Insecure Employment Relationships in Flexible and Regulated Labor Markets: Trend, Distribution, and Consequences in the United States and France

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Abstract

Many scholars have argued that forces of globalization are weakening employment security in contemporary industrialized societies, and that an important mechanism for this effect is the utilization by employers of contingent jobs. The plausibility of this conjecture is tested through an examination of trends, industry distribution, and career consequences of contingent jobs in France and the U.S. While some globalization effects are apparent, large and persisting differences in the rate and industry distribution of contingent jobs between the U.S. and France instead appear due to institutional differences concerning the structure of wages and the economic role of the state. National differences in aggregate employment insecurity derive not only from cross-nationally distinctive effects of insecure employment statuses on subsequent career outcomes, but also from cross-national differences in the distribution of workers across these statuses. While the French labor market has greater overall instability because of its relatively high share of contingent jobs and high unemployment rates, the American labor market has offsetting greater risks for workers in standard jobs that derive from its higher proportion of low-tenure workers. But whatever its specific institutional form, our results demonstrate that employment insecurity has negative career consequences.

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INTRODUCTION

Many scholars have argued that forces of globalization are increasing the volatility of labor markets, and that firms and governments have reacted to this change by weakening employment security. One often-noted consequence is a rise in the utilization of contingent jobs by employers. Drawing on evidence that contingent jobs are mostly "bad jobs" in terms of pay, benefits, and duration (Kalleberg, Reskin, and Hudson 2000), some observers view this trend as a negative development for workers. Others respond that many workers actually prefer the greater flexibility in work schedules afforded by contingent jobs (Belous 1989; Lenz 1996). Efforts to resolve this issue have compared the different types of jobs that make up the heterogeneous category of contingent jobs, analyzed trends in the incidence of various types of contingent work (Golden 1996; Segal and Sullivan 1997; Levenson 2000; Estevão and Loch 2000), and compared attributes and career consequences of the different types of contingent jobs with those of "standard" jobs (Ferber and Waldfogel 1998, 2000; Kalleberg, Reskin and Hudson 2000; Polivka, Cohany, and Hipple 2000; Houseman and Polivka 2000).[1]

This research has enhanced our understanding of contingent jobs as an insecure employment status, but it is still not clear how contingent jobs impact the broader spectrum of employment insecurity in contemporary industrialized societies. To answer this broader question requires more careful consideration of the institutional environment that operates along with market forces to shape the allocation of workers to secure jobs,

and to insecure employment statuses, including unemployment. In this paper, we examine trends, consequences, and the industry-wide distribution of insecure employment statuses in France and the U.S., two countries with similar exposure to the forces of globalization but marked differences in government regulation of the labor market. In both countries but especially in France, there has been a long-run upward trend in the proportion of the work force in contingent jobs. This trend can plausibly be characterized as both an institutional response to globalization (expressed through a relaxation of labor market regulation) and a behavioral response, as market forces take advantage of deregulation. However, the forces of globalization have produced only limited convergence in the rate and industry distribution of contingent jobs between the U.S. and France. Institutional differences between the labor markets of these two countries -- especially the impact of the minimum wage on the cost of low-skill labor, the level of employment protection, and the state's role as an employer of labor -- have resisted the homogenizing forces of globalization. Two results of these institutional differences are a much higher rate of contingent jobs in France than the U.S., and nationally distinct distributions of contingent jobs across industries.

The individual-level career consequences of contingent jobs are qualitatively similar for the two countries in the middle-career years that can be studied with available longitudinal data. Working in a contingent job has negative effects that are somewhat worse than having low employer tenure in a regular job, but are not as bad as being unemployed. The largest pertinent micro-level differences between the two countries are the higher future employment risks for contingent workers in France than the U.S., and the considerably higher overall turnover rates (regardless of outcome) at low tenure levels

in the U.S. The high American turnover rate produces a relatively (to France) large proportion of the American workforce in low-tenure standard employment.

Our macro and micro results demonstrate that a cross-national comparison of contingent jobs alone does not fully describe cross-national differences in the aggregate structure of insecurity in the national labor market. The unemployment rate, the share of workers in contingent jobs, and the share of workers in standard jobs who have heightened risks for insecurity because of their low tenure can all differ considerably across industrialized countries. While scholars debate whether the benefits of contingent jobs outweigh their costs or vice versa, our results focus both the theoretical and the policy debate on the broader issue of employment security itself rather than the specific institutional form in which this insecurity is manifested. The creation of contingent jobs may increase the total amount of insecurity in the labor market (by substituting for regular jobs) or may decrease the total amount of insecurity (by reducing unemployment). But aside from the specific institutional form that insecurity takes, our results demonstrate that employment insecurity, whatever its form, has negative career consequences.

THE INSTITUTIONAL AND ECONOMIC CHARACTER OF CONTINGENT JOBS

Most research in the rapidly growing study of contingent jobs concerns one of three common themes. The first theme describes the growth in contingent jobs, which do not provide an "explicit or implicit contract for long term employment" (Polivka 1996), as perhaps the most notable feature of contemporary "nonstandard" employment. A second theme concerns the question of why nonstandard contracts are used. Blank (1998) for instance, argued that contingent jobs are used when employers face fluctuating

product demand and need to adjust the size of their work force either on a periodic or episodic schedule. She further argued that firms make use of contingent jobs as a cost-effective way to screen candidates for "regular" jobs. Another motivation is the prospect of reduced labor costs, either by avoiding the need for training or by paying lower wages or benefits than would be possible if the entire workload was done by the firm's regular workers. The third theme concerns job quality. Contingent jobs (especially those not self-employed) are typically worse than non-contingent jobs in terms of pay and benefits, both in the U.S. and in other industrialized countries (Hipple 1998; Kalleberg, Reskin, and Hudson 2000; Polivka, Cohany and Hipple 2000; Goux, Maurin and Pauchet 2001; OECD 2002). Researchers have also produced evidence that contingent workers are more likely to switch employers and to be unemployed than regular full-time workers (Houseman and Polivka 2000; OECD 2002), and that workers who previously worked in contingent jobs generally have lower wages than other workers (Ferber and Waldfogel 1998).[2] This evidence, along with the research of Blank and others, supports the conclusion that contingent jobs offer employers the flexibility to respond to volatile product demand at the expense of lower socioeconomic rewards for workers.

This conclusion, however, is more tentative than might appear. The hypothesis that contingent jobs multiply in response to a globalization induced rising volatility in product markets has not been subjected to rigorous testing. Aside from the intuitive plausibility of this hypothesis, its main test comes from a set of trend analyses. These studies document a rising density of contingent jobs during a period when the American and European economies have become more exposed to globalization forces that appear to place an economic premium on flexibility (Golden 1996; Segal and Sullivan 1997; de

Grip, Hoevenberg and Willems 1997; Estevão and Lach 2000; Levenson 2000). But without more direct measures of the demand for flexibility, especially at the level of disaggregated industries, it is difficult to have confidence that a globalization-induced increase in the demand for labor flexibility is the sole cause of the observed pattern.

Similarly, the assertion that contingent jobs are undesirable for workers rests mainly on the comparison between the rewards of standard jobs with those of contingent jobs. But this comparison implicitly assumes that a worker would be in a standard job if the contingent job were eliminated. In reality, the elimination of a contingent job might as often place the affected worker into unemployment as into a standard job. Furthermore, the rewards and stability of standard jobs varies enormously. While the average contingent job clearly pays less than the average standard job, there exist a great many "bad" standard jobs, especially in the American labor market. These "bad" standard jobs not only pay poorly, but also may offer no more stability than contingent jobs. Without careful consideration of the appropriate counterfactual situation, it is difficult to know whether existing comparisons between contingent and noncontingent jobs accurately describe the impact of any rise in contingent jobs on aggregate employment insecurity or the aggregate "badness" of jobs in the national labor market.

A comparative approach to the causes and career consequences of contingent jobs offers important advantages for addressing these questions. Cross-national comparisons offer additional ways to test the globalization hypothesis, which implies similar industry-specific changes in the intensity of contingent jobs across the set of industrialized nations for all industries affected by the forces of globalization. Comparative analysis also gives insight into the impact of labor market institutions both on the overall intensity and on the

industry-specific distribution of contingent employment. Finally, comparative analysis offers the opportunity to determine whether institutions moderate or exacerbate the career consequences of contingent jobs in contrast to alternative plausible statuses that workers in these jobs might occupy.

The proposition that labor market institutions shape both the intensity and consequences of contingent jobs seems quite compelling based on an initial comparison of the American and French labor markets. Because American employers face few regulatory constraints in their utilization of contingent jobs, the rising demand for contingent workers by employers should be a largely unmediated response to trends in the volatility of product demand. The institutional context of western European labor markets is quite different. Since the 1970s, Western European labor markets have wrestled with high levels of unemployment that were generated by high wage levels and by high nonwage labor costs, which stemmed from the state's need to finance expensive social welfare programs. Perhaps even more important than Western Europe's high labor costs, however, are the high firing costs generated by relatively expansive employment security for workers who have "indefinite term" labor contracts (ITC) (Büchtemann 1993; OECD 1999). High firing costs make it expensive for firms to hire workers that they subsequently wish to discharge, whether because the workers are not sufficiently productive, or because demand for the firm's products declines. Faced with the political and economic difficulties created by high unemployment, most Western European countries responded in the 1980s with legislation that created the possibility of a "fixed term contract (FTC)."

The French labor market in particular is different from the American labor market in two important respects that are not uniformly shared by other Western European countries, whose labor markets are more heterogeneous than is sometimes appreciated (DiPrete et al. 2001). First, the French labor market has a high cost structure. These high costs stem partly from taxes levied to support the munificent French welfare state. Moreover, the French minimum wage is much higher than the American minimum wage, and so low skill labor is relatively expensive there.

The second major difference concerns employment security. Barriers to involuntary mobility are produced by the practice of local (firm-level) wage determination (Blanchard and Summers 1988; Goux and Maurin 1999a), which raises de facto mobility barriers around organizations. Additional barriers are produced by the behavior of French unions. While unions are weaker in France than in some European countries, they traditionally have emphasized job protection for employed workers as a central goal.

A more important source of employment security stems from French labor law, which at least superficially has a markedly dualist character. French labor law creates the legal presumption that workers have the normal right to an indefinite labor contract. FTC jobs are legally permitted only when the jobs in question (as opposed to the employment contracts of workers in these jobs) will end in the near future, either because the work is inherently seasonal, or because the demand filled by the job is temporary, or because the fixed term worker is temporarily replacing an ITC worker who is absent from the labor force. French law provides that FTC jobs have a maximum duration of 18 months, including renewals.[3]

But despite the dualist character of French labor contracts, France lacks a true insider-outsider labor market because of three important legal details that encourage movement between ITC and FTC jobs. First, FTC contracts are not renewable; when the contract expires, an FTC worker must either be terminated or transformed into an ITC worker. Second, French employers must pay a 6% termination fee at the end of the FTC unless the worker is retained on an ITC. Third, the greater security of ITC workers is enforced by powerful guarantees only after a worker has accumulated two years of seniority; workers with less than six months seniority in an ITC job do not have the right to prior notification of layoff, while workers who are discharged with less than two years seniority are not entitled to severance pay (Goux, Maurin and Pauchet 2001).

This configuration of structures in France produces not a rigid insider-outsider market, but rather a flexible two-tier labor market in which unemployment and separation rates have a strong age as well as education gradient, but where most workers eventually obtain ITC jobs (DiPrete et al. 2001). Often this transition occurs through transformation of an expiring FTC by the employer; roughly 1/3 of FTCs are transformed into ITCs upon expiration of the FTC (Goux, Maurin and Pauchet 2001). The relatively high rate of conversion suggests that French employers often use contingent jobs as a probationary period for new workers. Though the monetary firing costs for low-tenure ITC workers are small, it is perhaps the administrative paperwork and the possibility of appeals by ITC workers that make the disguised probationary FTC status a preferred hiring option for many French employers. French employers then have an incentive to convert desirable FTC workers into ITC workers in order to avoid paying the 6% termination fee.

From a legal perspective, contingent jobs have a manifestly different standing in France than in the United States. French employers are constrained by law to create either FTC or ITC jobs and accept the corresponding legally defined cost structures. American employers, in contrast, have no legal requirement to define the duration of a job; they have no legal requirement even to sign an employment contract with a person they hire.

From a purely behavioral perspective, however, FTC jobs in France and contingent jobs in the U.S. are similar in the expectation that these jobs will terminate in the near future. Employer-provided rationales for contingent jobs in the U.S. — the need to meet unexpected or short-term demand for labor (Houseman 2000) — are consistent with the legally allowable reasons for creating FTC jobs in France. Most (53%) contingent workers in the U.S. report that their jobs will last only until the end of their current project, 18% are hired for a fixed time period, 9% are temporarily replacing another worker, and 8% are seasonal (Hipple 2001).[4] These expectations of American contingent workers concerning the duration of their jobs are likewise consistent with French legal conditions for the creation of FTC jobs. Contingent jobs in the two countries are similar in one additional respect: the holders of these jobs sometimes work for temporary help agencies and sometimes are directly hired as short-term workers by the company at which they physically do the work.[5]

But despite the behavioral similarity of FTC jobs in France and contingent jobs in the U.S., the national incidence rates are very different. The BLS estimated that, by its most expansive definition, about 4.3% of American workers were contingent in the middle 1990s.[6] The incidence rate of FTC jobs in France is rather similar to the average

for the European Union and much higher than the American figure. By the early 1990s about 9% of French workers had FTCs (de Grip, Hoevenberg, and Willems 1997), and about 80% of all new hires into French for-profit firms were hired into FTC jobs (Goux, Maurin and Pauchet 2001). The much higher rate of contingent jobs in France is not a mere byproduct of the different legal standing of contingent jobs in the two countries; instead, it arguably derives from the relatively (to the U.S.) high costs of firing noncontingent workers coupled with the costless potential of transforming an FTC worker to an ITC at the end of the FTC.

French labor law in effect creates four levels of attachment to the labor force. At the bottom is unemployment, where attachment to the labor force comes solely from the search activity to find a job. The next most secure status is a FTC. More secure still is an ITC with low employer tenure. The highest level of security comes from an ITC with higher levels of employer tenure, or from a government job. Self-employment stands apart from these categories as a highly heterogeneous status, where employment security is correlated with years of tenure in the business in question.

Contingent jobs in the American labor market can arguably be placed on a similar but not identical hierarchy of attachment. Unemployment is still on the bottom, with contingent jobs in second place and low tenure "probationary" workers in third place. In the U.S. as in France, the distinction between "temporary" and "probationary" workers is ambiguous; in practice, roughly half of all employers who use contingent workers indicate that they "often," "occasionally," or "sometimes" move workers from these positions into regular jobs (Houseman 1998). As in France, the most secure status

in the American hierarchy consists of workers with higher levels of tenure who do not anticipate being laid off in the immediate future.

In summary, while demand volatility has increased in both the French and the American economy, and while the French and American labor markets display important behavioral similarities, labor market institutions may continue to have important impacts that are only visible through the lens of comparative research. In contrast to existing research, we adopt a comparative perspective to address three issues: the distribution of contingent jobs across the industrial structure, the individual-level career consequences of working in a contingent job, and the significance of contingent jobs in the context of the broader hierarchy of employment relationships on a country's overall structure of job and employment insecurity. We perform these analyses using both parametric models and nonparametric matching methods in order to better control the potentially confounding impact of the differing characteristics of contingent and noncontingent workers on estimates of how their employment status affects career outcomes. The results obtained by this strategy expand our understanding of the determinants and consequences of nonstandard employment relationships.

DATA AND MEASURES

We use data on contingent jobs from the Contingent and Alternative Work Arrangements Supplement to the Current Population Survey in 1995 and 2001 to analyze the cross-sectional distribution and very recent trends in the United States.[7] For the French case we analyze distribution and trends over a longer period of time with the Labor Force Surveys for 1982, 1991, 1995, and 2001, all of which contain information on the type of labor contract (including FTC).

We use data from the NLSY79 for the years 1994-2000 to analyze the consequences of insecure employment on subsequent employment, wages, and wage growth for American workers. Unlike the NLSY79 data used in previous studies (e.g., Ferber and Waldfogel 1998, 2000), the 1994, 1996, and 1998 waves of the NLSY79 contain explicit measures of whether a sample member worked in a contingent job.[8] To analyze individual-level outcomes in France, we use the *Formation et Qualification Professionnelle* (FQP) Survey. The FQP survey was conducted in May 1993 by the French *Institut National de la Statistique et des Etudes Economique* (INSEE). It covers a sample of 18,000 people between the ages of 20 and 65, is representative of the French population, and provides information on employment status in May 1988 and May 1993, total compensation (earnings plus benefits) in calendar year 1992, and other relevant factors such as education (highest degree), age, occupation, type of contract (e.g., FTC, ITC), and the employer's industry. For the American case, we analyze employment and wage consequences over both a two and a four year period. The data for France allow us to measure employment effects five years after the respondent's May 1988 employment status, and to measure effects on total compensation four years after the respondent's May, 1988 employment status.

Sample members of the NSLY were between 29 and 37 years old in 1994. According to data from the CPS (Hipple 2001), 26% of all contingent workers in the U.S. were between 25 and 34 years old, and another 18.5% were between 35 and 44 years old. Thus, the age range covered by the NLSY79 contains a numerically significant proportion of all contingent workers in the U.S., and is thus informative about the impacts of contingent work on subsequent work outcomes in the early to middle career

years. Furthermore, because these workers are older, they are more likely to report that they would prefer working in a noncontingent job if one were available (Hipple 1998). In other words, workers in this age range constitute a larger share of involuntary contingent workers than of total contingent workers. To create a comparable analysis, we analyzed career outcomes for French workers in this same age range.

The 1994, 1996, and 1998 waves of the NLSY79 contain questions that allow an operationalization of contingent work similar to that used in recent BLS studies (Polivka 1996; Hipple 1998, 2001). We used these questions to operationalize contingent work as those workers who said they were a temporary worker sent by a temporary help agency, or that they were a temporary worker hired directly by the company. We limited our definition of contingent work to these two groups because other research (Kalleberg et al. 1997; Kalleberg, Reskin and Hudson 2000; Polivka, Cohany and Hipple 2000) has found that independent contractors, consultants, and employees of independent contractors earn more money, have higher benefits and are more likely to prefer their jobs to "standard" employment than do temporary workers.

The French definition of contingent job includes all wage and salaried employees who do not hold a regular indefinite-term contract, which includes workers under fixed-term contracts (including seasonal contracts), workers sent by temporary help agencies, workers with temporary contracts in the public sector (i.e., *contractuels, auxiliaires, vacataires, pigistes*, etc.), and trainees and workers who benefit from subsidized contracts for job market integration or trial periods. To make the U.S. results more comparable with the French data, we excluded self-employed contingent workers from consideration. To make industry distributions comparable, we classified workers in both countries into

the 17 industry categories from the International Standard Industrial Classification (ISIC).

In a small proportion (less than 2%) of the NLSY79 cases, workers in contingent jobs reported wages that were either very low relative to the minimum wage, or were very high. Given the heterogeneity found in this group of workers in the American context, some of these values may be true, while others are probably errors in the data. To keep these values from unduly affecting the comparison, we capped wages in 1996 constant dollars below $3/hr at $3/hr and those above $100/hr at $100/hr (in fact, this transformation had no qualitatively significant effect on our estimates).

RESULTS

Distribution and Trends

Because the concept of the contingent job is relatively new (Polivka and Nardone 1989), there are no data available for direct estimation of the trend in the intensity and distribution of contingent jobs in the U.S. from the early 1980s through the 1990s. Indirect and partial evidence, however, suggests that the use of contingent workers generally increased over this period. The share of total employment provided by the temporary help services industry in particular rose from 0.3% in 1972 to more than 1.8% in 1995 (Segal and Sullivan 1997). While time series data do not directly measure the industry in which these temporary workers were assigned, indirect estimates (by Estevão and Lach 2000) suggest that there has been a reallocation of temporary workers away from the public sector and toward manufacturing and service sector firms. The increase was steady for transportation, communication and utilities, for finance, insurance, and

real estate, and for other non-public service industries, while the growth in manufacturing has been much larger and concentrated in the years since the recession of the early 1990s.

From 1995 onwards, it is possible to measure trends in the share and distribution of contingent jobs in the U.S. countries using the Contingent and Alternative Work Arrangements Supplement from the CPS. Table 1 displays the industry pattern found in these data. Consistent with other reports (cf. Belman and Golden 2000), table 1 shows that private household, education, real estate and business services, construction, and health and social services have relatively high utilization rates, while manufacturing has relatively low utilization rates. Perhaps surprisingly to those who would postulate a continual intensification of contingent jobs in response to an increasingly globalized economy, these data also show that the overall proportion of American workers who were in contingent jobs declined between 1995 and 2001. This decline supports arguments that the use of contingent jobs is inversely affected by the level of tightness in the job market, which increased during this period.[9]

Table 2 shows the corresponding picture for France. With the loosening of employment security regulations in the 1980s, French utilization increased dramatically between 1982 and 1991. Notably high increases occurred in public administration, health and social work, agriculture, and private household services. Given that there were no major *legal* changes in the structure of employment security after the 1980s, we would expect further trends in the intensity and distribution of contingent jobs in France to result from technical factors related to technological change and to globalization. Table 2 shows that the strongest increases in the 1990s are found in public administration,

electricity production, the agricultural sector, mining and quarrying, the manufacturing sector, transport, storage and communications, and private household services.

The French pattern is arguably consistent with the globalization thesis, for two reasons. First, agriculture and manufacturing, which both show upward trends in the utilization of contingent jobs, are by far the most open industries in France, and thus are the most likely of all French industries to be influenced by economic globalization.[10] Second, the French public sector has been influenced by the fiscal pressures from globalization. France has been obliged to restructure and limit the expansion of public services to conform to demands made by the European Union that are connected with European integration, the creation of a single currency and the establishment of a European central bank. These pressures have led to partial privatization and an increase in demand for contingent workers in the newly privatized services, including both the public administration sector per se (which shows relatively strong increases in the utilization of contingent jobs) and the industries that traditionally have been dominated by state enterprises (electricity, gas and water supply; and transport, storage and communications, both of which also show relatively strong increases in the utilization of contingent jobs). Finally, the rise in contingent workers in household service arguably reflects the rise in the need for child care linked to the expansion of market work by women, a trend that is sometimes viewed as partly a consequence of globalization.

However, the results in table 3, which directly compare industry specific utilization of contingent jobs in France and the U.S., suggest that this utilization cannot be explained solely in terms of global forces that increase the demand for flexible production in these countries. In the body of table 3, we compute odds ratios of a worker

being in a contingent job in one country relative to a worker in the same industry in the other country. These odds ratios demonstrate persisting differences in the distribution between the two countries. The bottom row of table 3 summarizes these differences using three different measures of the dissimilarity between the intensity of contingent jobs in the U.S. and in France, which are labeled as D1, D2, and D3. The first two rows show the index of dissimilarity under two alternative assumptions, while the third row shows a measure of goodness of fit from a loglinear model that hypothesizes equal relative odds of contingent job utilization across the industry groupings.[11]

Because we cannot directly compare the French and American labor markets of the early 1980s, we instead compare data for France in 1981, 1991, and 1995 with the 1995 statistics for the U.S. If the pattern of the two countries was continually converging over this time, then the cross-national differences in these three comparisons must also grow steadily smaller.[12] The pattern of contingent jobs in the tightly regulated French labor market of the early 1980s was certainly dissimilar to the American labor market of the1990s. While (similar to the U.S. pattern in 1995) the French education sector made extensive use of contingent jobs in 1982, and while (again similar to the 1995 U.S. pattern) the French construction sector made relatively high use compared with French manufacturing, some other industries where utilization was high in the 1995 U.S. (private household service, real estate and business services, and health and social work) either had average or low rates of utilization in 1982 France.[13]

The partial deregulation of the French labor market in the 1980s led to substantial changes in the distribution of contingent jobs across industries between 1982 and 1991, and the French distribution has continued to change in the 1990s. However, while D1,

D2, and D3 tell somewhat different stories about dissimilarity between the utilization patterns in the two countries, none of these measures supports the hypothesis that the two countries are becoming steadily more similar in their utilization patterns. Moreover, the two countries are manifestly diverging in their overall rate of contingent jobs, which was declining in the U.S. and expanding in France between 1995 and 2001.

A cross-national comparison by industry in the year 2001 finds several persisting country differences in the utilization of contingent jobs, which together require either a different or a more complex explanation than that most commonly found in the American literature, namely volatility of product demand (Abraham 1988; Golden 1996; Blank 1998; Kahn 2000). We look for this alternative explanation in three areas where the labor markets of France and the U.S. diverge, namely the structure of wages, the structure of firing costs, and the role of the state as an employer of labor.

By fitting a loglinear model to the 2001 data for the U.S. and France, we determined that the intensity of contingent jobs in seven of the ISIC industry groups (agriculture; construction; trade, hotels and restaurants; real estate, health and social work; and private household service work) is relatively high in the U.S., but not in France (this pattern can also be seen by comparing the size of the odds ratios in the last column of table 3).[14] One of these seven industries (real estate) is highly seasonal in the U.S., which could explain its relatively high utilization of contingent jobs. Four more of these industries (agriculture; trade; health and social work; and private household work) employed a large group of low-cost workers; the wages in these industries at the 20th percentile were the four lowest for all industry groups in the U.S., which is shown in table 4. In the sixth of these seven industries (hotels and restaurants), American labor

costs are lower than the statistics of table 4 suggest, because the wages of restaurant workers come partly from tips, which are paid by customers.

In contrast, the relatively high minimum wage in France causes the bottom of the wage distribution in this set of industries to be much higher than in the U.S (Piketty, 1997). The high French minimum wage increases the cost to the employer of integrating new workers, i.e., the costs of training them until they become fully productive. Because higher training costs imply higher turnover costs, the high minimum wage motivates French employers to hire more noncontingent workers than they would under the American wage structure. The anomaly from this pattern is construction, which pays relatively high wages even at the 20th percentile in the U.S. (though still much lower than corresponding French wages) and also makes relatively high use of contingent jobs, relative to overall American utilization levels. In absolute terms, of course, all of these industries are marked by a lower intensity of contingent jobs in the U.S. than in France, which suggests that the high firing costs in France dominate incentives that derive from the differing wage distribution in the two countries.

Next we turn to the six industry groups where utilization of contingent jobs is relatively (to the overall national rate) high in France. These six industry groups are public administration; manufacturing; electricity, gas, and water supply; transport, storage and communications; education; and other community, social, and personal services.[15] The common thread tying together the four industry groups of electricity, gas and water supply; transport, storage and communications; education; and public administration is that, along with health and social work, these are the industry groups that have the highest proportion of public sector workers (see table 4). This is significant

because, as noted above, the French state has adopted a policy to limit and even reduce the number of civil servants it employs even in loci where state administrative control has not decreased. In order to implement this policy, the French state has progressively substituted fixed term contracts for indefinite employment contracts in the more peripheral jobs all of these industries. It is notable that the pattern of public sector penetration is similar in the U.S. and France. What distinguishes the two countries is not the relationship between industries and the public sector, but rather the specific response of the French state to external political and economic pressures that are not as immediately pressing on the American state.

Neither wage setting institutions nor state ownership explains why the intensity of contingent jobs has grown so dramatically in manufacturing in France relative to other French industries. We believe that the dramatic growth of contingent jobs in French manufacturing is a response to two factors: (a) the sudden and rapid disengagement of French state from all the very large and capital intensive industries (automobile, iron and steel industries etc.) that were more or less under its direct control, which created massive job destruction and more direct exposure of this sector to competition, and (b) the rapid diffusion of post-Fordist organizational forms during the nineties, which shifted labor demand towards tasks that were less dependent on seniority (Givord and Maurin 2001; Maurin and Thesmar 2002). Nevertheless, both construction (which has relatively high utilization of contingent jobs in the U.S.), and manufacturing (which has relatively high utilization of contingent jobs in France) deserve further study. From the analyses presented here, however, we can conclude first that the firing costs faced by employers are a dominant force driving the expansion of contingent jobs, and second that

institutional factors are working together with the forces of globalization to shape the pattern of their utilization in these two industrialized societies.

Career Consequences of Contingent Jobs in Comparison to Other Insecure Statuses

While the forces of globalization may homogenize the dynamics of product demand across countries, differences in labor market structure in France and the U.S. produce notable cross-national differences in the distribution of contingent and noncontingent jobs. In this section we address the question of whether nation-specific labor market institutions also affect the individual-level consequences of being in an insecure labor force status.

As a starting point, we present results based on probit and OLS analysis of the impact of contingent jobs as compared with noncontingent jobs on future employment and future wages. Table 5 shows probit estimates of the effects of contingent work on future employment probabilities for NLSY79 sample members using education, experience, race, and the log wage in the origin year as controls, along with a measure of whether the worker was in a contingent job in the origin year. These results show no significant reduction in employment probability either two or four years in the future for male workers who are in contingent jobs compared with workers who are in noncontingent jobs. For women on the other hand, working in a contingent job in one year does appear to be associated with a reduced probability of employment both two and four years in the future. Assuming a baseline probability of .05 of not being employed at some specified time in the future, the coefficient for contingent job in year t-2 implies almost a tripling of the probability of not being employed two years in the future to .14

for women, while the point estimate for the probability of not being employed four years in the future more than doubles from .05 to .11.

Table 6 shows comparable results for French workers with the same set of controls as in the American data except that prestige of the origin job is substituted for wages. As the time between origin and destination status is five years in the French data (1988 to 1993), the results for France are most comparable to the four-year results for the U.S. (the third column of the two panels in table 5). The probit results for France suggest that, when contrasted to noncontingent jobs, contingent job status was more detrimental to future employment prospects for French than for American workers, especially for males.

Table 7 contains OLS estimates of the effect of contingent job as contrasted with noncontingent job status on wages two years and four years in the future. The first three columns contain estimates for males, and the last three columns contain estimates for females. For the male sample, the estimates imply about an 11% lower hourly wage two years after working in a contingent job, and a 14% reduction four years after being so employed. The estimated two-year effects are generally smaller for females than for males. We note however, that the four year effects for the two genders are rather similar in magnitude, and the t-values are also similar.

Table 8 reports analyses using the French data. These results similarly suggest that workers in contingent jobs suffered earnings penalties in the future relative to workers in noncontingent jobs, though in France the negative consequences appear to be larger than the American consequences and appear to be larger for French women than for French men.

The country comparison obtained from the probit and OLS estimates in tables 5 through 8 must be regarded as tentative in light of the well-known possibility of coefficient bias with these procedures, which is perhaps compounded by the possibility of unequal bias due to the lack of exactly comparable control variables in the available data for the two countries. The recent literature on causal estimation, particularly in the context of labor market outcomes, argues that much of the bias in OLS estimates is due to the unequal distributions of the observed covariates for the subsamples who do and who do not experience the event in question (Rubin 1980; Rosenbaum and Rubin 1983; Heckman, LaLonde and Smith 1999). Matching methods can address this potentially large component of the overall bias. To obtain additional evidence on the career consequences of contingent jobs in comparison with other insecure employment statuses, we therefore reestimated these consequences using a propensity score analysis.

Our analysis of employment outcomes contrasts the proportion of workers in contingent jobs (the "treatment group") who are employed at a specific time in the future with that of a comparison group (the "control group") of workers who were in noncontingent jobs at the origin time, where each contingent worker closely matched a specific worker in the comparison sample on his or her propensity to be in a contingent job at the origin time. For American workers, we present three outcomes of the wage analysis. The first compares wages (in dollars) at a specific future time point for the treatment and control group. The second compares wage change (in dollars) between the first and second time point for the two groups. The third analysis compares change in the log wage between the first and second time point for the two groups. This third analysis can be given an interpretation of percentage changes. For employment outcomes, and

for wage and wage change outcomes, we estimated the mean difference between the treatment and control groups. For the analysis involving the change of log wages, we estimated the median difference of the change in the log wage for each treatment and matched control case, and test for differences in the median with a sign test (Sprent 1993).[16]

In order to compare the effects of different insecure statuses, we then estimated the short and medium-term career consequences of being unemployed, and of being employed with less than one year of tenure in a noncontingent job. For the unemployment analysis the comparison group was drawn from employed workers, while for the low-tenure analysis, the comparison group was drawn from higher tenure workers in noncontingent jobs.

Because we have more closely spaced panel data for the U.S than for France, we analyzed outcomes both two and four years in the future. We estimated two year effects based on the NLSY79 subsample of individuals who were in a contingent job in either 1994, 1996, or 1998. We deleted duplicate observations for all individuals who were in contingent jobs in more than one of these years (note that this is a relatively small fraction of workers in contingent jobs), and we then matched the remaining observations with other sample members who were not in contingent jobs. The matching was done based on gender, survey year (1994, 1996, or 1998), and the estimated probability of being in a contingent job in the relevant year from a logistic regression of being a contingent worker on race, marital status, number of children ever born, the SMSA unemployment rate or non-SMSA state unemployment rate, education, potential labor force experience, employment status and hourly wage (or zero if not working) two years

prior to the treatment time,[17] whether R is working in a full-time or part-time job at the treatment time, the number and square of the number of job displacements since 1979 in R's main job, and the number of job displacements from all other jobs besides the main job.[18]

We did the matching several ways in order to ensure the robustness of the matching procedure. We first matched workers in contingent jobs with workers in noncontingent jobs based on a Mahalanobis-metric matching on gender, survey year, and the estimated probability of being a contingent worker, and on the time interval in question (either 1994→1996, 1996→1998, or 1998→2000). In a second procedure, we used caliper matching where we required a potential match to be within ¼ of a standard deviation of the treated case's estimated propensity score, and where we forced perfect matches on gender and on survey year. According to the mathematical properties of propensity score matching (Rosenbaum and Rubin 1983), consistency of the matching estimator with respect to bias arising from selection on observable variables requires matching only on the propensity score that is a function of these variables, not on the actual values of these variables themselves. Nonetheless, to improve precision, we did a third matching on estimated propensity scores with a ¼ standard deviation caliper, where gender and survey year were perfectly matched, and where the lagged wages of all matched pairs were forced to lie within $2 per hour of each other or, if not working, where the matching observation also was not working. Even with this additional condition, we were still able to match most of the treated cases with a control case whose propensity score was within ¼ of a standard deviation from that of the treated case.[19] We used matching with replacement, because research has shown this procedure to produce

less bias than matching without replacement (Dehejia and Wahba 1998, 1999). These three alternative methods gave qualitatively similar results, and so we present only the results from our third matching procedure in the tables.

Table 9 reports the results of the analyses for outcomes two years in the future. The three panels of table 9 report differences between contingent and non-contingent workers, unemployed and employed workers, and low tenure and higher-tenure workers, respectively. Within each panel, the first column compares differences in the proportion of workers in the treatment and comparison group who were employed at time 2. The second column reports average differences in wage levels at time 2 conditional on the matched cases actually working at time 2. The third column compares differences in wage growth between times 1 and 2, conditional on working at both times 1 and 2. Column 4 compares differences in the change in log wage, conditional on working at both times 1 and 2. Columns 5, 6, and 7 contain estimates of wage outcomes, wage change, and change in log wage both for cases who were and who were not working at time 2. By setting the wage at zero for those not working, columns 5, 6, and 7 provide an estimate of the combined wage effect that is produced by differences in wages for those working and the lack of a wage for those not working.[20] Because workers who were unemployed at time 1 have no wage for that time, we do not estimate the average wage change effects of unemployment.

The results in table 9 show a lower probability of employment two years later for contingent workers relative to noncontingent workers in the U.S. For comparison, the second panel shows the effect of unemployment on employment two years later. The effect of unemployment on future employment is larger than the effect of contingent

status on future employment for men, while for women the reverse pattern holds. These two patterns cancel each other; the average effects of unemployment and contingent job status on future employment in the two-gender sample are approximately the same size.

The third panel demonstrates that low tenure in a noncontingent job is also an insecure employment status, with an average impact on future employment that is about one-third the magnitude of contingent job status or unemployment. We interpret this effect to be partly due to the probationary status of many workers in low-tenure situations, though the determination and termination of a "bad match" can sometimes be made by the employee as well as by the employer. The estimated effect of low tenure on future employment provides a more nuanced interpretation of the effect of contingent job status; about one third of the negative employment effect of contingent job status on future employment may arise from the lack of a strong attachment to the job that is typical for low-tenure workers, while the other two-thirds may be attributable to the explicitly temporary character of contingent jobs.

The contrasts between the three insecure statuses change noticeably when the outcome is wages as opposed to employment. Contingent workers (especially men) experience lower wages two years later than do otherwise comparable non-contingent workers. There is little evidence in the propensity score analyses that contingent job holders face lower rates of wage growth; rather the results suggest that their working in a contingent job puts them (at least temporarily) on a lower but parallel wage track than otherwise comparable noncontingent workers. A more revealing comparison, however, is with low-tenure holders of noncontingent jobs, who, as table 9 shows, have higher average wage growth than more senior workers. Like low-tenure noncontingent workers,

contingent workers also generally have low tenure in their jobs. Unlike low-tenure noncontingent workers, however, contingent workers cannot expect higher wage growth to compensate for the risk of higher employment instability. In short, contingent workers are disadvantaged relative to low-tenure noncontingent workers in both future employment prospects and wage growth. They are less disadvantaged than the unemployed however, whose risk of future employment instability is as great as is the risk faced by contingent workers, and whose wage penalties appear to be even greater.

Taking employment and wage outcomes together yields a clear ordering of the three insecure statuses, with low-tenure noncontingent status giving the most favorable short and medium term career prospects, and unemployment giving the worst prospects. Contingent jobs are midway between unemployment and low-tenure work, and appear to share characteristics of both of the other states.

Generally speaking, the consequences of insecure employment relationships four years in the future show the same pattern as two years in the future, but the size of effects is somewhat diminished. Table 10 shows that the effects of both contingent status and unemployment on employment status four years in the future are negative but no longer statistically significant. The low-tenure effects on future employment status are of similar magnitude as the effects of contingent status or unemployment though they retain statistical significance; it is probably the larger sample size for the low-tenure analysis that accounts for the difference in standard errors for these estimates. Unemployment continues to have a negative effect on wages in the four-year as in the two-year analyses, while low-tenure status continues to have a positive effect. The effects of contingent status on wage levels four-years in the future remain fairly similar in magnitude to the

two-year effects, but they are not statistically significant at conventional levels. The effects of contingent job status continue to lie between the other two statuses, with unemployment offering the worst prospects and low-tenure status offering the best.

We then performed a propensity score analysis of employment and compensation outcomes using the French data over a five year time period (for employment) and over a four year time period for compensation. To compute propensity scores, we estimated the probability of an individual being in each of the three insecure employment statuses in 1988 as a function of the following covariates: gender, region of residence, education, labor force experience, contingent status in first job, and the prestige of first job.[21] The results are presented in table 11.

As in the probit analyses, the employment consequences of being in a contingent job in France appear somewhat worse than are the consequences in the U.S. French contingent workers have greater employment risks than do French low-tenure workers. The point estimate for contingent job status in France is even larger than the point estimate for unemployment, but table 11 suggests that the ordering of these two insecure statuses depends on gender. Specifically, the future employment risks from contingent job status are greater than the risks from current unemployment status for French men, while the reverse is true for French women. Interestingly, the French five-year results look rather similar to the American two-year results in terms of risk patterns. This suggests that insecure employment statuses generate future employment risk in both countries, but that the risk tends to decay faster in the U.S. than it does in France.

Recall that the French data provides information about yearly compensation rather than wages. Similarly to the analyses of U.S. data reported above, we estimated both the

mean compensation difference between the treated and control samples, and also the median difference in log compensation differences between each matched case from the treatment and from the control groups.[22] Because the measure of compensation applies to the calendar year prior to the survey time, we estimated compensation effects unconditional on employment status at the survey time. Because no information on compensation in the treatment year (1988) is available in the French data, we can estimate the effects of the treatment on compensation levels, but not on change in compensation, as we did for the American sample.

Just as the OLS results suggested greater negative wage consequences from contingent job status in France than the U.S., the propensity score analyses also find estimated effects of contingent status on future compensation in France to be somewhat more negative than in the U.S. For example, the estimated cost of contingent job status for French male workers (FF22,790 per year four years later, or about $4,272) is greater than the American result (US$1.44/hr, which equals about $2,880 for a full-time worker).[23] These differences in the point estimates derive from cross-national differences in the wage/compensation effects for women in the two countries. If we focus solely on men, the French effect (FF18,760 per year four years later, or about $3,520) is actually smaller than is the American effect ($2.77/hr or about $5,440 for a full-time worker). The standard errors are wide enough, however, that we cannot reject the null hypothesis that the male effects and also the combined gender effects are of similar magnitude in the two countries. The French results share the American pattern of showing more negative average earnings effects from unemployment than from contingent jobs, with the best wage outcomes arising from the status of low-tenure noncontingent worker. Thus for

France, like the U.S., contingent jobs appear to be an insecure labor force status that is similar to, but not as disabling, as unemployment, with more negative effects for contingent jobs than for low-tenure noncontingent jobs both in terms of future employment prospects and in terms of future compensation. The main micro-level difference between the two countries appears to be a lower future employment risk for American than for French contingent workers.

Our micro-level comparison needs to be qualified in an important respect, however. The aggregate impact of contingent jobs on workers' careers depends on how the labor markets of each country would adjust if the category of contingent jobs were reduced in size or even eliminated. Any modification of contingent jobs as an institution would also modify the rate of unemployment and the quality distribution of standard employment. Without a better understanding of what these macro-level effects would be and whether they would be similar or different in the two countries, it is difficult to conclude whether the macro-level consequences of suppressing contingent jobs would be more dissimilar than micro-level comparisons suggest, or even whether the aggregate effect of suppressing contingent jobs would be negative or positive (and in any case, we would expect the effect to vary across skill levels and other relevant attributes). Further understanding of this issue rests on theoretical and empirical investigation of the macro-level interrelationship between contingent jobs, non-contingent jobs, and unemployment.

THE DISTRIBUTION OF INSECURITY IN FRANCE AND THE U.S.: A BROADER VIEW

As we have shown, France has a different distribution of insecure employment statuses than does the U.S. The high labor costs, high firing costs, high minimum wages, and the special role of the state in the French economy create a much higher

concentration of contingent jobs in France than in the U.S., and distribute these jobs across industries in a different configuration than is found in the U.S. This can be seen in table 12, which shows the proportion of workers in the three insecure statuses that were studied in this paper, according to labor force survey data for the year 2001 in both the U.S. and in France. Table 12 breaks down the distribution by three age groups: (1) 18-28, (2) 29-39, which corresponds to the age range of the analyses presented above using the NLSY79 and FQP samples, and (3) 40-64.

Table 12 highlights three facts. First, workers in both countries move into increasingly secure employment statuses over the life course, but insecurity remains a problem for a considerable fraction of workers even in the oldest age range. Second, the overall proportion of insecure workers is higher in France than in the U.S. at all age ranges. Third, the breakdown of workers across the three insecure statuses differs considerably in the two countries. Despite the notably downward sloping gradient in unemployment risk, 29-39 year old workers in France had sharply higher unemployment rates than did American workers. Furthermore, despite the even more sharply downward sloping gradient in contingent jobs, a much higher proportion of 29-39 year old workers in France were in contingent jobs than in the U.S. If we limited attention to these two insecure statuses, we would conclude that the risk of being in an insecure employment status in France was three times as high as in the United States.

One final relative source of insecurity needs to be considered, of course, and that concerns high-tenured noncontingent workers. The main risks to workers in this category come from job displacement. These risks in the aggregate have been well studied in the American case through the Displaced Worker Surveys. According to the 1998 Displaced

Worker Survey (see Hipple 1999, table 3), the two-year rate of job displacement in the U.S. in the middle 1990s was about 4% on average and about 2.8% for those with more than 3 years of tenure, which would correspond to a rate of about 1.5% per year.[24] While precisely comparable statistics do not exist for France, Givord and Maurin (2001) have analyzed the yearly rate of transition between employment and unemployment using the French Labor Force surveys. Whereas the yearly risk of job loss for workers with at least a year of seniority in the 1984-1988 period was about 1.6% for workers with at least a high school diploma and 3.1% for workers with less than a high school diploma, the yearly rates for these two groups had risen to 2.6% and 3.6% per year, respectively for the 1993-1998 period.[25] The U.S. rates exclude firings, which are included in the French statistics (in a firing, the job continues to exist, but the incumbent is terminated). Nonetheless, such an adjustment would still leave the French job loss rates for more senior workers at least as high as the American rates.[26]

The factor that partially equalizes the aggregate risk of insecurity in the two countries is in the proportion of workers who have low tenure with their employer. As table 12 shows, the proportion of workers in mid- and later-career who are in low-tenure noncontingent jobs is about twice as high in the American as in the French labor market.[27] As we have just seen, the higher rate of low-tenure noncontingent jobs in the U.S. than France does not stem from higher displacement rates in the U.S. – if anything; the displacement rates in the middle 1990s were higher in France than the U.S. Rather, the higher rate of low-tenure workers in the U.S. comes from higher rates of separation (for both voluntary and involuntary reasons) in the United States as compared with France among low-tenure workers. OECD statistics (1997, table 5.10) show separation

rates for all workers with less than one year of tenure with the employer were 65.9% in the U.S. as compared with 41.6% in France. As shown by our results, the great majority of these workers are not unemployed two or four years in the future. However, the difference in these rates creates a larger pool of low-tenure noncontingent workers in the U.S. than in France.

What is the impact of this difference in the distribution of insecure statuses in the two countries on the relative overall level of insecurity in the two countries? We have already seen that the individual risk of insecurity incurred by low-tenure noncontingent workers was lower than the risk faced by contingent workers. If we nonetheless assumed that the levels of relative risk that we obtained in our analyses could be extrapolated to the 2001 labor market in the two countries, we would reach two unambiguous conclusions. The first would be that American low-tenure noncontingent workers in the 29-39 age range as a group face a larger aggregate quantity of insecurity than do American contingent workers, because while the risk of future nonemployment for low-tenure noncontingent workers is about one-third that of contingent workers in the two-year analysis, and is of comparable magnitude in the four-year analysis, they are substantially more than three times as numerous in the American labor market. If the relative risks that we estimated apply beyond the 29-39 year age range, the same conclusion would extend to younger and to older workers as well. The second conclusion is that the larger quantity of low-tenure noncontingent workers in the U.S. than in France is not large enough to offset the aggregate greater employment insecurity in France stemming from the larger quantity of French workers in unemployment and in contingent jobs. It is important to note, however, that France's higher employment

insecurity does not imply that French workers have higher *income* insecurity than do American workers. In addition to having a higher minimum wage, France has an unemployment insurance system that both covers a higher proportion of unemployed workers and provides a higher replacement rate of lost earnings than does the American system (OECD 1994, Chapter 8).

CONCLUSION

As we have seen, the formal structure of employment statuses in France and the U.S. is quite different. Regular workers in France get indefinite labor contracts, while American regular workers are for the most part working under the "employment at will" doctrine, which denies them legal guarantees of employment security. French contingent workers have fixed term contracts with ostensibly strict requirements concerning both the duration of the labor contract and the type of work that can be covered by such contracts (i.e., the job, as opposed to the worker, has to be of fixed duration). Differences in the structure of the two labor markets have marked implications for the overall rate and industry distribution of contingent jobs in the two countries. Differences in labor market structure may furthermore be responsible for the higher future employment risk faced by contingent workers in France than in the U.S. Despite these dissimilarities, however, the wage and earnings consequences of contingent job status in the two countries are rather similar.

Three important implications of our results need to be stressed. First, the biggest difference between France and the U.S. with respect to employment insecurity arises not from cross-national differences in the individual-level effects of unemployment, contingent job, or low-tenure non-contingent status on career outcomes, but rather in the

institutional structures that create cross-national differences in the quantity and distribution of jobs and workers across these employment statuses. Second, while insecurity in France is concentrated among workers who occupy overtly insecure positions, the career instability generated by the (until the late 1990s) rising number of contingent jobs in the U.S. is a relatively small share of the overall career instability found in the American labor market. In this respect, our conclusion about insecurity parallels conclusions that could be reached about the contribution of contingent jobs to the wage distribution in the U.S. In 1995, 21% of jobs in the U.S. paid below $6.00 per hour (Kalleberg, Reskin and Hudson 2000). Even though contingent jobs pay poorly on average, many fewer than half of the contingent jobs in the U.S. at this date paid below $6.00 per hour. Thus, the ratio of poor paying jobs to poor-paying contingent jobs in the American labor market was better than 10:1 in the middle 1990s.

The final and perhaps most important implication of our results is that, when studying the impact of rising labor market volatility on work careers, the key research focus should arguably be not contingent job or nonstandard employment, but rather employment insecurity itself. Our results demonstrate that employment security as such has negative career implications for workers, regardless of the particular institutionalized form that it takes. While one can debate whether contingent jobs are good or bad for workers, it appears to be indisputable that employment insecurity is bad for workers' careers.

It follows directly from this conclusion that public policies which are targeted at employment insecurity should not focus solely on the issue of contingent jobs. As shown by our cross-national comparisons, the quantity and distribution of insecure job positions

depend on the role of the state in the economy, the legal constraints on the wage structure, and the costs of terminating workers. These factors, in turn, are dependent upon the evolution of institutions that are not directly linked to the production of contingent jobs. A broader policy focus on the factors that produce insecurity in labor markets is likely to be more fruitful than a narrower focus on contingent or nonstandard employment relationships.

These comparisons are not meant to downplay the importance of contingent jobs as a source either of low wage or of insecure employment. Rather, they are designed to put the issue of contingent jobs in perspective. When comparing countries such as the United States and France, the large disadvantage from France's relatively high proportion of contingent jobs is partially offset by the more equal French wage distribution, by the lower proportion of noncontingent French workers who occupy insecure or poorly paid positions, and by its more extensive and more generous unemployment insurance system. The spread of contingent jobs may be one side effect of the forces of globalization. But these forces do not affect workers equally in all industrialized countries. The same institutions that produce cross-nationally varying rates and patterns of nonstandard employment maintain cross-national differences in the wage and career consequences for the workers who have standard employment contracts as well.

Notes

[1] There is no agreement in the literature on exactly what characterizes "standard" as opposed to "nonstandard" employment. The BLS surveys on contingent and alternative work arrangements divide jobs into eight categories: agency temporaries, on-call workers, contract company workers, direct-hire temporary workers, independent contractors, regular self-employed (excluding independent contractors), regular part-time workers, and regular full-time workers (Polivka, Cohany and Hipple 2000). Some researchers place only regular full-time workers in the "standard" category, while others extend this category to regular part-time workers and regular self-employed workers. In this current paper, we are primarily interested in distinguishing jobs that are officially or expected to be temporary from jobs that have an indefinite duration.

[2]The career consequences of contingent jobs have certainly not been ignored in the literature (particularly in the American context), though the focus of existing papers is typically narrower than that adopted here. Previous research has demonstrated the extent to which workers in contingent jobs are paid less and have fewer benefits than workers in non-contingent jobs (see Hipple 1998 or Polivka, Cohany and Hipple 2000, for the American case and Goux, Maurin and Pauchet 2001 for the French case). Some research also exists on the short and long-term consequences of contingent work on future wages and employment. Houseman and Polivka (2000) used the panel structure of the CPS to compare outcomes one month and one year later for workers who were in nonstandard employment relationships in February, 1995 compared with workers who were in regular full-time jobs. The CPS has the advantage of large sample size and full coverage of the age distribution, but in other respects, it is not the ideal dataset for such panel analyses, because it misses workers who have changed their residence over the course of the year. Their results showed that agency temporaries, on-call workers, direct-hire temporaries, and contract company workers were 10-14 percentage points more likely both to switch employers and to not be employed than were regular full-time workers over one-month and one-year intervals. After controlling for relevant variables, they found that agency temps, on-call workers, and direct hire temps have between a .035 and .04 higher probability of being unemployed the following year than regular full-time workers.

[3] The precise details of these conditions have changed somewhat over time. Generally speaking, the conditions under which FTC could be used were loosened in 1985 and tightened somewhat in 1990, though these tighter regulations seem to have been inconsequential in practice (Michon and Ramaux 1993; OECD 1999)

[4] Note that the CPS survey is in February, a time when the seasonal workforce is relatively small.

[5] In the U.S., roughly 25% of contingent workers are employed by temporary help agencies, with the rest being either direct short-term hires or self-employed short-term contractors. In France, the temporary help agency business is actually slightly larger (in proportion to the work force) than it is in the U.S. In 1996, temporary work business revenues in France were $11.3 billion, vs. $47.1 billion in the U.S. This ratio is somewhat larger than is the ratio of population in the two countries (Si Review 2002; see also OECD 1999).

[6] The most expansive definition of contingent work used by the BLS ("estimate 3") includes self-employed workers and independent contractors with tenure and expectation of continued employment of one year or less, as well as temporary workers and contract workers, regardless of their current tenure. Unlike more restrictive estimates, estimate 3 does not require that the worker expect their jobs to end within one year. The job is contingent so long as the employee views the job as temporary for reasons related to the structure of the job. For further details, see Polivka (1996).

[7] The CPS did not begin using questions designed to measure contingent jobs until 1995.

[8] Houseman and Polivka (2000) found that agency temps, on-call workers, and direct hire temps had between a .035 and .04 higher probability of being unemployed the following year than regular full-time workers after controlling for relevant variables in an analysis of panel data from the 1995 CPS. Because CPS panels miss workers who have changed their residence over the course of the year, Houseman and Polivka were only able to match 67.1% of workers in a one-year interval. They reweighted the CPS data as a strategy to reduce selection bias. Ferber and Waldfogel (1998, 2000) examined the longer-term impact of ever having worked part-time, self-employed, or in a temporary job in the period from 1979 to 1993 on 1993 wages for sample members of the National Longitudinal Survey of Youth 1979 (NLSY79. They found roughly a 6% reduction in wages for those workers who had ever worked in a temporary job in the previous 15 years, but no effect on wage growth. Because the NLSY79 lacked any direct questions on the nature of the employment relationship for the years in which they did their analysis, they had to rely on whether a job terminated because it was temporary, which misses all individuals who left temporary jobs for other reasons (e.g., to take a noncontingent job before their temporary job ended).

[9] The rate of contingent workers by the BLS's "estimate 3" was 4.9% in 1995 and 4.0% in 2001. That overall contingency rates in the U.S. have varied directly with unemployment in the recent past is also consistent with arguments from Europe that the intensity of contingent jobs increases with rising unemployment, which makes it harder for job-seekers who prefer employment in noncontingent jobs to satisfy their preference (de Grip, Hoevenberg and Willems 1997).

[10] In 1997, 72% of French exports and 82% of imports were in the manufacturing sector, while 15% of exports and 11% of imports were in the agricultural sector.

[11] The index of dissimilarity equals ½ times the sum of the absolute differences in the proportion of contingent workers in the two countries who are located in each of the industries of table 2. The relative weight of each industry in this calculation will thus be a function of the intensity of contingent jobs in that industry and of the relative size of that industry compared with other industries. In the first row, (D1) we computed the index of dissimilarity for the two countries under the assumption that the overall industry distribution in both countries was the 1995 industry distribution found in the U.S. in 1995. Under this assumption, all dissimilarity between the countries comes from the difference in the industry-specific intensity rates. In reality, the industry distribution for France and the U.S. are not equal. The French manufacturing and construction industries account for about 1/3 of the salaried workforce vs. less than 22% in the U.S., while trade and community, social and personal services are correspondingly larger in the U.S. The second row (D2) takes account of these differences by standardizing the French calculations on the 1991 French industry distribution and standardizing the U.S. on the 1995 U.S. distribution. As a third measure, we fit a loglinear model to the French and U.S. data that allows the nations to vary in industrial distribution, allows the nations to vary in the overall intensity of contingent jobs, allows contingent jobs to vary by industry, but specifies that the contingency by industry interaction does not vary by country. The third row reports the deviance (G^2) for these models. In the computation of the deviance, we fixed the overall sample size for each country at 50,000 to eliminate any impact on the computation from fluctuations in sample size.

[12] A geometric proof of this assertion is available from the authors.

[13] The industries with the largest deviance residuals (the sum of the square of all deviance residuals equals the total deviance, or lack of fit) are private household services, education, other community, social and personal services, real estate, wholesale and retail trade, and agriculture). The deviance residuals for education are actually the second largest for any of the industries, because France had an exceptionally high rate of contingent jobs in this industry in comparison to the rate of contingent jobs in other French industries.

[14] These are the industries whose deviance residual was greater than unity in favor of the U.S. in our loglinear analysis of the 2001 data.

[15] These are the industries whose deviance residual was greater than unity in favor of France in our loglinear analysis of the 2001 data.

[16] Median differences are not sensitive to the size of outliers (rare matches where the difference in log wage or log compensation was very large, and whose impact on the sample mean would be a function of how we capped or trimmed these values). The test statistic for the sign test, n^+ is the number of differences that are greater than zero. Under the null hypothesis that the probability of a difference being positive is equal to the probability of a difference being negative, then n^+ is Binomially distributed, i.e., $n^+ \sim \text{Binomial}(n,p=1/2)$, where n is the total number of matched pairs. The test was implemented in Stata.

[17] Note that the estimated propensity for being in a contingent job is estimated to be a function of lagged wage (or zero if not working) as opposed to the current wage. Because the current wage is arguably a consequence of contingent job status, we do not want to confuse the consequences of one's employment status with the propensity to be in that status in the first place.

[18] In our analyses, job information is based on the "CPS" job. The CPS job is defined as the "current or most recent job" or (if multiple jobs) the job at which R worked the most hours.

[19] For the U.S., we could not match 3% of the contingent and 6% of the low tenure treated cases. However, all unemployed treated cases were matched. For France, 2% of contingent and 1% respectively of low tenure and unemployed treated cases could not be matched.

[20] For the change in log wage analysis, those not working were assigned a wage of $1 (which implies a log wage of zero). Because we do median comparisons for analyses involving the change in log wage, the results are unaffected by the specific positive wage value that we choose for those not working in the change in log wage analysis.

[21] Because the French data lack information about prior wages, we matched using the information on prestige of first job in place of lagged wages. As in the American case, we avoided using prestige of 1988 job to avoid confusing the propensity of being in a contingent job with the possible consequences of being in a contingent job. We also used 0.25 standard deviation caliper matching on the French data where we further forced the matched cases to lie within 5 prestige points of each other (with perfect matching on gender as well).

[22] Column 3 of table 11 allows one to interpret compensation differences in percentage terms as opposed to the absolute differences (in French francs) reported in column 2. Note that these differences in log compensation between the treatment and the control group involve wage levels, and thus are not directly comparable to the differences in the *change* in log compensation over two or four years between the treatment and the control group that are reported in tables 9 and 10 for U.S. workers.

[23] The exchange rate was FF5.3346 per U.S. dollar on May 3, 1993 (source: Bank of Canada). The most comparable estimate for American workers would be somewhat higher than the 2000* $1.44 or 2000* $2.77/hour figures used in the text, because this figures assume that there are no differences in hours worked in the future year for workers who were or who were not in a contingent job in the treatment year.

[24] Hipple (1999, table 3) found a two year displacement rate of 5.5% for those with fewer than 3 years of job tenure. For higher tenured groups, the two-year displacement rate was: 3.7% (for 3-4 years of tenure), 3.3% (for 5-9 years of tenure), 2.4% (for 10-14 years of tenure), and 2.5% (for 15-19 years of tenure).

[25] We have adjusted the transition rates reported in Givord and Maurin (2002) by 0.9, because, as they estimate, about 90% of these transitions are involuntary.

[26] Furthermore, it is likely that the French rates underestimate displacement because some workers who are displaced find new jobs without an intervening spell of unemployment (Margolis 2000).

[27] Our findings are consistent with published OECD (1997) statistics, which come from the European Community Labour Force Survey for France, and the CPS for the U.S. They show that

average tenure on the job for French workers aged 25-44 was 9.0 years in 1995 vs. 6.2 years in the United States. They also show that 15% of all French workers in 1995 (regardless of age) had less than one year of tenure on the job, vs. 26% in the U.S. Finally, and again consistent with our data, they show a rising risk of insecurity in France, with 12.2% of the French labor force having less than one year of tenure in 1985 vs. 14.4% in 1995.

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Table 1. Proportion of Workers in Contingent Jobs, by ISIC industry group for American Male and Female Workers, February 1995 and 2001.

	1995	2001	Odds Ratio
A - Agriculture, hunting and forestry	0.049	0.056	1.2
C - Mining and quarrying	0.027	0.010	0.4
D – Manufacturing	0.030	0.020	0.7
E - Electricity, gas and water supply	0.037	0.008	0.2
F – Construction	0.075	0.056	0.7
G - Wholesale and retail trade; Repair of motor vehicles, motorcycles and personal and household goods	0.025	0.024	1.0
H - Hotels and restaurants	0.051	0.063	1.3
I - Transport, storage and communications	0.027	0.016	0.6
J - Financial intermediation	0.018	0.012	0.6
K – Real estate, renting and business activities	0.072	0.051	0.7
L – Public administration and defense; Compulsory social security	0.036	0.031	0.9
M – Education	0.123	0.097	0.8
N - Health and Social work	0.046	0.039	0.8
O – Other community, social and personal service activities	0.030	0.027	0.9
P - Private households with employed persons	0.177	0.101	0.5

Source: Current Population Survey, 1995 and 2001.
Note: The CPS definition 3 of contingent jobs was used here, but it was modified to exclude the self-employed. Definition 3 of contingent jobs includes self-employed workers and independent contractors with tenure and expectation of continued employment of one year or less, as well as temporary workers and contract workers, regardless of their tenure or expectation of employment duration.
Due to the very small number of observations in these categories, results for the B-Fishing and Q-Extra-territorial organizations and body industries were omitted from these tables.

Table 2. Proportion of Workers in Contingent Jobs, by ISIC industry group for French Male and Female Workers.

	1982	1991	1995	2001	Odds Ratio 82-91	Odds Ratio 91-01
A - Agriculture, hunting and forestry	0.004	0.026	0.055	0.087	6.9	3.5
C - Mining and quarrying	0.017	0.014	0.051	0.067	0.8	5.1
D – Manufacturing	0.016	0.075	0.098	0.137	5.0	2.0
E - Electricity, gas and water supply	0.013	0.034	0.062	0.082	2.7	2.5
F – Construction	0.032	0.079	0.099	0.126	2.6	1.7
G - Wholesale and retail trade; Repair of motor vehicles, motorcycles and personal and household goods	0.032	0.070	0.082	0.106	2.3	1.6
H - Hotels and restaurants	0.045	0.119	0.134	0.133	2.9	1.1
I - Transport, storage and communications	0.011	0.050	0.095	0.100	4.6	2.1
J - Financial intermediation	0.012	0.042	0.048	0.052	3.5	1.2
K – Real estate, renting and business activities	0.024	0.079	0.098	0.109	3.5	1.4
L – Public administration and defense; Compulsory social security	0.014	0.145	0.315	0.367	11.9	3.4
M – Education	0.182	0.311	0.512	0.456	2.0	1.9
N - Health and Social work	0.015	0.094	0.159	0.143	6.6	1.6
O – Other community, social and personal service activities	0.050	0.176	0.228	0.239	4.1	1.5
P - Private households with employed persons	0.003	0.034	0.040	0.064	11.8	1.9

Source: French Labor Surveys 1982-2001.

Note: Due to the very small number of observations in these categories, results for the B-Fishing and Q-Extra-territorial organizations and body industries were omitted from these tables.

Table 3. A Comparison of French and American Use of Contingent Jobs, by Industry

	Odds Ratio Fr82-US95	Odds Ratio Fr91-US95	Odds Ratio Fr95-US95	Odds Ratio Fr 01-US95	Odds Ratio Fr01-US01
A – Agriculture, hunting and forestry	0.1	0.5	1.1	1.9	1.6
C - Mining and quarrying	0.6	0.5	2.0	2.6	7.2
D – Manufacturing	0.5	2.7	3.5	5.2	8.0
E - Electricity, gas and water supply	0.3	0.9	1.7	2.3	11.5
F – Construction	0.4	1.0	1.4	1.8	2.4
G - Wholesale and retail trade; Repair of motor vehicles, motorcycles and personal and household goods	1.3	3.0	3.5	4.7	4.9
H - Hotels and restaurants	0.9	2.5	2.9	2.9	2.3
I - Transport, storage and communications	0.4	1.9	3.8	4.0	6.8
J - Financial intermediation	0.7	2.3	2.7	2.9	4.7
K – Real estate, renting and business activities	0.3	1.1	1.4	1.6	2.3
L – Public administration and defense; Compulsory social security	0.4	4.5	12.3	15.5	17.9
M – Education	1.6	3.2	7.5	6.0	7.8
N - Health and Social work	0.3	2.1	3.9	3.4	4.1
O – Other community, social and personal service activities	1.7	6.8	9.5	10.1	11.4
P - Private households with employed persons	0.0	0.2	0.2	0.3	0.6
D1 (Index of Dissimilarity)	0.29	0.19	0.20	0.20	0.20
D2 (Index of Dissimilarity)	0.23	0.26	0.25	0.28	0.27
D3 (Deviance)	528	594	876	765	574

Source: French Labor Force Surveys, 1982-2001; CPS 1995 and 2001.
Note: Due to the very small number of observations in these categories, results for the B-Fishing and Q-Extra-territorial organizations and body industries were omitted from these tables.
D1 is computed by standardizing the industry distribution for both countries on the 1995 U.S. distribution
D2 is computed by standardizing the U.S. on the 1995 U.S. distribution, and France on the 1991 French distribution.
D3 is the Deviance (G^2) from a loglinear model that allows the rate of contingent jobs to vary by country, the industry distribution to vary by country, and the rate of contingent jobs to vary by industry, but specifies no three way interaction between these variables. The samples were rescaled for each country in each year to equal 50,000 in order to eliminate the impact of fluctuating sample sizes across countries and year on the computed deviance.

Table 4. Mean Wages Relative to National Averages, and Proportion of Government Workers per Industry in France and the U.S. in 2001.

	Prop. of National Mean Wage for France		Prop. of National Mean Wage for the U.S.		Prop. Govt. Workers per Industry	
	Industry Mean	Industry 20th Percentile	Industry Mean	Industry 20th Percentile	France	U.S.
A - Agriculture, hunting and forestry	0.7124	0.4743	0.6811	0.3693	0.0091	0.0177
C - Mining and quarrying	1.0686	0.6159	1.1358	0.4611	0.0000	0.0000
D – Manufacturing	0.9849	0.5788	1.1358	0.3977	0.0046	0.0032
E - Electricity, gas and water supply	1.3160	0.7636	1.0757	0.3743	0.2202	0.2687
F – Construction	0.8570	0.5529	1.2473	0.4110	0.0003	0.0560
G - Wholesale and retail trade; Repair of motor vehicles, motorcycles and personal and household goods	0.8610	0.5255	1.0098	0.3822	0.0009	0.0039
H - Hotels and restaurants	0.7247	0.4506	0.7425	0.4010	0.0220	0.0078
I - Transport, storage and communications	1.0365	0.5988	0.6755	0.3831	0.2404	0.1357
J - Financial intermediation	1.3085	0.7118	1.1274	0.3952	0.0205	0.0142
K – Real estate, renting and business activities	1.0781	0.5516	1.1901	0.4047	0.0435	0.0168
L – Public administration and defense; Compulsory social security	1.0048	0.5742	1.2450	0.3932	0.6718	0.9558
M – Education	1.3687	0.5821	1.2216	0.3825	0.6180	0.7180
N - Health and Social work	0.9425	0.5221	1.0677	0.3791	0.3230	0.1467
O – Other community, social and personal service activities	0.9909	0.5118	0.8864	0.3849	0.1026	0.0991
P - Private households with employed persons	0.6266	0.3976	0.9642	0.3496	0.0005	0.0082
Number of Observations					71642	38777

Source: French Labor Force Survey 2001.
Note: The exchange rate for May 1, 2001 was used to convert French Francs in US$, and the Comparative Price Levels published by the OECD for December 2001 were used to adjust for purchasing power parities.
Due to the very small number of observations in these categories, results for the B-Fishing and Q-Extra-territorial organizations and body industries were omitted from these tables.

Table 5. Probit Estimates of the Effects of Contingent Jobs on Employment Two and Four Years Later for American Male and Female Workers, 29-39 Years Old in 1994.

	Men			Women		
	Employed in 96	Employed in 98	Employed in 98	Employed in 96	Employed in 98	Employed in 98
Education	0.115**	0.04	0.085**	0.041	0.002	0.042
	(3.91)	(1.53)	(3.18)	(1.39)	(0.09)	(1.59)
Experience	0.028	0.001	0.01	0.023	-0.003	0.008
	(1.35)	(0.07)	(0.47)	(1.22)	(0.15)	(0.44)
Race:						
Black	-0.278**	-0.165	-0.123	0.088	0.069	0.141
	(3.22)	(1.88)	(1.43)	(1.12)	(0.86)	(1.73)
Other race	-0.397	-0.165	-0.265	0.021	0.031	-0.061
	(1.61)	(0.80)	(1.32)	(0.12)	(0.20)	(0.37)
Log(wage at t-2 yrs)	0.262*	0.408**		0.228*	0.373**	
	(2.57)	(3.88)		(2.52)	(4.21)	
Log(wage at t-4 yrs)			0.503**			0.172*
			(5.02)			(2.05)
Contingent Job, t-2 yrs	-0.041	-0.338		-0.566**	-0.584*	
	(0.15)	(1.60)		(2.81)	(2.54)	
Contingent Job, t-4 yrs			-0.296			-0.427*
			(1.00)			(2.01)
Constant	-0.868	0.138	-0.849	-0.143	0.419	0.102
	(1.43)	(0.21)	(1.37)	(0.25)	(0.73)	(0.19)
Number of Observations	2947	2989	2841	2555	2722	2522

Source: NLSY79 1994-1998.
Robust z statistics in parentheses
* = p < .05, ** = p < .01, two-sided.

Table 6. Probit Estimates of the Effects of Contingent Jobs on Employment in 1993 for French Workers Employed and Aged Between 29 and 39 Years Old in May 1988.

	Women	Men
Highest degree:		
> 2 year Tertiary Education	-	-
2 year Tertiary Education	0.19	-0.12
	(0.73)	(-0.43)
Baccalauréat	0.37	0.04
	(1.3)	(0.15)
CAP, BEP	-0.16	0.04
	(-0.62)	(0.16)
BEPC	0.28	0.01
	(0.88)	(0.04)
no degree, CEP	-0.25	-0.07
	(-0.86)	(-0.26)
Experience (in years)	0.01	0.00
	(1.00)	(0.00)
Contingent job in 1988	-0.53**	-0.87**
	(-2.65)	(-4.14)
Prestige of the job in 1988	0.08	0.13
	(1.0)	(1.9)
Intercept	1.42**	1.82**
	(4.7)	(6.7)
Number of observations	1550	2240

Source: FQP Survey, 1993, INSEE.
T-values in parentheses.
* = p < .05, ** = p < .01, two-sided.
Note: The Baccalauréat is awarded to those who pass an exam following the end of secondary education, and is required for higher education. The CAP is a national certificate for laborers and skilled workers. The BEP qualifies holders for a series of trades in a technological vocational sector. CEP is a certificate of primary education.

Table 7. OLS Regression Estimates of the Effects of Contingent Jobs on Subsequent Wages, American Male and Female Workers 29-39 Years Old in 1994.

	Males			Females		
	Ln(wage96)	Ln(wage98)	Ln(wage98)	Ln(wage96)	Ln(wage98)	Ln(wage98)
Education	0.036**	0.042**	0.049**	0.030**	0.023**	0.038**
	(7.04)	(7.82)	(8.32)	(4.60)	(3.06)	(5.26)
Experience	0.002	0.002	0.000	-0.006	-0.002	-0.004
	(0.69)	(0.56)	(0.11)	(1.67)	(0.41)	(0.87)
Race:						
Black	-0.059**	-0.056**	-0.066**	-0.019	-0.061**	-0.072**
	(3.21)	(3.23)	(3.48)	(1.12)	(3.71)	(4.28)
Other race	-0.02	-0.024	0.021	0.084	-0.066	0.001
	(0.35)	(0.70)	(0.47)	(1.73)	(1.84)	(0.02)
Log(wage at t-2 yrs)	0.721**	0.691**		0.691**	0.729**	
	(27.58)	(29.27)		(24.31)	(29.73)	
Log(wage at t-4 yrs)			0.646**			0.620**
			(24.96)			(19.74)
Contingent Job, t-2 yrs	-0.11	-0.120*		-0.06	-0.04	
	(1.36)	(2.11)		(1.46)	(0.62)	
Contingent Job, t-4 yrs			-0.143*			-0.129
			(1.98)			(1.82)
Constant	0.286**	0.306**	0.397**	0.484**	0.451**	0.571**
	(2.92)	(2.63)	(3.38)	(3.77)	(2.91)	(4.21)
N of Observations	2713	2782	2600	2242	2389	2181
R-squared	0.42	0.42	0.33	0.41	0.42	0.3

Source: NLSY79 1994-1998.
Robust t-values in parentheses
*= p < .05, ** = p < .01, two-sided.

Table 8. OLS Regression Estimates of the Effects of Contingent Jobs on Future Wages for French Workers Employed and Aged 29 to 39 in May 1988.

	Women	Men
Highest degree:		
> 2 year Tertiary Education	-	-
2 year Tertiary Education	-0.14	-0.21**
	(-1.8)	(-3.0)
Baccalauréat	-0.22**	-0.38**
	(-2.8)	(-5.3)
CAP, BEP	-0.30**	-0.48**
	(-3.8)	(-6.9)
BEPC	-0.29**	-0.43**
	(-3.22)	(-6.14)
No degree, CEP	-0.52**	-0.56**
	(-5.8)	(-8.0)
Experience (in years)	0.006	0.006
	(1.2)	(1.5)
Contingent job in 1988	-0.43**	-0.29**
	(-5.4)	(3.2)
Prestige of the job in 1988	0.21**	0.18**
	(10.5)	(9.0)
Intercept	11.47**	11.79**
	(127.4)	(168.4)
Number of observations	1550	2240

Source: FQP Survey, 1993, INSEE.
T-values in parentheses.
* = $p < .05$, ** = $p < .01$, two-sided.
Note: The Baccalauréat is awarded to those who pass an exam following the end of secondary education, and is required for higher education. The CAP is a national certificate for laborers and skilled workers. The BEP qualifies holders for a series of trades in a technological vocational sector. CEP is a certificate of primary education.

Table 9. Effect on Employment and High Tenure Employment (as a proportion) and Wages (in constant dollars) Two Years Later of Contingency, Unemployment and Low Tenure in 1994, 1996 and 1998 by gender, for US workers 29-41 years old.

		Conditional on Working at Time 2			Unconditional on Working at Time 2[a]		
	Employment	Wage	Wage Change	Change in ln(Wage)[c]	Wage	Wage change	Change in ln(Wage)[c]
Contingency							
All	-0.12**	-1.06	-0.23	0.03	-1.99**	-1.05	-0.08
(N=309)	(-3.7)	(-1.9)	(-0.3)		(-3.2)	(-1.6)	
(N=238)							
Men	-0.12*	-1.78*	0.51	0.01	-2.68*	-0.17	-0.12
(N=138)	(-2.5)	(-2.2)	(0.4)		(-2.6)	(-0.1)	
(N=109)							
Women	-0.12**	-0.48	-0.83	0.01	-1.47*	-1.74*	-0.06
(N=171)	(-2.7)	(-0.6)	(-1.0)		(-2.0)	(-2.2)	
(N=129)							
Unemployment							
All	-0.12**	-2.10**			-2.88**		
(N=731)	(-5.0)	(-3.7)			(-5.8)		
(N=545)							
Men	-0.17**	-2.12*			-3.60**		
(N=344)	(-5.1)	(-2.4)			(-4.7)		
(N=249)							
Women	-0.07*	-2.15**			-2.28**		
(N=386)	(-2.2)	(-3.0)			(-3.6)		
(N=296)							
Low Tenure[b]							
All	-0.04**	-0.25	0.88**	0.05**	-0.82*	0.38	0.03**
(N=2808)	(-4.0)	(-0.7)	(2.8)		(-2.4)	(1.3)	
(N=2401)							
Men	-0.04**	-0.30	0.80	0.06**	-0.32	0.50	0.04**
(N=1437)	(-3.1)	(-0.6)	(1.7)		(-0.6)	(1.1)	
(N=1271)							
Women	-0.04**	-0.84	0.97*	0.05**	-1.31**	0.26	0.02
(N=1371)	(-2.6)	(-1.9)	(2.4)		(-3.1)	(0.7)	
(N=1130)							

Note: Matching was done using 0.25 caliper along with perfect matching on gender and survey year, and constrained matching on wages. See text for details.
[a] Those not working at time 2 are assigned a wage of 0.
[b] Contingent workers are excluded from these analyses.
[c] The median differences are reported here. See text for details.
Source: NLSY79 1994-2000
T-values in parentheses
* = p < .05, ** = p < .01, two-sided.
N is the number of matched pairs of observations– The first N is for the "Conditional on working at time 1" sample, and the N below it is for the "Conditional on working at time 1 and 2" sample.

Table 10. Effect on Employment, High Tenure Employment and Wages Four Years Later of Contingency, Unemployment, and Low Tenure Status in 1994 and 1996 by Gender, for US Workers 29-39 Years Old.

		Conditional on Working at Time 2			Unconditional on Working at Time 2[a]		
	Employment	Wage	Wage Change	Change in ln(Wage)[c]	Wage	Wage Change	Change in ln(Wage)[c]
Contingency							
All	-0.03	-1.44	-0.68	0.02	-1.61	-1.10	0.03
(N=216)	(-0.9)	(-1.6)	(-0.6)		(-1.8)	(-1.0)	
(N=182)							
Men	-0.08	-2.77	-0.11	0.03	-3.43	-1.15	0.03
(N=97)	(-1.4)	(-1.5)	(-0.04)		(-1.9)	(-0.5)	
(N=84)							
Women	-0.001	-0.41	-1.17	0.01	-0.23	-1.09	0.03
(N=119)	(-0.01)	(-0.5)	(-1.2)		(-0.3)	(-1.2)	
(N=98)							
Unemployment							
All	-0.05	-2.04**			-2.20**		
(N=539)	(-1.9)	(-3.2)			(-3.3)		
(N=429)							
Men	-0.06	-2.29*			-2.68*		
(N=257)	(-1.5)	(-2.1)			(-2.3)		
(N=209)							
Women	-0.04	-1.52*			-1.61*		
(N=281)	(-1.1)	(-2.4)			(-2.4)		
(N=219)							
Low Tenure[b]							
All	-0.04**	0.15	1.06*	0.04*	-0.44	0.73	0.02
(N=1958)	(-3.2)	(0.4)	(2.5)		(-1.1)	(1.8)	
(N=1692)							
Men	-0.04**	0.27	0.88	0.02	-0.39	0.45	0.01
(N=1013)	(-2.7)	(0.4)	(1.4)		(-0.6)	(0.7)	
(N=896)							
Women	-0.04	-0.01	1.27*	0.05*	-0.50	1.02	0.03
(N=945)	(-1.9)	(-0.02)	(2.4)		(-1.0)	(1.9)	
(N=796)							

Note: Matching was done using 0.25 caliper along with perfect matching on gender and survey year, and constrained matching on wages. See text for details.

[a] Those not working at time 2 are assigned a wage of 0.

[b] Contingent workers are excluded from these analyses.

Source: NLSY79 1994-2000.

T-values in parentheses

* = p < .05, ** = p < .01, two-sided.

N is the number of matched pairs of observations – The first N is for the "Conditional on working at time 1" sample, and the second N is for the "Conditional on working at time 1 and 2" sample.

Table 11. Effect on Employment in 1993 and Total Compensation in 1992 of Contingency, Unemployment and Low Tenure in 1988 by Gender, for French Workers 29-39 Years Old in 1988

	Employment in 1993	Total compensation in 1992 (in 1,000s of FF)	Natural log of total compensation in 1992 (in 1,000s of FF)[b]
Contingency in 88			
All	-0.12**	-22.79*	-0.29*
(N=117)	(-3.2)	(-2.4)	
Men	-0.15**	-18.76	-0.31*
(N=52)	(-2.7)	(-1.6)	
Women	-0.09	-26.01	-0.13
(N=65)	(-1.8)	(-1.8)	
Unemployment in 88			
All	-0.08*	-39.18**	-0.51**
(N=148)	(-2.4)	(-6.2)	
Men	-0.02	-43.99**	-0.42**
(N=65)	(-0.3)	(-4.0)	
Women	-0.13**	-35.40**	-0.54**
(N=83)	(-3.2)	(-5.4)	
Low tenure in 88[a]			
All	-0.03	-9.64	-0.13
(N=289)	(-1.2)	(-1.4)	
Men	-0.03	-6.38	-0.12
(N=191)	(-1.0)	(-0.7)	
Women	-0.03	-15.99	-0.15
(N=98)	(-0.7)	(-1.8)	

Source: FQP Survey 1993, INSEE.
[a] Contingent workers are excluded from these analyses.
[b]The median differences are reported here. See text for details.
T-values in parentheses
* = p < .05, ** = p < .01, two-sided.
N is the number of matched pairs of observations

Table 12. Proportion of Workers in Insecure Statuses by Gender, U.S. and France 2001.

	U.S. 2001			France 2001		
	All	Men	Women	All	Men	Women
18-28 years						
Unemployed	7.3%	8.2%	6.2%	16.8%	14.5%	19.5%
Contingent	6.7%	6.6%	6.9%	37.2%	35.8%	39.1%
Low tenure but not contingent	34.5%	32.4%	36.7%	18.5%	19.6%	17.2%
No. of obs.[a]	7850	4014	3836	13928	7443	6485
	7284	3693	3591	11575	6380	5195
29-39 years						
Unemployed	3.4%	3.2%	3.8%	10.2%	7.8%	12.9%
Contingent	3.0%	2.8%	3.3%	10.8%	9.4%	12.6%
Low tenure but not contingent	16.4%	14.9%	18.1%	10.3%	10.6%	9.9%
No. of obs.[a]	10399	5516	4883	24506	13185	11321
	10033	5330	4703	22108	12232	9876
40-64 years						
Unemployed	2.7%	2.8%	2.6%	9.1%	7.7%	10.8%
Contingent	2.7%	2.6%	2.8%	5.5%	4.4%	6.9%
Low tenure but not contingent	9.3%	8.2%	10.5%	4.6%	4.6%	4.7%
No. of obs.[a]	18344	9576	8768	40316	21451	18865
	17865	9317	8548	36718	19869	16849

Source: Current Population Survey, Contingent Workers Supplement, 2001; French Labour Force Surveys 2001.
[a] The first number of observations reported refers to the population in the labor force, while the second refers to the employed population (from which both the contingency and non-contingent low tenure rates were calculated).