# Reasons for the continuing growth of part-time employment

*Involuntary part-timers—workers who would prefer full-time jobs—account for most of the growth in part-time employment since 1970; the rise in the share of these workers appears to be driven by employer demand for scheduling flexibility and a work force that commands lower compensation*

Chris Tilly

Part-time employment makes up a growing share of jobs in the United States. At first glance, this trend might appear to be driven by workers' preferences: aren't employers simply accommodating the wishes of housewives, students, retirees, and others who prefer short-hour schedules? This explanation might have been valid during the 1950's and 1960's. However, since 1969, part-time jobs have expanded primarily because more employers view them as a means to cut labor costs, and not because more workers want them. In fact, *involuntary* part-time workers—part-time workers who would prefer full-time hours—account for most of the growth in part-time employment's share of the work force since 1969. To explain the continuing expansion of part-time employment, we must look to changes in labor demand, not labor supply.

## Long-term growth

Part-time employees comprise almost one-fifth of the U.S. work force. About 20 million people in the economy's nonagricultural sectors worked part-time[1] in 1989, making up 18.1 percent of persons at work. A full 92 percent of these part-timers reported that they *usually* worked part time, and almost one-quarter of them—close to 5 million people—were involuntary part-time workers who would have preferred a full-time job. (These figures represent averages over 12 months; about twice as many people worked part time at some time during the year.[2])

Since the late 1950's, the fraction of those at work consisting of part-timers has grown gradually, rising from 12.1 percent in 1957 to its current 18 percent. In the short run, the incidence of part-time employment has climbed during economic recessions and dipped during expansions. (See chart 1.) But over the long run, increases have exceeded decreases, so that, on the average, the fraction of the work force employed part-time has trended upward at roughly 0.19 percentage point per year since the 1950's. The long-run increase in the rate of part-time employment was most rapid during the 1970's.

The expansion of part-time employment might appear even more rapid if U.S. statistics counted the number of part-time *jobs*, rather than the number of part-time workers. The number of multiple jobholders climbed from 4.9 percent of the work force in 1979 to a record high of 6.2 percent in 1989. Because 85 percent of multiple jobholders work 24 hours or less on their second job, but most multiple jobholders work total hours exceeding 35 hours per week, this marks an increase in part-time jobs without a corresponding increase in the number of persons counted as working part time.[3]

Until about 1970, the growth trend was driven by expanding voluntary part-time employment, as women and young people desiring part-time hours streamed into the work force. But since that time, the increase in voluntary part-time employ-

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ment has leveled off, and the growing incidence of involuntary part-time work has propelled the upward trend. Of the 2.6-percentage-point increase in the rate of part-time employment between 1969 and 1989, 1.7 percentage points are accounted for by growth in involuntary part-time work. In other words, companies are creating part-time jobs even though workers do not want them.

## Classifying part-time jobs

Why has the fraction of the working population employed part time grown faster than the fraction who want part-time jobs?

To start with, the categories of voluntary and involuntary part-time work are not terribly helpful in explaining why, where, and how part-time employment is used. Instead, part-time work can be broken down into three broad categories of *short-time, secondary* part-time jobs, and *retention* part-time jobs.[4] In goods-producing industries predominantly employing men, such as manufacturing, construction, and mining, short-time is a common form of part-time employment. Short-time employment occurs when, instead of laying workers off during a business downturn, an employer temporarily reduces workers' hours. When sales revive, such employers typically restore full-time hours. This practice has the advantage for the employer of keeping the workers closely attached to the firm during the slow period, and employees may also prefer it to layoffs in some cases. The prevalence of short-time part-time work in the goods-producing industries is reflected in the fact that about half of part-time employment is involuntary in these industries, compared to about one-quarter in the economy as a whole.

As important as short-time may be in particular industries, it makes up a small fraction of part-time employment overall—less than one-tenth.[5] An overwhelming 90 percent of part-time employment occurs in the service industries, and in these sectors, secondary and retention part-time employment are most important. Secondary part-time jobs are the main form of "bad" part-time jobs—bad in terms of low pay, lack of advancement opportunity, and high turnover—in services. Retention part-time jobs, in contrast, are "good" jobs in terms of pay, skill requirements, advancement opportunity, and so forth.

*Part-time employees are almost one-fifth of the U.S. work force.*

As noted, secondary part-time jobs are characterized by low skill requirements, low pay and fringe benefits, low productivity, and high turnover. Managers cite low compensation and scheduling flexibility as the key advantages they derive from this form of part-time employment. Secondary part-time employment thus represents one form of what labor economists call a "secondary" labor market—a set of jobs characterized by high turnover and little opportunity for advancement.

Retention part-time jobs, on the other hand, are "good" part-time jobs created to retain (or in some cases attract) valued employees whose life circumstances prevent them from working full-time—particularly women with young children. Retention part-time arrangements tend to be offered only to workers in relatively skilled jobs. Unlike secondary part-time employment, retention part-time work involves high compensation, high productivity, and low turnover—all characteristics of what labor economists call a "primary" labor market. Rather than gaining schedule flexibility as an advantage, managers often must accommodate the worker's schedule.

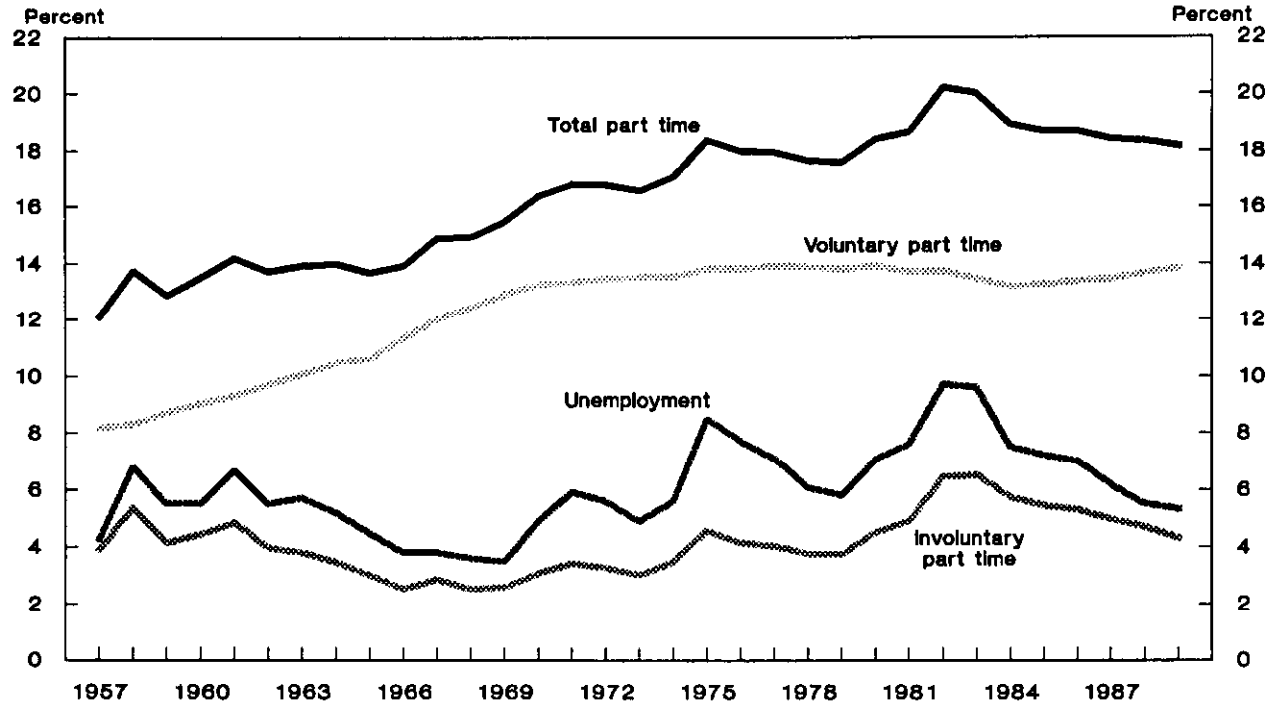
Table 1. **Age and sex composition of the labor force and rate of part-time employment, 1969, 1979, and 1989**

| Age and sex | 1969 | | 1979 | | 1989 | |
|---|---|---|---|---|---|---|
| | As percent of at-work population | Percent part time | As percent of at-work population | Percent part time | As percent of at-work population | Percent part time |
| All persons ages 16 to 21 | 12.8 | 40.6 | 14.0 | 41.7 | 10.3 | 46.3 |
| Women ages 22 to 44 | 17.3 | 22.7 | 23.1 | 22.5 | 27.7 | 21.9 |
| Women ages 45 to 64 | 13.2 | 22.5 | 11.3 | 24.4 | 11.6 | 23.8 |
| Men ages 22 to 64 | 53.2 | 3.7 | 48.9 | 4.8 | 47.8 | 6.7 |
| All persons age 65 and over | 3.5 | 41.1 | 2.7 | 52.9 | 2.6 | 52.4 |
| Total | 100.0 | 15.5 | 100.0 | 17.6 | 100.0 | 18.1 |
| Total, holding within-group rates at 1969 levels | — | — | — | 16.4 | — | 15.9 |
| Total, holding within-group rates at 1979 levels | — | — | — | — | — | 17.0 |

NOTE: Includes only nonagricultural workers at work.

SOURCE: Estimates were computed from the BLS publication *Employment and Earnings* for the years 1970, 1980, and 1990.

**Chart 1. Unemployment rates and rates of part-time employment, 1957–89**




NOTE: Rates are total persons in the given labor force state, divided by the total labor force.

SOURCE: Data for 1957–87 are from *Labor Force Statistics Derived from the Current Population Survey, 1948–87*, Bulletin 2307 (Bureau of Labor Statistics, August 1988); data for 1988–89 are from *Employment and Earnings*, January 1989 and January 1990.

Considerable evidence points to secondary part-time employment as the most common type of part-time job. Almost two-thirds of all part-timers work in clerical, sales, and service occupations. These occupations are predominantly low-paid and low-skilled. Even full-time clerical workers earn only 83 percent of the median full-time weekly wage; service workers earn 64 percent; and salesworkers just come out equal to the median.[6]

The lower average pay and higher average turnover of part-time jobs also indicates that most of these jobs fit the secondary profile. The median part-time worker earned 58 percent of the hourly wage of the median full-time worker in 1989.[7] More than one-quarter of part-time workers earned the minimum wage in 1984, compared to 1 in 20 full-timers.[8] In addition, part-time workers are much less likely to receive most major fringe benefits than are full-timers.[9] The average job tenure of a part-time worker is 3.4 years, well below the average of 5.7 years for full-time working women and 8.1 years for full-time working men.[10] Indeed, in retail chains studied by the author, part-time workers turned over as much as 10 times as rapidly as full-time workers, even within the same job classification.[11]

## The effect of demographic shifts

In searching for explanations of the growth trend for part-time work, it is helpful to separate the last two decades into two periods, 1969–79 and 1979–89.[12] Between 1969 and 1979, the rate of part-time employment grew relatively rapidly—climbing a total of 2.1 percentage points—and about half of the increase was due to the greater incidence of involuntary part-time employment. Between 1979 and 1989, total growth was slower—only half of a percentage point—but involuntary part-time work accounted for the entire increase.

A first possible explanation for growing part-time employment lies in recent demographic shifts in the work force. Part-time workers in the United States are primarily female, young, or old. Two-thirds of part-time workers are women, and another 16 percent are men ages 16 to 21 or 65 and over. Women with home responsibilities, students, and people of retirement age would be expected to prefer part-time schedules in many cases. So one might try to explain the growth of short-hours work by the influx of these groups—especially women—into the work force.

Of course, this hypothesis only offers an explanation for growing *voluntary* part-time em-

ployment, because it depends on groups of workers who prefer to work part time. Thus, demographic shifts would be expected to explain at most half of the increase in the rate of part-time employment during 1969–79, and none of the increase since 1979.

Statistical analysis confirms these expectations. The effect of demographic shifts from 1969 to 1979 can be approximated by holding the rate of part-time work within each age-gender group in the work force constant at 1969 levels, but allowing the age-gender composition of the work force to change as it actually did. Based on this approximation, demographic changes can account for 0.9 percentage points of the 2.1-percentage-point rise in part time employment during 1969–79—somewhat less than half (table 1). For the period 1979–89, the demographic shifts predict a *decrease* of 0.6 percentage points, rather than the 0.5-percentage-point increase that took place. So, as expected, they explain none of the later growth.

In both periods, most of the growth of part-time employment is due to increases in the rate of part-time work among youths (ages 16 to 21), prime-age men (ages 22 to 64), and older persons (age 65 and over). Interestingly, women's rate of part-time employment remained essentially unchanged over this period. In fact, women in the main child-rearing years (22 to 44) slightly decreased their rate of part-time employment: with their growing attachment to the work force, more women shifted to full-time work.

## Explanations that do not work

Because demographic shifts tell only a part of the story, we must seek other explanations for the climbing rate of part-time employment. It turns out that two possible causes for the ongoing growth can be eliminated: the increase is *not* explained by long-term growth in unemployment, or by a widening part-time/full-time wage differential.

Because involuntary part-time employment rates rise in times of high unemployment (chart 1), it might be possible that long-term growth in unemployment rates (at least through the early 1980's) has caused long-term growth in part-time employment. But, the evidence says no. A recent study shows that as much as 90 percent of the increase in the part-time share of employment remains even after controlling for changes in the unemployment rate.[13] In fact, the study's estimates suggest that, because of the underlying growth in involuntary part-time employment, unemployment would have to have been less than 1 percent in 1989—rather than the actual 5.3 percent—to bring the rate of involuntary part-time employment down to its 1969 level.

What about the possibility that full-time workers simply "became too expensive," causing employers to substitute part-timers wherever possible? This substitution could be conceptualized as movement along a downward-sloping demand curve for part-time labor, with employers responding to a lower (relative) price for part-time labor. The wage gap between part-time and full-time workers is indeed a substantial one—part-timers earned about 58 percent as much per hour as full-timers in 1989—but has not widened significantly over the last 15 years. A more likely suspect for increasing expense is the cost of fringe benefits. According to surveys by the U.S. Chamber of Commerce, fringe costs rose from 28 percent of total compensation in 1969 to 37 percent in 1988.[14] Because part-time workers are much less likely to receive fringe benefits than are full-timers, employers may be hiring more part-timers to minimize benefit costs.[15]

*Apparently, employers continue to create part-time jobs although workers do not want them.*

However, time-series regression analysis indicates that changes in the compensation (wage and benefit) gap have not contributed significantly to the recent growth of part-time employment. The part-time employment rate (*RATE*) was regressed on the unemployment rate (*URATE*) and a time trend (*TREND*), with and without a wage differential variable (*LWAGER*) and a fringe benefit differential variable (*LFRINGE*), according to the following specification:

$$RATE = \beta_0 + \beta_1 URATE + \beta_2 TREND + \beta_3 LWAGER + \beta_4 LFRINGE + \varepsilon$$

Table 2. **Results of ordinary least squares and two-stage least squares time series regression models of the rate of part-time employment, 1973–89**

| Variable | Ordinary least squares | | Two-stage least squares |
|---|---|---|---|
| | Version 1 | Version 2 | |
| *URATE* . . . | 0.53 (19.6) | 0.55 (23.6) | 0.59 (10.5) |
| *TREND* . . . | 0.00092 (12.1) | 0.0011 (10.5) | 0.0016 (3.5) |
| *LWAGER* . | — | –0.04 (2.6) | –0.13 (1.5) |
| *LFRINGE* . | — | –0.12 (2.3) | –0.30 (1.5) |
| Adjusted $R^2$ | 0.971 | 0.981 | 0.862 |

NOTE: Absolute values of t-statitics are indicated in parentheses. See text and appendix for description of variables and regression method.

Table 3. **Industry composition of the labor force and rate of part-time employment, 1969, 1979, and 1989**

| Industry | 1969 | | 1979 | | 1989 | |
|---|---|---|---|---|---|---|
| | As percent of at-work population | Percent part time | As percent of at-work population | Percent part time | As percent of at-work population | Percent part time |
| Construction | 6.0 | 8.6 | 6.0 | 10.5 | 5.9 | 10.5 |
| Durable manufacturing | 18.2 | 3.2 | 15.3 | 3.8 | 12.0 | 3.9 |
| Nondurable manufacturing | 12.3 | 7.8 | 9.9 | 8.6 | 8.3 | 8.1 |
| Transportation, communications, and public utilities | 7.3 | 7.8 | 7.0 | 9.0 | 7.3 | 8.7 |
| Trade | 18.5 | 26.3 | 20.7 | 30.0 | 21.4 | 29.7 |
| Finance | 5.1 | 10.5 | 6.2 | 11.9 | 7.1 | 11.5 |
| Services | 25.3 | 26.2 | 28.1 | 25.0 | 32.1 | 24.0 |
| Public administration | 6.5 | 6.2 | 5.9 | 6.6 | 5.3 | 5.8 |
| Mining | .7 | 5.0 | 1.0 | 4.0 | .6 | 4.8 |
| All industries | 100.0 | 15.1 | 100.0 | 17.1 | 100.0 | 17.6 |
| All industries, holding within-industry rates at 1969 levels | — | — | — | 16.2 | — | 17.2 |
| All industries, holding within-industry rates at 1979 levels | — | — | — | — | — | 18.1 |

NOTE: Includes only nonagricultural wage and salary workers at work.

SOURCE: Estimates were computed from the BLS publication *Employment and Earnings* for the years 1970, 1980, and 1990. Percent part time in mining for 1969, which was not published separately, was computed from available information.

(Precise definitions of the variables are given in the appendix.)

We would expect that larger full-time/part-time differentials in wages or fringe benefits would induce employers to hire more part-timers, yielding positive coefficients on *LWAGER* and *LFRINGE*. But, as results from specifications (1) and (2) in table 2 show, the estimated coefficients on these variables are negative. This is a puzzling finding, but certainly provides no evidence that a widening compensation gap is pushing employers to switch to part-time workers.

*Secondary part-time jobs are low-skilled and low-paid, and have high turnover.*

Because the wage is simultaneously determined by supply and demand, the equation shown above must be viewed as a reduced form. To deal with the simultaneity problem, the equation was re-estimated using two-stage least squares techniques. The proportions of the labor force accounted for by teenagers, retirement-age persons, and married women—all of which should shift the relative supply of part-time and full-time labor—were used as instruments. Results are shown in the last column of table 2. Once more, the estimated coefficients on the compensation differential variables are negative. In short, the long-term expansion of part-time employment results from shifts in the demand for part-time labor, not movement along a demand curve.

These results do not rule out the possibility that the existence of a compensation gap leads employers to switch from full-time to part-time employees. Rather, what they rule out is the notion that the *widening* of a compensation gap has led to increasing use of part-timers. The underlying impetus is not a growing compensation gap, but changing needs and strategies of employers.

## Growing demand by employers

If demographic movements, changes in unemployment, and a widening part-time/full-time wage gap can only explain a small part of the continuing increase in the proportion of part-time jobs, where does the rest of the explanation lie? The answer is twofold. First, the industry composition of employment has shifted away from manufacturing and toward industries such as trade and services that employ large numbers of part-timers. The reason why these industries employ so many part-time workers is that they are predominantly made up of firms that have adopted a low-wage, low-skill, high-turnover labor market, built in many cases around secondary part-time employment. The second major explanation is that, during the 1970's, larger numbers of jobs within *all* industries—including services and trade—were absorbed into this type of labor market. These changes have swelled the ranks of part-time workers even though the work force's desire for part-time jobs has not kept pace, resulting in the growth of involuntary part-time employment.

Much of the recent secular increase in part-time work can be explained by changes in the industry composition of employment, involving

the relatively rapid growth of the industries that use the most part-timers. As shown in table 3, if rates of part-time employment within each industry had remained at 1969 levels but each industry had followed its actual employment growth pattern from 1969 to 1979, the number of part-time workers would have risen from 15.1 percent of the work force to 16.2 percent—about halfway to the actual 1979 level of 17.1 percent.[16] Between 1979 and 1989, industry shifts account for "more" than the total increase—1 percentage point, compared to the actual 0.5-percentage-point rise—indicating that interindustry employment shifts were offset by other changes, such as demographic shifts.

The evidence suggests that the industry composition effect represents the growth of "bad" part-time employment rooted in secondary labor markets. Essentially all of the increase in the part-time employment rate accounted for by changes in industry shares in both periods is explained by the growth of trade and services. In fact, between 1969 and 1989, part-time workers in trade and services rose from 11 percent to 14 percent of all nonagricultural wage and salary workers, with about one-third of the increase taking place between 1979 and 1989. These are the industries where secondary labor markets are particularly prevalent—and where secondary part-time employment is most common.

The occupational slant of part-time job growth confirms this connection. Part-time employment grew fastest in less skilled white-collar occupations: part-time workers in clerical, sales, and service occupations climbed from 9.5 percent to 11.5 percent of all nonfarm workers between 1969 and 1989.[17]

Why has employment growth in the trade and service industries been so rapid? The reasons are several. These industries have grown in *relative* terms because the changing international division of labor has increasingly shifted manufacturing to other countries. The *absolute* level of demand for the output of the services and trade industries has expanded in a number of areas. Final demand for consumer services has grown via the commoditization of goods formerly produced at home (breakfast at McDonald's), in part because women entering the work force no longer provide many of these services for the family. Intermediate demand for producer services has boomed because of the growing importance of specialized business services—such as legal advice, advertising, and accounting—to the successful enterprise. Productivity growth in services and trade has been very slow (when positive), so that increases in output have translated directly into increases in employment. And finally, the use of low-cost labor has facilitated the growth in demand by enabling employers in these industries to keep prices relatively low despite lagging productivity growth.[18]

*A widening full-time/part-time pay gap can explain only a small part of the increase in part-time employment.*

Although the employment growth of industries that are heavy users of part-time labor is numerically important, the increase in part-time employment *within* industries is potentially more interesting, because it reflects not just changes in the composition of output, but changes in firms' behavior and strategies. As table 4 shows, between 1969 and 1979, the rate of part-time employment rose within every major industry except services and mining. Between 1979 and 1989, within-industry increases were negligible.[19]

Table 4. **Rates of total, voluntary, and involuntary part-time work, by industry, 1969, 1979, and 1989**

| Industry | Total | | | Involuntary | | | Voluntary | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1969 | 1979 | 1989 | 1969 | 1979 | 1989 | 1969 | 1979 | 1989 |
| Construction | 8.6 | 10.5 | 10.5 | 4.4 | 5.4 | 6.1 | 4.2 | 5.0 | 4.4 |
| Durable manufacturing | 3.3 | 3.8 | 3.9 | 1.4 | 1.5 | 1.6 | 1.9 | 2.3 | 2.3 |
| Nondurable manufacturing | 7.8 | 8.6 | 8.1 | 3.4 | 3.8 | 3.4 | 4.4 | 4.8 | 4.7 |
| Transportation, communications, and public utilities | 7.8 | 9.0 | 8.7 | 1.8 | 2.6 | 2.7 | 6.0 | 6.4 | 6.0 |
| Trade | 26.3 | 30.0 | 29.7 | 2.9 | 5.4 | 6.3 | 23.4 | 24.5 | 23.4 |
| Finance | 10.5 | 11.9 | 11.5 | 1.0 | 1.7 | 1.8 | 9.5 | 10.2 | 9.6 |
| Services | 26.2 | 25.0 | 24.0 | 3.1 | 4.1 | 4.7 | 23.1 | 21.0 | 19.3 |
| Public administration | 6.2 | 6.6 | 5.8 | .8 | 1.3 | .9 | 5.4 | 5.3 | 4.9 |
| Mining[1] | 5.0 | 4.0 | 4.8 | 1.6 | 2.3 | 2.5 | 3.4 | 1.7 | 2.3 |
| All industries | 15.5 | 17.1 | 17.6 | 2.5 | 3.6 | 4.1 | 12.6 | 13.5 | 13.5 |

[1] The "1969" figure for mining is from 1976, because earlier figures are not available in published form.

NOTE: Includes only nonagricultural wage and salary workers at work.

SOURCE: Estimates were computed from the BLS publication *Employment and Earnings* for the years 1970, 1980, and 1990.

Because within-industry growth in the rate of part-time employment between 1969 and 1979 primarily resulted from more involuntary part-time work, much of it cannot be explained by the demographic shifts discussed earlier. To provide a fuller explanation, it is necessary to draw on the growing body of case-study research.

*Interindustry employment shifts seem to be important in the growth of part-time employment.*

Firms turn to a part-time labor force for a variety of reasons. On the one hand, some companies have simply encountered scheduling difficulties that could be solved most effectively by using short-hours employees. For example, many employees at restaurants or company cafeterias typically work short shifts tied to peak mealtimes. Similarly, employers may use part-timers to staff file room operations that require files to be delivered in the morning and refiled at night, with little work flow in between. At another extreme, companies have hired part-time workers as a union busting device. For example, the Wisconsin Physicians' Service reacted to the acrimonious 1980 round of contract negotiations with the United Food and Commercial Workers local that represented their employees by hiring 200 part-time and temporary workers and 150 home-based workers. The company excluded the new part-time and temporary workers from the union, and paid all three groups reduced hourly wages and benefits.[20]

But for most companies in the service industries where part-time employment has grown fastest, the shift to part-time employment is neither a response to a technical imperative nor an outright antilabor measure. Rather, companies have shifted because they have decided cutting labor costs and enhancing staffing flexibility are more important—at least in some areas of work—than maintaining a stable labor force. Of course, hiring part-timers is only one of a number of ways to bring down labor costs. Often, companies that choose the part-time route do so because specific scheduling needs favor part-time workers over other low-wage workers.

The retail food industry offers a case in point. In retail as a whole, part-time employment rose rapidly from 24 percent of the work force in 1962 to 36 percent in 1987.[21] Among grocery stores in particular, the rate of part-time employment soared even more rapidly, from 35 percent in 1962 to 60 percent by 1985.[22] According to *Progressive Grocer*, the supermarket industry's main trade publication, grocers expanded part-time employment in search of cheaper labor:

> To cut labor costs by switching to lower-paid part-timers with fewer benefits, the industry's percentage of part-timers has continually grown.[23]

The initial impetus for the use of part-time workers in retail food stores was the extension of store hours. But then, as one retail union official recalls:

> The retail industry woke up one day. The light bulb went on. They got the profit and loss picture, and started to create more part-time for that reason. This started in the early to mid '50's. Since then, it has grown and grown. In the late '40's, early '50's, the key was flexibility. Since then the key is cost.[24]

Subsequent technological changes have permitted greater boosts in part-time employment in the retail food industry. Supermarket operators have moved toward stores that are larger both in floor size and sales volume. They maintain a full-time core of department managers and one or two full-timers per department. This core does not grow proportionally with store employment, so that larger stores have higher rates of part-time employment. Innovation in food processing—such as the introduction of boxed beef, which makes unnecessary many of the tasks formerly performed by food store butchers—has decreased skill requirements and further shrunk the full-time skilled labor force in supermarkets.

Certain sections of the insurance industry—particularly health insurers—have made an even more rapid shift to a part-time work force for routine clerical jobs such as claims processing. At two health insurance companies studied by the author, part-time employment rocketed from less than 7 percent to over 24 percent of the work force in one case, and from 1 percent to 16 percent in the other—over a period of about 5 years![25] Once more, labor costs were a major factor. According to one manager, "Our whole drive is to go toward more part-time jobs. It's very cost-effective."[26]

The computerization of claims processing has facilitated the transition to a part-time work force in insurance—both because automation reduces the skill and training time required for claims processing jobs and because productivity when working on a video display terminal falls off after 4 or 5 hours of work. Thus, as in retail, technological change has speeded the spread of part-time employment.

## Conclusion

Neither the long-term growth of unemployment nor changes in the gap between part-time and full-time wages explains the rising rate of part-time employment over the last 20 years. The changing demographic composition of the work force did contribute to the part-time growth trend from 1969 to 1979, but has not done so since 1979.

It is striking that expanding part-time employment is concentrated in "bad," secondary part-time jobs. The share of these jobs has grown both because the industries that rely on a low-wage, low-skill, flexible work force have grown in relative terms, and because, within industries, employers came to rely increasingly on such a work force during the 1970's.

Part-time jobs are not inherently bad. Short-time and retention part-time jobs, as described above, are good jobs despite their short hours of work. But when low-paid, low-skill part-time employment—and particularly involuntary part-time employment—expands, this is cause for concern. Further research is needed to deepen our understanding of the causes of this labor market change. □

## Footnotes

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[1] In this discussion, a Bureau of Labor Statistics definition of part-time employment is used. Part-time workers include everybody working fewer than 35 hours per week, except for those who usually work full time but who have lost hours for noneconomic reasons. Part-time workers are considered involuntary if they report that they are working part time because of slack work, plant downtime, starting or ending a job during the week they are surveyed, or inability to find a full-time job. The data series is derived from the Current Population Survey, a monthly survey of households conducted for BLS by the Bureau of the Census. It is only one of a number of series on part-time work produced by BLS.

[2] See Sylvia Lazos Terry, "Involuntary part-time work: new information from the Current Population Survey," *Monthly Labor Review*, February 1981, pp. 70–74.

[3] John F. Stinson, Jr., "Moonlighting by women jumped to record highs," *Monthly Labor Review*, November 1986, pp. 22–25; and "Multiple jobholding reached record high in May 1989," *Bureau of Labor Statistics News*, Nov. 6, 1989.

[4] This typology is the author's. The distinction between secondary and retention part-time employment is discussed at much greater length in Chris Tilly, *Half a Job: How U.S. Firms Use Part-Time Employment*, doctoral diss., Departments of Economics and Urban Studies and Planning, Massachusetts Institute of Technology (Cambridge, MA, 1989); and in Chris Tilly, "Two Faces of Part-Time Work," in Kitty Lundy and Barbara Warme, eds., *Part Time Work: Opportunity or Dead End?* (New York, Praeger, forthcoming 1991).

[5] In terms of standard BLS definitions, short-time workers are those who usually work full time, but are currently working part time for economic reasons other than inability to find a full-time job. This group made up 8 percent of all part-time workers in nonagricultural industries in 1989.

[6] There is additional evidence that part-time salesworkers are concentrated at the low end of the sales force. For example, Current Population Survey analysis by the author reveals that in 1985, only 6.5 percent of salesworkers in insurance worked part time, whereas 37.8 percent of salesworkers in retail trade did so.

[7] Unpublished data provided by Thomas Nardone of the Bureau of Labor Statistics. Part of this differential can be accounted for by differences in the composition of the two work forces by race, sex, experience, education, and so on. However, these variables are also important in sorting persons between primary and secondary labor markets. Thus, the fact that these variables help account for the full-time/part-time wage difference reinforces the supposition that most part-time jobs fall into the secondary category. In any case, even after controlling for sex, race, education, experience, industry, and occupation, part-timers still earn 10 percent less than full-time workers. See John Owen, *Working Hours: An Economic Analysis* (Lexington, MA, Lexington Books, 1979).

[8] Earl F. Mellor and Steven E. Haugen, "Hourly paid workers: who they are and what they earn," *Monthly Labor Review*, February 1986, pp. 20–26.

[9] Bernard Ichniowski and Anne E. Preston, "New in Part-Time Employment," *Proceedings of the 38th Annual Meeting of the Industrial Relations Research Association*, 1985.

[10] James Rebitzer and Lowell Taylor, "A Model of Dual Labor Markets with Uncertain Product Demand," mimeo (University of Texas at Austin, Department of Economics, July 1988).

[11] See Tilly, *Half a Job*; and "Two Faces of Part-Time Work."

[12] These years are chosen not only because they are 10 years apart, but also because 1969 and 1979 represented business cycle peaks, so that they represent labor markets comparable to that of 1989.

[13] Ichniowski and Preston, "New Trends." See also Ronald Ehrenberg, Pamela Rosenberg, and Jeanne Li, "Part-Time Employment in the United States," paper presented at a Conference on Employment, Unemployment, and Hours of Work, Berlin, Germany, Sept. 17–19, 1986.

[14] U.S. Chamber of Commerce, *Fringe Benefits* (annual).

[15] Evidence of part-time workers' lower probability of receiving specific benefits is provided in Ichniowski and Preston, "New Trends"; and Rebitzer and Taylor, "A Model."

[16] The 17.6-percent estimate is the 1989 rate of part-time employment for nonagricultural wage and salary workers at work, as opposed to the rate of part-time employment for all nonagricultural workers at work, 18.1 percent, which is cited elsewhere in this report. This difference appears because of the way in which BLS publishes data.

[17] The size of this change may be affected by the change in the Current Population Survey occupational classification in 1983. Examination of changes from 1982 to 1983 suggests that the growth in importance of these occupational groups is likely to be understated.

[18] Louise Waldstein, "Service sector wages, productivity, and job creation in the U.S. and other countries," Background Paper (Economic Policy Institute, 1989).

[19] However, part-time employment within industries increasingly shifted from voluntary to involuntary, presumably because of demographic changes that reduced the proportion of workers who prefer part-time work.

[20] Cynthia B. Costello, "The Clerical Homework Program at the Wisconsin Physicians' Services Insurance Corporation," in Eileen Boris and Cynthia R. Daniels, eds., *Homework: Historical and Contemporary Perspectives on Paid Labor at Home* (Chicago, University of Illinois, 1989).

[21] From unpublished Current Population Survey results provided by Thomas Nardone, Bureau of Labor Statistics.

[22] "The Changing Product Mix: Labor—Growing Pains," *Progressive Grocer*, October 1986, pp. 62–64.

[23] Michael Sansolo, "Take this job...please," *Progressive Grocer*, January 1987, p. 75.

[24] Tilly, *Half a Job*.

[25] These numbers were obtained from interviews with company representatives. They enumerate part-time jobs, as distinct from BLS statistics that count people with part-time hours. See Tilly, *Half a Job*.

[26] *Ibid.*

## Appendix: The regression analysis

Regressions were run on annual data for the period 1973–89. Variables are annual averages, except where otherwise specified. The dependent variable, *RATE*, is (number at work part time)/(number at work), among nonagricultural workers. *URATE* is the unemployment rate, and *TREND* is a time trend.

The wage differential variable (*LWAGER*) is the natural logarithm of the ratio of the median full-time hourly wage rate to the median part-time hourly wage rate. Call this ratio *WAGER*. The fringe differential variable (*LFRINGE*) is the natural logarithm of 1 plus the fraction of hourly compensation accounted for by fringe benefits, using the U.S. Chamber of Commerce estimate. Call this fraction of compensation *FRINGE*. Except for the fact that the rate of part-time employment, rather than the ratio of part-time to full-time workers, is used as a dependent variable, this is essentially a Cobb-Douglas specification.

The specification implicitly employs the simplifying assumption that part-timers receive no benefits. In this case, the ratio of hourly compensation (including wages and fringe benefits) of full-time workers to hourly compensation of part-timers is equal to (*WAGER*) x (1 + *FRINGE*). The logarithm of this ratio is equal to *LWAGER* + *LFRINGE*.

In the two-stage least squares analysis, the instruments used are *TEEN*, *ELDER*, and *MARFEM* (in addition to *URATE* and *TREND*). *TEEN* is (persons ages 16 to 19 in the labor force)/(total in the labor force). *ELDER* is (persons age 65 or older in the labor force)/(total in the labor force). *MARFEM* is (married women in the labor force)/(total in the labor force). Unlike data for the other variables, those for *MARFEM* relate to March of each year, and are not annual averages. *MARFEM* was imputed for 1985–89.

Values for a small number of missing data points for various variables were imputed. Imputation procedures are available from the author upon request.

A variety of alternative specifications were tested—using a ratio rather than a rate as the dependent variable; linking the U.S. Chamber of Commerce benefit cost series with a Bureau of Labor Statistics series beginning in 1979 to create a new variable; and entering compensation variables as levels rather than logarithms. None of these changes greatly affected the findings described in the article.