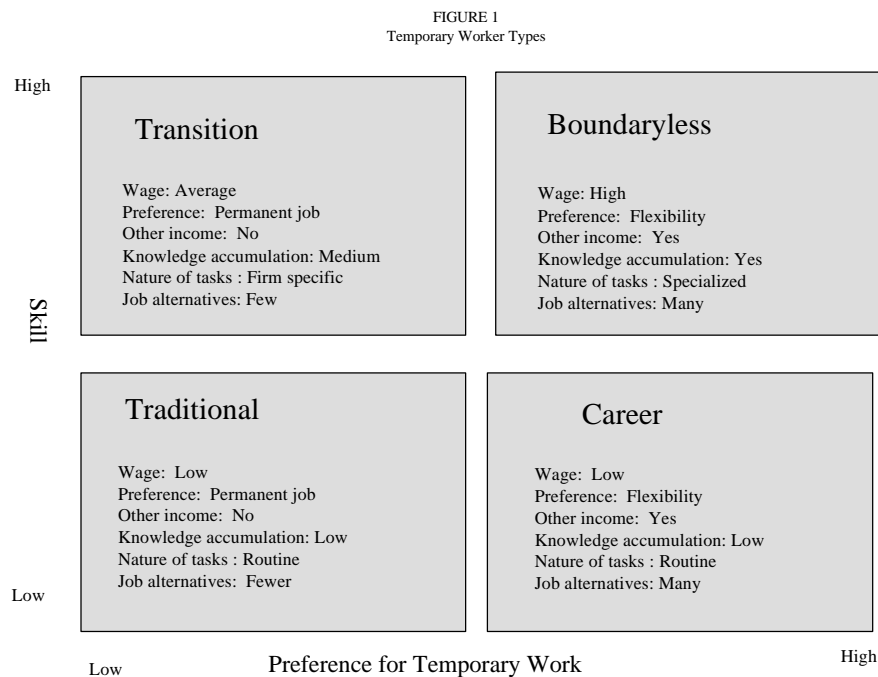
Temporary Work and Boundaryless Careers

Temporaries have experienced multiple employers but this does not mean all have boundaryless careers. Boundaryless careers involve skill growth across multiple experiences and an identification with the occupation, not employer. Survey evidence suggests that many temporaries do not like temporary work and use it only as a stepping stone to a traditional career (Cohany, 1996; Hippel et al, 1997). There are, however, a minority of workers who seem to like temporary work and who may be at the forefront of individuals embarked on boundaryless careers.

Studies of temporary workers often treat them as homogenous, a group of low skilled, low waged workers (Cohany, 1996; Davis-Blake & Uzzi, 1993; Golden & Appelbaum, 1992; Houseman, 1997) but this is misleading. Recent academic analyses suggest temporary workers may vary substantially from this stereotype. Segal & Sullivan (1997) distinguish temporary workers on the basis of blue, pink and white collar occupations, and Hipple et al. (1997) find temporary worker's reasons for choosing temporary work vary based on their

preference for temporary work. Pearce (1993) found high skilled temporary engineers to be as committed as their permanent counterparts.

Building on Baker & Aldrich's boundaryless career dimensions, we hypothesize that temporary workers fall into four subgroups: traditional, career, transition, and boundaryless, which differ by their preference for temporary work, on their degree of human capital, and the nature of their work. We use the Baker and Aldrich dimensions but instead of identity, we use preference for temporary work, and we replace knowledge accumulation with high and low levels of human capital. We further distinguish these four groups using 3 variables drawn from the economic model of labor supply: wages, preferences, and other income (Lazear, 1995; Killingsworth, 1983). Figure 1 depicts these groups and the differences among them based on these factors.



Boundaryless temporaries are highly skilled workers who prefer temporary work. They identify with their work more than with any particular employer. Their multiple assignments increase their skills and knowledge. They are not looking for a permanent job because they are able to increase their value through accumulating knowledge across employers.

Career temporary workers prefer temporary work too but they have fewer skills. They are as likely as boundaryless temporaries to prefer temporary work over a permanent job because they more interested in non-work pursuits. With lower skills and more routine

assignments than boundaryless temporaries, however, they are less likely to accumulate knowledge or skills.

Traditional temporary workers also have lower skills but do not identify with their work, either as temporaries or by the work they do. They are more likely to prefer a permanent job than boundaryless temporaries. Their skills are general and require limited human capital investments. As a result their wages are low. The nature of their assignments afford them limited opportunity to accumulate greater knowledge or skills. They represent more than the other temporary types the stereotypic temporary worker.

Transitional temporary workers are high skilled but do not identify with temporary work. Their skills are more likely to be firm specific and less transferable between organizations. As a result, they are less likely to have as many temporary assignment opportunities compared to the boundaryless temporary. They are more likely to be looking for a permanent job from which to gain the full value of their human capital investments. Consistent with human capital theory these high skill workers are truly “temporary” temporaries, choosing temporary work involuntarily.

Based on these distinctions shown in Figure 1, we derived the following initial hypotheses:

H1a: *Traditional and career temporary workers perform more routine standardized temporary assignments than boundaryless temporaries.*

H1b: *Traditional and transitional temporaries are more likely to choose temporary work to access a permanent job than boundaryless temporaries.*

H1c: *Transitional temporaries are less likely to have many alternative assignments than boundaryless temporaries.*

H1d: *Boundaryless temporaries hold job assignments which are more likely to increase their knowledge and skills.*

The number of opportunities and wage rates of high skilled temporary workers is likely to increase as more organizations choose to externalize certain unique high skilled tasks. Thus, it is likely that high skill temporary workers who choose to work temporary assignments, voluntarily and not for economic reasons, will do so because they can earn higher wages. Higher wages may also induce workers who prefer a permanent job to work for multiple employers, particularly if they also see the value of multiple assignments and if these assignments yield a higher return on their human capital investments. Further, as job security

appears less assured, individuals may become more focused on the transactional aspects of their relationship (Gibbons, 1997; Robinson, 1996; Rousseau, 1995).

H2: *Boundaryless temporaries are more likely than traditional, career, or transitional temporaries to expect to earn higher wages.*

Temporary work may be very attractive to individuals who value highly nonmarket time. For example, individual preferences, besides compensation, also influence choices about whether and when to work (Blau, Ferber, & Winkler, 1997; Hollenbeck, et al. 1987). Preferences for nonmarket time can be especially high when individuals have family responsibilities (For a review see Blau, Ferber, & Winkler, 1997). By the same token, individuals with many and varied interests may also have high preferences for non-market time. Temporary work assignments offer more freedom to choose when and for how long to work. For someone who is caring for children or ill relatives, is partially retired, or someone with other non-work interests, temporary work offers greater flexibility.

Non-market preferences are indulged at a cost, however, foregone wages. Individuals who have high preferences for nonmarket time are less likely to work, all else equal, but absent other sources of other income, most must work for their well being. A sizable proportion of temporary workers, 27 percent, indicated they preferred temporary work (Cohany, 1996). Workers who prefer temporary work are more likely to also prefer temporary work because they have other sources of income. They can afford their preference for greater flexibility and do not feel the need for the implied job security of a single employer. Alternatively, it is likely that temporary workers who do not like temporary work are working involuntarily for economic reasons. Census data indicate that a greater proportion (10.9%) of temporary workers work part-time involuntarily, for economic reasons, compared to workers who work in traditional single employer arrangements (3.3%), and a majority said they worked temporarily for economic reasons (Cohany, 1996; Polivka, 1996b). We hypothesize that traditional and transition temporaries, both of whom indicated they did not prefer temporary work, are more likely to be working temporary jobs for economic reasons. They are, therefore, likely not to have other sources of income and to be looking for a permanent job. We therefore hypothesize that:

H3a: *Boundaryless temporaries are more likely than traditional or transitional temporaries to choose temporary work voluntarily and not for economic reasons.*

H3b: *Boundaryless workers are more likely to prefer greater flexibility and are also more likely to have other sources of income than transitional or traditional temporaries.*

In summary, we have suggested that organizations pursuing essentially a resource based strategy have contributed to an increased demand for high skilled temporary work. In conjunction with the THS industry which has facilitated this demand, organizations are providing attractive temporary work assignments to higher skilled individuals who might otherwise spurn contract work arrangements. As these strategies create boundaryless or virtual organizations they also encourage boundaryless careers. We suggest that the growth of high skilled temporary workers who prefer temporary work represent an example of the growing acceptance of boundaryless careers. We develop a boundaryless temporary profile as evidence of the growth of boundaryless careers. To distinguish this particular group, we hypothesize the existence of four types of temporaries and compare the boundaryless career type to the three others on the basis of a combined boundaryless career and labor supply model. We test our hypotheses using data collected from individual temporary workers in the following two sections.

METHODS

The Data

Survey data were collected from temporary and contract workers working in temporary work assignments in the Northeast United States. Four temporary help agencies and one employment broker² agreed to distribute surveys (by mail or with pay checks) to all temporary workers currently on their active list. Completed surveys were returned by mail to the researchers. A total of 960 surveys were successfully delivered and 276 were returned for a response rate of 29%³.

Respondents represent a broad cross section of temporary workers and work assignments. They were working in assignments at 95 client organizations representing Fortune1000 companies. They range in age from 16 years old to 74 years (SD 12.03) with an average age of 38 years; half are men (48.7%) and about half are married (46.1%). The

² An employment broker is an agency that makes arrangements with temporary help agencies to provide contract workers to client organizations.

³ This response rate is about average for sample surveys of this population. Miller (1995) sampled one large temporary agency located in the West and had a 17% response rate. Hippel et al (1997) had a 54% response rate with a survey fielded by a large Midwestern agency.

average respondent had a college degree and about 40% indicated they preferred working in temporary assignments.

Dependent Variables -Temporary Type

The dependent variable identifies the temporary worker as one of four possible types discussed earlier (See figure 1). Four worker types are defined: 1) boundaryless (high skill and prefer temporary work), 2) career (low skill and prefer temporary work, 3) transition (high skill and do not prefer temporary work), and 4) traditional (low skill and do not prefer temporary work). The respondents were grouped into four categories based their responses to a question concerning their preference for temporary work and on their skill level which is measured based on educational level and occupational skills.

Preference for temporary work is used as a measure of how much an individual identifies with temporary work. Respondents were asked how much they agreed with the following statement "I have a choice and I prefer temporary/contract work." Response choices were ordered categorically: strongly disagree, disagree, neutral, agree, and strongly agree. The respondents were grouped into two categories based on how strongly they agreed with the statement. Those that indicated agreement and strong agreement, choosing 4 or 5 on a scale of 1 (strongly disagree) to 5 (strongly agree), were treated as preferring temporary work.

Skill level is measured by education and type of occupation⁴. Individuals with an occupation or with college degree are classified as high skilled. Economists studying the effects of human capital investments on wage rates define skill on the basis of education⁵ (Ehrenberg & Smith, 1994). Those who invest in a college education, invested significantly in their human capital by foregoing four years or more of earnings and paying tuition on the expectation of earning substantially higher wages over their life time (Mincer, 1974).

⁴ Measuring skill is challenging because there are many kinds of skills. There is an extensive literature on job analysis and selection which focus precisely on how firms specify and acquire relevant knowledge skills and abilities (See for example, Binning & Barrett, 1989; Guion, 1991). Skills used for the purposes of this study (and by the way it is measured) approximates a measure or signal of cognitive ability (Schmidt, 1993) which is recognized and valued in the labor market with higher wages (Mincer, 1974; Spence, 1973). Including occupation is our attempt to recognize the value of specialized skills and knowledge.

⁵ Level of education clearly distinguishes wage rates (Juhn, Murphy & Pierce, 1993). Those with college education earn higher wages throughout their work life. Skill is also measured in terms of years of work experience and job tenure. We chose not to use these variables because We didn't have adequate measures for these. Economists generally use "expected labor market experience" which equals age less years of education less six years as an estimate. This would not be a valid measure for temporary workers because they are less likely to be continuously in the labor market. The measure would tend to overestimate experience for less skilled workers. Job tenure for temporary workers is also not as meaningful as it is for permanent workers.

For this study, we defined professional occupations to include those who selected engineering, accounting, or software/systems as their occupation from a choice that also included clerical, technician, light industrial and managerial/executive. Individuals who are in recognized occupations generally have to comply with skill competency requirements established by professional organizations that govern a particular occupation (Tolbert, 1996).

In summary, respondents that indicated they had completed college or had a professional occupation were classified as high skilled.

Independent Variables

The increased demand for temporary work creates new markets for temporary workers. We measure this by determining how many opportunities an individual thinks they have in the market. This was measured by a question that asked respondents to estimate their present alternative job opportunities on a scale ranging from no opportunities to many opportunities. These were coded as ordered categorical responses with 1 representing no opportunities and 5 representing many opportunities.

Labor supply variables measure an individual's perception of their financial and personal incentives to work and are measured by wage rates, personal preferences for working temporary work, and other sources of income.

Wage rates are measured in two ways. First, respondents reported their hourly wage rate and second, individuals also indicated whether they chose temporary work for high wages. Both variables are significantly and highly correlated ($r=.47$). We used the indicator variable which represents a respondent's reason for accepting temporary work because we want to measure perceived wage differentials between temporary and permanent work which is different from whether their actual wage rate is higher or lower than other temporary wage rates. We do use wage rate in a secondary regression analysis to compare wage rates between temporary types.

Preferences are measured by indicator variables which represent respondents' reasons for accepting temporary work. These include: preferences for traditional work arrangements (chose temporary work to access long-term employment), flexibility, and economic reasons (long-term employment unavailable).

A measure of other sources of income is not directly included because respondents were not asked to report income or sources of income in this survey. Instead, two measures serve as proxies. One is marital status. Most families are dual worker families. About 60% of married women (Blau et al., 1997) are in the labor force and on average contribute at least

30% of their family's income (Daphne & Bianchi, 1996), and most married men, 97%, work (Daphne & Bianchi, 1996). Consequently, marital status indicates the likelihood of another source of income from a working spouse. Another indicator used in this study was age. Older workers are assumed to have sources of retirement income and other savings, particularly those over the age of 65.

Individuals who have boundaryless careers should value and experience greater knowledge accumulation. The extent to which this occurs was measured by the respondent's degree of satisfaction (1= very dissatisfied to 7=very satisfied) with the chances they had to learn new things in their work assignments. The nature of their work, such as the level of routineness is also measured using a question that tapped job complexity. Respondents were asked how long it would take a supervisor to detect an error in their work. Ordered categorical choices ranged from less than one hour (1) to greater than a month (6).

Gender was included as a control variable because women are expected to have different labor market opportunities than men and this influences their responses (Blau et al., 1997; Hollenbeck, Ilgen, Ostroff, & Vancouver, 1987). We also anticipate that women will cluster in the traditional low wage low skill temporary work category (Golden & Appelbaum, 1992).

Estimation Model

We specify a multinomial logistic regression model where the dependent variable has four categories, one for each temporary worker type. The parameter estimates are determined simultaneously for all categories and are identified in comparison to a chosen baseline category (Long, 1997). We specified the boundaryless temporary type as the baseline category. The model uses maximum likelihood estimation to simultaneously estimate parameters for each category. The parameter estimates in a multinomial logistic model are more efficient and reduce the problem of experiment-wise error because all parameters are estimated concurrently. Equation 1:

$$\ln \Omega_{j|m}(X) = \text{learning}\beta_1 + \text{job}\beta_2 + \text{LTjob}\beta_3 + \text{alternatives}\beta_4 + \text{wages}\beta_5 + \text{economic}\beta_6 + \text{flexibility}\beta_7 + \text{married}\beta_8 + \text{age}\beta_9 + \text{gender}\beta_{10} + \varepsilon_i$$

where $\Omega_{j|m}(X)$ = probability that y_j equals a particular temporary worker type (career, transitional, or traditional) given the independent variables, X_1 to X_{10} , divided by the probability that y_m equals the boundaryless temporary type. $J=1$ to 3, representing each different temporary worker type, and m = the baseline temporary type. ε_i is an error term that has a logistic distribution

RESULTS

Descriptive statistics shown in Table 1 include variable means and correlations. Interestingly, on average temporary workers are neutral with respect to their preference for temporary work ($\bar{x} = 2.82$, sd 1.45 on a 1 to 5 scale) but a bi-modal distribution underlies this average (Figure 2). About 60% do not prefer temporary work and 40% prefer it.

Figure 2

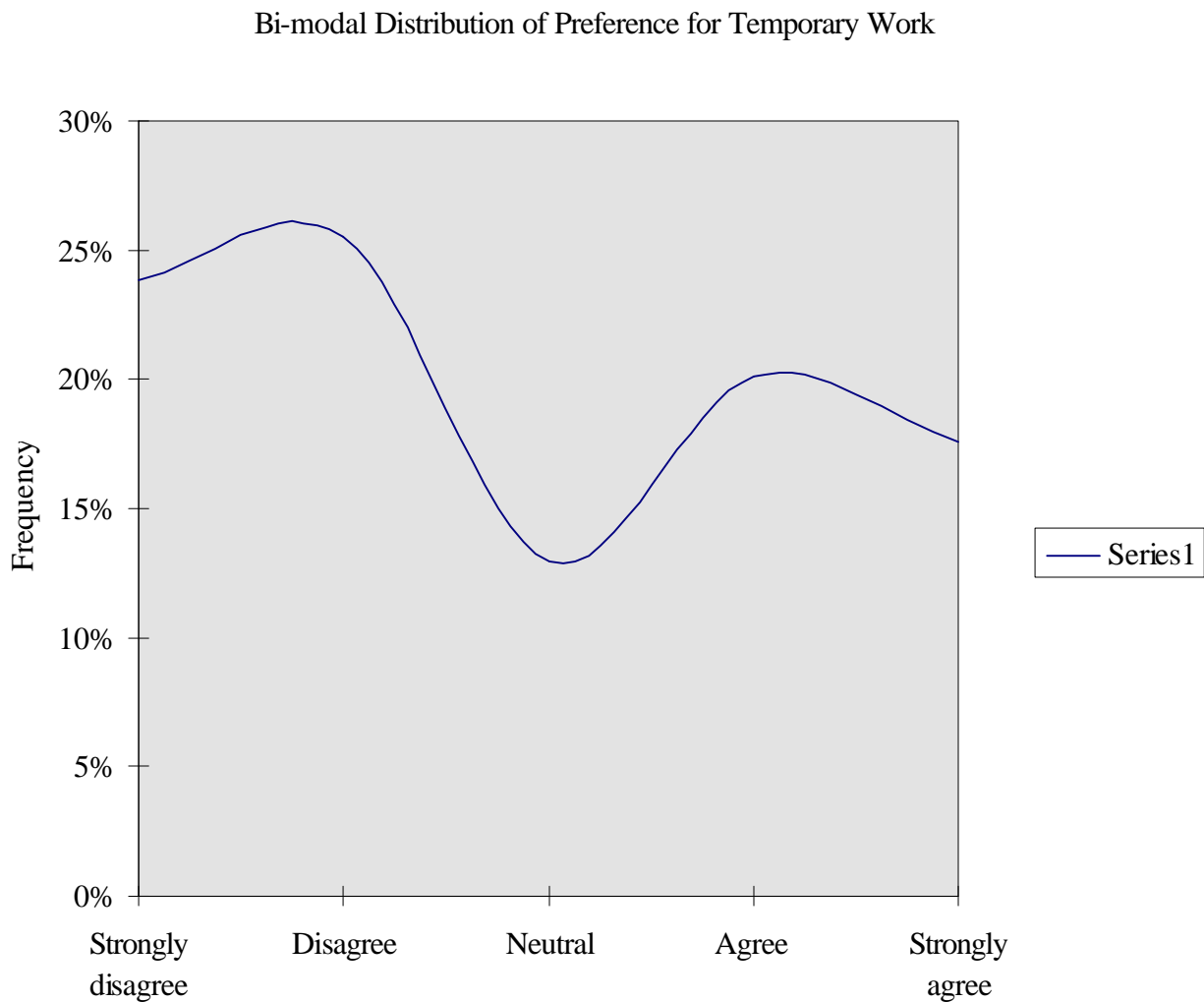


Table 2 sheds more light on this dichotomy. It contains the results of the multinomial regression comparing the boundaryless temporary type (high skill and prefer temporary work) to the other three types. The model specification is highly significant ($\chi^2 = 153$; $p < .001$).

TABLE 1
Means and Correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Prefer Temporary work	2.820	1.445	1															
2 Alternative jobs	3.770	1.083	0.40 *	1														
3 No LT employment	0.383	0.487	-0.51 *	-0.39 *	1													
4 Flexibility	0.215	0.412	0.35 *	0.19 *	-0.23 *	1												
5 Higher wages	0.215	0.412	0.41 *	0.26 *	-0.27 *	0.14 *	1											
6 Permanent employment	0.223	0.417	-0.14 *	-0.02	-0.04	0.08	-0.13 *	1										
7 Marital status	0.537	0.500	0.17 *	0.13 *	-0.18 *	0.10	-0.03	-0.04	1									
8 Age	38.260	11.840	0.05	-0.08	0.11	-0.04	-0.14 *	-0.20 *	0.30 *	1								
9 Learning at work	3.670	1.255	0.14 *	0.14 *	-0.15 *	0.04	0.01	0.00	0.01	-0.07	1							
10 Job complexity	2.970	1.700	0.02	0.05	-0.05	-0.07	0.09	-0.05	-0.02	-0.04	0.05	1						
11 Gender	0.464	0.500	0.10	0.11	-0.12	-0.05	0.30 *	-0.14 *	0.11	0.11	-0.02	0.15 *	1					
12 Rate	16.98	12.97	0.27 *	0.26 *	-0.17 *	-0.07	0.49 *	-0.11	0.09	0.01	0.00	0.16 *	0.42 *	1				
13 Boundaryless	0.287	0.485	0.72 *	0.36 *	-0.42 *	0.29 *	0.40 *	-0.19 *	0.05	0.04	0.09	0.11	0.20 *	0.39 *	1			
14 Career	0.089	0.366	0.37 *	0.05	-0.15 *	0.07	0.00	0.00	0.19 *	0.01	0.07	0.07	-0.17 *	-0.15 *	-0.20 *	1		
15 Transitional	0.401	0.500	-0.60 *	-0.17 *	0.31 *	-0.33 *	-0.23 *	0.04	-0.17 *	-0.07	-0.10	0.08	0.14 *	0.00	-0.52 *	-0.26 *	1	
16 Traditional	0.224	0.418	-0.32 *	-0.22 *	0.20 *	0.02	-0.18 *	0.16 *	0.01	0.04	-0.03	-0.17 *	-0.28 *	-0.32 *	-0.34 *	-0.17 *	-0.44 *	1
17 Skill	0.667	0.47	0.07	0.14 *	-0.06	-0.04	0.18 *	-0.15 *	-0.12 *	-0.07	-0.03	0.20 *	0.34 *	0.38 *	0.43 *	-0.46 *	0.55 *	-0.80 *

* p<.05

TABLE 2

Multinomial Logistic Regression of Temporary Worker Type

	Traditional		Career		Transition	
	β^a	se	β^a	se	β^a	se
Learning at work	-0.054	0.220	0.065	0.285	-0.176	0.196
Job complexity	-0.127	0.159	-0.071	0.207	-0.003	0.136
Access to permanent employment	1.659	0.686 **	1.391	0.830	1.103	0.665 *
Alternative opportunities	-0.613	0.285 *	-0.354	0.362	-0.478	0.267 *
Expect higher wages	-1.130	0.740 +	0.369	0.833	-1.815	0.602 ***
No long-term jobs	2.475	0.732 ***	0.651	1.029	2.744	0.691 ***
Flexibility	-0.548	0.612	-1.030	0.752	-1.844	0.652 **
Marital status	0.211	0.572	1.403	0.795 *	-0.122	0.520
Age	-0.004	0.024	0.008	0.030	-0.047	0.023 *
Gender	-1.355	0.625 *	-2.271	0.863 **	0.543	0.547
Intercept	2.742	1.824	-0.306	2.333	4.348	1.6639 **
Log Likelihood			-172.92			
χ^2			153.20 ***			
df			30			
Pseudo R ²			0.307			
n			198			

+ = $p < .10$ * = $p < .05$; ** = $p < .01$; *** = $p < .001$ one-tailed.

^a Baseline category is boundaryless temporary type; coefficients are unstandardized.

Traditional Temporary

According to the first two hypotheses traditional temporary workers (low skills and do not prefer temporary work) perform more routine tasks and are more likely to be looking for a traditional job than boundaryless temporaries. The results on Table 2 provide partial support for these hypotheses. Traditional temporaries are more likely to choose temporary work because they are looking for long term employment ($\beta= 1.659$; $p<.01$). Indeed, the odds of traditional temporaries choosing temporary work in search of a permanent job is five times greater than for boundaryless temporaries. Traditional temporaries are also more likely than boundaryless employees to have more routine jobs as indicated by the negative coefficient on the measure of work complexity. This coefficient, however, is not significant. These results do show that this group is significantly more likely to be female and to have fewer alternative job opportunities than the boundaryless temporary, consistent with the image of the stereotypical temporary worker often reported in the literature (Cohany 1997; Davis-Blake & Uzzi, 1993).

Career Temporary

Career temporaries prefer temporary work but have lower skills than boundaryless temporaries. We hypothesized that like the lower skilled traditional temporary they would also have more routine assignments than boundaryless temporaries. The negative coefficient on job complexity measure is not significant so the hypothesis is not supported, however, the negative sign implies these workers have less demanding jobs, as predicted. Career temporaries are more likely than boundaryless temporaries to be married and female and therefore more likely to have other sources of income from a working spouse. This may account for their preference for temporary work because they may have less economic pressures.

Transition Temporary

We hypothesized that transitional temporaries (high skilled but do not like temporary work) were less likely than boundaryless temporaries to have many alternative assignments and were more likely to be looking for permanent employment. The data supports this hypothesis. The coefficient on the measure of alternative opportunities has the predicted negative sign and is significant ($\beta= -.478$; $p<.05$ one-tailed) and the coefficient on the traditional job indicator is positively signed and significant ($\beta= 1.10$; $p <.05$ one-tailed).

We also hypothesized that transitional temporaries would be less likely to have other sources of income than boundaryless temporaries and be less interested in flexibility. This

hypothesis is also largely supported. Transitional temporaries are more likely to be younger than boundaryless temporaries ($\beta = -.047$; $p < .05$), and less likely to be married, although the coefficient on the marriage dummy while negative is not significant. The evidence is suggestive, however, that this group is less likely to have alternative resources compared to boundaryless temporaries.

Finally, transitional temporaries are significantly less likely than boundaryless temporaries to be interested in flexibility ($\beta = -1.84$; $p < .01$). Consistent with the hypotheses, transition employees are more likely to be working temporarily because long term work is unavailable and are less likely to be working temporarily for flexibility or high wages

Boundaryless Temporary

Boundaryless temporaries are high skilled workers who identify with and prefer temporary work. We hypothesized that they would be more likely to have assignments which increase their learning (hypothesis 1d) and to expect to earn high wages (hypothesis 2) compared to other temporary worker types. We also hypothesized that boundaryless employees compared to traditional and transitional temporaries would be more likely to choose to temporary work voluntarily and not for economic reasons (hypothesis 3b), to prefer work flexibility, and to have other sources of income (hypothesis 3a). We found no support for the first hypothesis. The coefficients on this measure of perceived learning while of the predicted sign were not significant. Boundaryless temporaries were not more likely than any of the other temporary worker types to be satisfied with the amount of learning that occurs in their work. We discuss this result further in the next section.

The next hypothesis regarding wages is largely supported. Boundaryless temporaries are more likely to choose temporary work for higher wages than traditional ($\beta = -1.13$; $p = .06$) and transitional temporaries ($\beta = -1.815$; $p < .001$). Only the coefficient on the career temporaries was not significant which makes sense because the career and boundaryless career types are expected to have similar preferences.

Hypothesis 3b is also partially supported. Boundaryless temporaries are more likely than transitional temporaries to choose temporary work for its flexibility but this does not appear to hold for traditional temporaries. While coefficients' signs supported the prediction only the one for transitional temporaries was significant. There was even less support for the predicted higher likelihood of other income compared to traditional and transitional temporaries. Only one coefficient out of four was significant. Boundaryless temporaries are

more likely to be older than transitional temporaries and therefore presumed to have accumulated more savings but this is very weak evidence in favor of the hypothesis.

Boundaryless temporaries do not appear to have more sources of income compared to other temporaries. They are far more likely, however, to choose temporary work for higher wages and flexibility. A regression (available from the authors) of wage rates on temporary type, controlling for gender, confirms that boundaryless temporaries earn significantly more (\$8 per hour more) than any of the other types.

Finally, the results also support hypothesis 3a which predicted that boundary less temporaries are more likely than transitional and traditional temporaries to choose temporary work voluntarily rather than for economic reasons. The coefficients on this measure were of the predicted sign and significant for both transitional and traditional temporaries.

Discussion

A resource based strategic perspective which encourages externalization of specialized skills and the increase of THS agencies have contributed to the emergence of a new type of temporary worker, the high skilled temporary worker. We suggest that some of these high skilled temporary workers are at the forefront of a unique type of worker, embracing boundaryless careers.

What distinguishes the high skilled boundaryless temporary workers from others is their preference or identification with temporary work. Most temporary workers do not want temporary jobs and human capital theory explains why. Temporary assignments are too short for workers to gain the advantages of specific training and too risky to attract most those with large human capital investments. Consistent with this theory, over 60% of our sample were neutral or disagreed with the statement that they preferred temporary work. The remaining 40% who prefer temporary work, however represent interesting cases.

We hypothesized that high skilled temporaries who preferred temporary work would most likely be those who were in high demand, who could earn high wages, enjoyed work flexibility because they could choose when to work, and have other sources of income to support their preference for flexibility. The empirical results largely corroborate these predictions.

We proposed that temporary workers fall into four different groups based on their stated preference for temporary work and their skill level. Within this typology we wanted to see if we could distinguish a boundaryless career temporary, those that preferred temporary

work and accumulated skills with multiple assignments (Baker & Aldrich, 1996). We found that each group had distinguishing characteristics which were derived from the theory of labor supply, human capital theory, and notions of boundaryless careers.

Traditional temporaries appeared to fit the stereotypical exploited temporary worker. These workers, primarily female, perceived less alternative opportunities and were using temporary work as a stepping stone to a traditional job. Career temporaries, also primarily female, were more likely to be married, therefore had another source of income and used temporary work as a means to earn supplemental income. Transition temporaries fit the profile of the worker in between jobs. The odds of falling into this group was 3 times greater if the individual indicated they chose temporary work because long term employment was unavailable. Transitional temporaries were also more likely to be younger, therefore less likely to have alternative sources of income.

High skilled temporary workers who preferred temporary work, boundaryless temporaries, were more likely to have selected temporary work to earn higher wages and were more likely than other skilled temporaries to have more job opportunities. They prefer temporary work because it offers them an opportunity to have greater flexibility as well as earn more money, and they were less likely to indicate they were looking for access to long term employment opportunities.

This group seems to fulfill the profile of individuals with boundaryless careers but not entirely. They were not more likely to perceive their work assignments involved opportunities for knowledge accumulation, which Baker and Aldrich (1996) argue is an important characteristic of boundaryless careers. Perhaps boundaryless temporary careers involve many opportunities to perform the same specialized task in many different settings. The opportunity to earn higher wages and to choose when to work may compensate for the lack of knowledge accumulation.

Boundaryless temporaries distinguished themselves on the basis of their personal characteristics and preferences, largely supporting human capital and labor supply theories. Surprisingly, however, none of the variables that measured the nature of their work were significant. Two variables measured work complexity and satisfaction with the amount of learning. Neither was significant compared to any temporary worker group which is unexpected. The literature suggests that the demand for specialized temporary work is increasing and we expected there would be an effect for these variables, especially for high skilled workers. In our analyses we saw no evidence of this. Skilled temporary workers

showed no indication that their work involved more learning or was more complex. It could be the perceptual nature of these measures interfered with a more accurate gauge of differences between assignments. It may be the assignments are more complex and specialized but not to the individuals performing them. Alternatively, perhaps within the realm of specialized tasks, some are more routine than others, and routine specialized tasks are assigned to temporary workers. Further research is needed to better understand how specialized temporary tasks differ from specialized tasks performed by permanent employees.

Our findings have several practical implications. First, it is clear that managers responsible for staffing decisions need to consider the four types of temporary worker. Perhaps efficient selection and hiring strategies will vary by each type of temporary worker. Indeed, it may be that some agencies specialize in various types. Next, the compensation system for each type could also be varied given their differences in preferences. Understanding these differences, organizations might provide compensation packages that induce better performance depending on temporary worker type.

Limitations and future research

The sample in this study is not representative of the general temporary worker population. A comparison of this sample on demographic characteristics (age, education, occupation) with the Bureau of Labor Statistic's current population survey suggests this sample represents a larger proportion of professional temporary workers. The focus of this study, however, was on professional skilled temporary workers and thus larger proportion of these in our sample enabled us to analyze this population with greater accuracy. Further, our analyses corrects for differences in the distribution of occupation and education by treating each group separately.

This analysis identifies four temporary worker types. Future research is needed to determine what other attitudinal and performance dimensions might distinguish these groups beyond the ones studied here. Recent work concerned with whether temporary workers are differentially committed to their assignments might apply this classification. It also might shed light on other differences among temporary workers, depending on their skill, opportunities, and expectations regarding their future as temporary workers. For example, some may be more productive than others.

Conclusion

The growth of out-sourcing and externalized work has lead to an increased demand for temporary workers, both for standardized routine tasks and also for specialized assignments. Temporary help agencies have contributed to this demand by creating a market for diverse temporary skills. Several studies have looked at the extraordinary increase in the supply of temporary help workers but few have considered a new breed of temporary worker, the high skilled permanent temporary worker. We provide evidence of a boundaryless temporary worker career. Contrary to the popular belief that temporary work represents a segmented low wage market, we see the emergence of another temporary market, a temporary external labor market for high skill workers that may be the wave of the future, and an example of the boundaryless career.

References

- Appelbaum, E., & Batt, R. (1994). *The New American Work Place*. Ithaca: ILR Press.
- Arthur, M. B., & Rousseau, D. M. (Eds.). (1996). *The Boundaryless Career*. Oxford: Oxford University Press.
- Baker, T., & Aldrich, H. E. (1996). Prometheus Stretches: Building Identity and Cumulative Knowledge in Multi-employer Careers. In M. Arthur & D. Rousseau (Eds.), *The Boundaryless Career* (pp. 123-149). Oxford: Oxford University Press.
- Barney, J. (1997). Organizational Economics: Understanding the Relationship Between Organizations and Economic Analysis. In S. Clegg, C. Hardy, & W. Nord (Eds.), *Handbook of Organization Studies* (pp. 115-147). London: Sage Publishers.
- Barringer, M. W., & Sturman, M. C. (1997). *Exploring The Effects of Variable Work Arrangements On the Organizational Commitment of Contingent Workers*. Unpublished Manuscript, University of Massachusetts, Amherst.
- Becker, G. S. (1992). *Human Capital*. (Third Edition ed.). Chicago: University of Chicago Press.
- Binning, J. F., & Barrett, G. V. (1989). Validity of Personnel Decisions: A conceptual Analysis of the Inferential and Evidential Bases. *Journal of Applied Psychology*, 74(3), 478-494.
- Bishop, J. (1994). *The Incidence of and Payoff to employer Training: a Review of the Literature with Recommendations for Policy* (Working Paper 94-17). Ithaca: Center For Advanced Human Resource Studies.
- Blau, F., Ferber, M., & Winkler. (1997). *The Economics of Women, Men, and Work*. Englewood Cliffs: Prentice Hall.
- Carnoy, M., Castells, M., & Benner, C. (1997). Labour markets and employment practices in the age of flexibility: A case study of Silicon Valley. *International Labour Review*, 136(1), 27-48.
- Cohany, S. R. (1996). Workers in Alternative Employment Arrangements. *Monthly Labor Review*(October), 31-45.
- Daphne, S., & Bianchi, S. M. (1996). *Balancing Act*. New York: Russell Sage Foundation.
- Davis-Blake, A., & Uzzi, B. (1993). Determinants of Employment Externalization: A Study of Temporary Workers and Independent Contractors. *ASQ*, 38, 195-223.

- Defillippi, R. J., & Arthur, M. B. (1996). Boundaryless Contexts and Careers: A competency-Based Perspective. In M. Arthur & D. M. Rousseau (Eds.), *Boundaryless Careers* (pp. 116-131). New York: Oxford University Press.
- Dieshenhouse, S. (1993, May 16). In a Shaky Economy Even Professionals. *The New York Times*.
- Ehrenberg, R., & Smith, R. S. (1994). *Modern Labor Economics*. (Fifth ed.): HarperCollins College Publishers.
- Golden, L., & Appelbaum, E. (1992). What Was Driving the 1982-88 Boom in Temporary Employment? *American Journal of Economics and Sociology*, 51(4), 473-493.
- Guion, R. (1991). Personnel Assessment, Selection, and Placement. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of Industrial and Organizational Psychology* (Vol. 1, pp. 327-397). Palo Alto: consulting Psychologists Press, Inc.
- Hecksher, C. (1995). *White-collar Blues*: Basic Books.
- Hippel, C. v., Mangum, S. L., Greenberger, D. B., Heneman, R. L., & Skoglund, J. D. (1997). Temporary Employment: Can Organizations and Employees Both Win? *Academy of Management Executive*, 11(1), 93-103.
- Hollenbeck, J., Ilgen, D., Ostroff, C., & Vancouver, J. (1987). Sex Differences in Occupational Choice, pay and Worth: A Supply-Side Approach to Understanding the Male-Female Wage Gap. *Personnel Psychology*, 40, 715-743.
- Houseman, S. N. (1997). *Temporary, Part-time, and Contract Employment in the United States: New Evidence from an Employer Survey*. Paper presented at the Conference on Labor Market Inequality, Madison, Wisconsin.
- Killingsworth, M. (1983). *Labor Supply*. Cambridge: Cambridge University Press.
- Lazear, Edward. (1995). *Personnel Economics*. Cambridge: MIT Press.
- Lenz, E. A. (1996). Flexible Employment: Positive Work Strategies for the 21st Century. *Journal of Labor Research*, XVII(4), 555-565.
- Long, J. Scott. (1997). *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks: Sage Publications.
- Mincer, J. (1974). *Schooling, Experience, and Earnings*. Chicago: University of Chicago.

- Noe, R. A., & Wilk, S. L. (1993). Investigating the Factors that Influence Employees' Participation in Development Activities. *Journal of Applied Psychology, 78*(2), 291-302.
- Pearce, J. (1993). Toward an Organizational Behavior of Contract Laborers: Their Psychological Involvement and Effects on Employee Co-Workers. *Academy of Management Journal, 36*(5), 1082-1096.
- Pfeffer, J., & Baron, J. N. (1988). Taking the Workers Back Out: Recent Trends in the Structuring of Employment. In B. M. Staw & L. L. Cummings (Eds.), *Research in Organizational Behavior* (Vol. 10, pp. 257-303). Greenwich: JAI Press Inc.
- Polivka, A. E. (1996a). Contingent and alternative work arrangements, defined. *Monthly Labor Review, October*, 3-9.
- Polivka, A. E. (1996b). Into Contingent and Alternative Employment: by choice? *Monthly Labor Review*(October), 55-74.
- Rousseau, D. (1995). *Psychological Contracts in Organizations*. Thousand Oaks: Sage Publishers.
- Schmidt, F. L. (1993). Refinements in Validity Generalization Methods: Implications for Situational Specificity Hypotheses. *Journal of Applied Psychology, 78*(1), 3-12.
- Segal, L. M. (1996). Flexible Employment: Composition and Trends. *Journal of Labor Research, 17*(4), 525-542.
- Segal, L. M., & Sullivan, D. G. (1997). The Growth of Temporary Services Work. *Journal of Economic Perspectives, 11*(2), 117-136.
- Snell, S. and David Lepak (forthcoming). The Human Resource Architecture: Toward a Theory of Human Capital Allocation and Development. *Academy of Management Review*.
- Spence, M. A. (1973). Job Market Signaling. *Quarterly Journal of Economics, 87*, 355-74.
- Tolbert, P. S. (1996). Occupations, Organizations, and Boundaryless Careers. In M. Arthur & D. M. Rousseau (Eds.), *Boundaryless Careers* (pp. 331-349). New York: Oxford University Press.
- Tsui, Anne S., Jone L. Pearce, Lyman W. Porter, and Angela M. Tripoli. 1997. Alternative Approaches to the Employee-Organization Relationship: Does Investment in Employees Pay Off? *Academy of Management Journal, 40*(5):1089-1121.

- Williamson, O. (1990). Transaction-Cost Economics: The Governance of Contractual Relations. In O. Williamson (Ed.), *Industrial Organization* (Vol. 9, pp. 223-251). Aldershot: Edward Elgar Publishing Limited.
- Williamson, O. E. (1981). The Economics of Organization: The Transaction Cost Approach. *ASJ*, 548-.
- Wright, P. M., McMahan, G. C., & McWilliams, A. (1994). Human Resources and Sustained Competitive Advantage: A Resource-Based Perspective. *International Journal of Human Resource Management*, 5(2), 301-326.