Chapter 2

Literature Review

INTRODUCTION

Since 1947, the Bureau of Labor Statistics has classified an individual as a part-time worker if the total number of hours worked during the week is fewer than 35. Part-time workers have always been part of the U.S. labor force, and over the past decade the evidence shows that their numbers are rising. Much of the recent growth in part-time work has been fueled by factors such as changing characteristics of the labor market and changing family structures (Khane, 1994). The part-time workforce is expected to grow further, fueled by changes in social policies that place emphasis on education, training, and work requirements for welfare recipients. This review combines two streams of literature: one focuses on the economic issues surrounding part-time work; the second focuses on the journey to work of full-time workers with characteristics similar to part-time workers.

Background

Between 1950 and 1990, the percentage of employees who worked part-time grew from approximately 12 percent to about 18 percent (Bassi, 1995). Some analysts have argued that the prevalence of part-time work in U.S. society would be even more dramatic if the number of part-time jobs rather than the number of part-time workers were reported in the official statistics (Tilly, 1991). While part-time work may be economically less desirable than full-time work, a large segment of the part-time workforce prefers this work arrangement because it affords them the flexibility and convenience to be involved in other activities.

The two primary reasons for working part time given by more than half of the respondents to the monthly Current Population Survey (CPS) conducted by the Census Bureau for the Bureau of Labor Statistics (BLS), were unavailability for full-time work or disinclination to work full time (Nardone, 1995). Part-time work may also be performed because of slack work in a current job, difficulty in finding full-time employment, or part-time hours or a short-schedule being the "full-time" requirement for a given job.

Part-time employees are demographically heterogenous, but women represent almost two-thirds of all part-time workers. Teenagers and older workers also have a high propensity to work part time and are also well represented in the part-time workforce. As the number of part-time workers continues to grow, so too does the body of literature analyzing the expansion and growth, the inequities in wages and benefits, and the quality of work in this segment of the American workforce.

One of the inequities faced by part-time workers may well be that of transportation access related to their journey to work, but little research has been done on the subject. Several geographic, economic, and sociological studies on transportation and journey to work by full-time workers exist, but very few studies on part-time workers have been undertaken. The analysis undertaken in this study will serve to fill part of this gap in the literature.

There is a need to understand the characteristics of part-time workers, the occupations and industries in which they are employed, and their current worktrip commuting patterns. This literature review focuses on the growth and expansion of the part-time sector, the access to part-time jobs, the journey to work by workers, and the impact of technological change on the spatial arrangement between the workplace and the residence.

Transportation costs affect job opportunities. A better understanding of the worktrip and its impact and their impact on job choice by part-time workers is essential to developing effective policies to improve transportation access for this important segment of the workforce.

GROWTH AND EXPANSION OF PART-TIME WORK

The decision to work part time is made for both economic and noneconomic reasons. Two groups of part-time workers—voluntary and involuntary—are identified in the literature. These classifications reflect the extent to which part-time employees are sought by employers relative to employees who seek such employment as a convenience.

The need to satisfy lifestyle demands has always served as a catalyst to performing voluntary part-time work. Voluntary part-time workers are usually those who have a desire to combine labor force participation and other activities, while involuntary part-time workers are those who want full-time work but have to settle for less (Gallaway, 1995). Since 1936, about a third of all new jobs held by women are considered voluntary part-time (Owen, 1978), since women usually combine household responsibilities with work. Slightly over 70 percent of all part-time workers in 1993 were voluntary workers. This group is likely to be disproportionately composed of women aged 25 to 54, young people between the ages of 16 and 24 years, or older people over the age of 60.

Since 1969, involuntary part-time workers have accounted for most of the growth in part-time employment. Difficulty in obtaining full-time jobs is one of the primary reasons for involuntary part-time employment. Between 1973 and 1993, the proportion of involuntary part-time employees rose from only 3 percent of all part-time workers to 13.3 percent (Gallaway, 1995). This increase reflects the mismatch between the demand for part-time employees and the supply of involuntary employees,

or as pointed out by Larson and Ong (1994), the supply of part-time workers has lagged behind growth in the demand for part-time workers.

There is no universal agreement on the demand-side argument. Economists have argued that the presence of involuntary part-time workers reflects the underutilization of labor in the economy resulting from low employer demand. Using the March 1990 CPS, Stratton (1996) conducted an analysis to determine whether those classified as involuntary part-time workers were truly involuntary and, therefore, consistent with the argument of labor underutilization.

Stratton tested the extent to which this group of part-timers desired full-time employment using simple probit models of employment preferences and opportunities. His analysis revealed that involuntary part-time workers were truly involuntary and their numbers are rising. Those workers classified as involuntary in 1990 were 50 percent more likely to be in the full-time labor force in 1991 than were their voluntary counterparts. The findings also included more significant racial differences among women than among men in terms of their job preferences. Nonwhite women were more likely than white women to desire full-time work; whereas, no preference difference existed between nonwhite men and white men. Education was also important. Generally, the more education, the higher the preference for full-time work.

Data analysis of the January 1994 CPS by Nardone (1995) suggests that involuntary part-time workers are more likely than full-time workers to have less than a high school education. He therefore argued against the labor underutilization view, which rests in part on the assumption that part-time workers have skills similar to full-time workers. Because involuntary part-time workers have less education than full-time workers, their ability to get as much full-time work as they would desire will be reduced substantially. Job expansion by employers is therefore unlikely to lead to full-

time work for this group.

Some studies (Tilly, 1991) have focused on the relationship between involuntary part-time work and unemployment. These studies suggest a different classification of part-time jobs and explain why, where, and how the fraction of the working population employed part time has grown faster than the fraction who want part-time jobs.

Part-time jobs can be categorized as short-time, secondary, or "retained" part-time jobs, based on the demand created by employers. Short-time part-time work is an alternative solution to laying off workers during a downturn, in which working hours are temporarily reduced by the employer. This practice is prevalent in goods producing industries such as manufacturing, construction, and mining. Secondary and retained part-time jobs occur more often in the service industry where about 90 percent of all part-time employment occurs. Secondary part-time jobs display secondary labor market characteristics such as low pay, lack of opportunities, and high turnover. Retained part-time jobs, on the other hand, are primary labor market positions. They are higher paying, require higher skills, and are relatively stable and common among technical and professional occupations.

Drawing on open-ended interviews of managers in the retail and insurance industry in the Boston and Pittsburgh area, Tilly (1992) characterized these two distinct types of service sector part-time jobs. The results of the study suggest that retained part-time jobs are designed to attract voluntary part-time workers. They "are designed by employers to retain or attract valued workers who prefer to work part time." Secondary part-time jobs, on the other hand, are used by employers "to gain advantages of lower compensation and greater scheduling flexibility." A job that falls into the secondary category would include, for example, the position of front-end employee in a supermarket. This type of employee was found to represent the bulk of part-time workers in this type

of retail activity. Retained jobs in both the retail and insurance industry were found to involve highly skilled occupations, such as computer systems experts. The extent to which the skills of these workers were important to the business operation was expressed by a manager who described them as "very critical resources in the area that is very difficult to find replacements."

The Service Sector

Moderate projections suggest that by the year 2005, close to 81 percent of all jobs will be in the service industry and close to 19 percent will be in the goods producing industry (Carey and Franklin, 1991). The growth in the number of part-time workers is explained in part by this shift from manufacturing to the service industries, which employ large proportions of part-time workers. A growing body of literature analyzes the link between the rapid growth of part-time workers and changes in labor demand. Much of the analysis has focused on issues such as the quality of work and the changes in skills levels (Parcel and Kaufman, 1993), segregation by gender (Lorence, 1992; Steiger and Wardell, 1995), and workers' benefits and the impact of service jobs on workers' standards of living (Nelson, 1994).

The debate continues over the quality of part-time jobs in the service sector. Nelson (1994) suggests that as the service sector grows, the standard of living among workers in this sector deteriorates. A study of 129 industries found fringe benefits for workers in service jobs to be lower or absent when compared to those benefits in manufacturing jobs. This occurred independent of earnings, worker characteristics, and core peripheral status. Explaining the differences in benefits between services and manufacturing, the analysis suggests that service workers are poorly paid because they are generally younger, female, and work part time. So, since most benefits are earnings related, the author argues that benefits among service sector workers are low because service sector

workers make less money.

Describing the plight of inner-city blacks in Chicago, Wilson (1992) argued that the loss of traditional manufacturing jobs has resulted in the increased joblessness among inner-city black males, who now have to participate in "low-wage, high-turnover laborer and service sector jobs." Although the author did not say so, these positions may be high-turnover jobs because they are mostly secondary jobs with characteristics similar to the secondary part-time jobs described above.

Woody (1989) pointed out that static wages, high rates of part-time work, and a continuing overconcentration of jobs in new but marginal services have resulted in a crisis for personal income and black family support. Much of the literature dealing with equity for part-time workers has focused on these issues of benefits, pay, general job quality, and advancement opportunities. For the most part, inequities associated with transportation and the journey to work have been largely ignored or overlooked.

EQUITY ISSUES AND SPATIAL MISMATCH IN THE JOURNEY TO WORK

While the journey to work is a common experience shared by most American workers, significant spatial differences and inequities exist among various segments of the workforce. Ever since Kain (1968) published his seminal article on the relationship between metropolitan housing market segregation and nonwhite employment, a proliferation of articles have supported or disputed the theory of a spatial mismatch between jobs and residence of minorities trapped in segregated inner-city neighborhoods. At the center of the spatial mismatch theory is the suggestion that the changing mix of occupations in the central city and the widening skills gap between city and suburban residents have resulted in a spatial mismatch within metropolitan areas between the geographic location of jobs

requiring fewer skills or less education and the residences of those people with few skills or less education.

In an analysis of census data for 37 large metropolitan areas in 1980, Blackley (1990) found that 50 percent of service and blue collar jobs with lower educational requirements were located in the suburbs, while those jobs requiring the highest rates of high school graduation were located in the city. While the potential for a mismatch exists among both male and female members of the labor force, the problem appears to be more serious for females. Analyzing spatial mismatch and labor market segmentation among African American and Latina women in northern New Jersey, McLafferty and Preston (1992) found that minority women experienced poorer spatial access to jobs than did white women. They also found that a smaller percentage of African American women than of white or Hispanic women worked locally or closer to home. The shortage of well-paying jobs located nearer the residences of black women have severe implications for the journey to work, forcing some of them to travel long distances to gain better paying jobs.

Holzer's (1991) review of literature on the empirical evidence of spatial mismatch from the mid-1950s through 1980, provides comprehensive evidence that suggests that a spatial mismatch is relevant in explaining black/white employment differences. The studies reviewed by the author provided empirical evidence on the effects of residential segregation, residential and employment suburbanisation, and direct measures of "access." The results discussed in the 20 articles reviewed were mixed, but most of the empirical literature suggests that decentralization of population and employment continues to take place in the major metropolitan areas.

While some of the studies provided evidence that residential segregation has been declining for blacks, center-city blacks continue to have less access to employment than suburban blacks. This

differential access was also reflected in the level of earnings for both black and white workers. For example, some studies found wages to be higher for less-educated blacks in the suburbs than in the central city, although after adjusting for commuting costs of center-city residents the magnitude of these effects is still unclear. One study estimated the weekly earnings for blacks in suburban areas to be 40 percent higher than the earnings for blacks in the central city.

Several analysts have disputed the spatial mismatch theory. Using data from the metropolitan samples of the American Housing Survey, Taylor and Ong (1995) argued that contrary to the spatial mismatch hypothesis, black and Hispanic workers living in minority areas had shorter commutes and a slower increase in commuting times between 1977-78 and 1985 when compared to workers in other areas. Other analysts (Cohn and Fossett, 1995) have questioned the validity of cross-regional comparisons of spatial mismatch measures based on center-city suburb distributions, because these comparisons reduce urban space to a dichotomy that ignores job and residential distributions within the suburban ring of the central city. They argued that definitions for center city may be too expansive for newer cities in the South and West of the United States as compared to older cities in the North and Midwest where most of the empirical evidence advancing a spatial mismatch has been concentrated.

How do part-time workers fit into this spatial dimension of workplace and residence? What are the transportation requirements in their journey to work? How effective are current transportation policies in addressing the transportation needs of part-time workers? What differences, if any, exist between part-timers and other workers? What are the demographic differences and similarities among part-time workers in their journey to work? Answers to these and similar questions regarding part-time workers are essential in formulating effective policy to reduce the gaps and inequities between

part-time workers and other segments of the labor force, and within the part-time workforce itself. Few studies that examine the journey to work by part-time workers exist; however, there is a large and growing body of literature on the journey to work across major metropolitan areas of the United States. Most of these studies are based on analysis of the decennial census and the Nationwide Personal Transportation Survey (NPTS).

Commuting Patterns

Commuting patterns, travel mode, and travel time to work in major metropolitan areas in the United States exhibit a broad range of demographic, economic, and spatial variation. Studies conducted over the past decade have consistently shown that women commute to sites closer to home than do men. How true is this for women part-time workers? This shorter travel distance to work has been explained as the result of constraints experienced by women in the workforce, such as lower paying jobs, family commitments, and limited access to automobiles (Madden, 1981; Hanson and Johnston, 1985).

Gordon et al. (1989) have argued that women in the United States do not necessarily commute shorter distances for these reasons. Using data from the 1977 and 1983-84 NPTS, they concluded that, except for unmarried mothers, many of whom might suffer from all three constraints (lower income, domestic commitments, and captive labor market), no evidence existed for the constraints hypothesis to explain a shorter commute among women. While women in general may work closer to home in terms of distance, evidence suggests that commuting time to work is longer for women than for men. Analyzing the 1990 NPTS data, Rosenbloom (1995) found that while women in general make shorter trips, they make more trips than men.

Responsibilities for child care and, at times, elder care make travel behavior among women quite different from that among men. The importance of combining elder care with paid employment was one of the driving forces behind legislation such as the Family and Medical Leave Act (1993), which provides up to 12 weeks of leave per year for family situations that may include serious health conditions of a parent.

Using data from the 1987-88 National Survey of Families and Households, Wolf and Soldo (1994) estimated a simultaneous equations model of employment, hours of work, and provision of care to an older parent. Their results provide evidence that suggests part-time work and low job retention are common phenomena among women caregivers. Caregivers were found to be less likely to hold a current job or less likely to have held a job during the last week before the survey. However, among those who held full-time jobs, the number of hours worked were essentially equal for caregivers and noncaregivers–about 36 hours.

While the number of hours worked may not differ between job-holding caregivers and noncaregivers, recent analysis of the May 1991 CPS (Presser, 1995) suggests that demand for nonstandard work hours (evenings, nights, or rotating hours) and weekends is pervasive throughout the occupational hierarchy. Family factors create gender differences in the demand for these types of employment patterns. For example, using multivariate analysis, the author found that the presence of children affects the hours and days of employment for women but not men. Nonstandard working hours have serious implications for transportation and the journey to work among women, particularly those who depend on public transit for their commute.

Disaggregating the working population by race, McLafferty and Preston (1991) found that regardless of income, occupation, and industry, African American and Hispanic women have longer

commutes, exceeding those of white males and females. Why are the commuting patterns of minority women so different from those of nonminority women and males?

Several researchers have analyzed and reviewed this question. In an analysis of 1980 and 1990 PUMS data for Erie County, New York, Johnston-Anumonwo (1995) found that suburban employment imposes longer commuting times on African American women than on European American women: 22.8 minutes compared to 18.1 minutes in 1980; and 21.2 minutes versus 17.8 minutes in 1990. While the travel time difference between black and white women dropped between 1980 and 1990, reliance on public transportation and other slower modes of transit by black women contributes to their longer average travel times. In a similar study by Wilson and Johnston-Anumonwo (1996) of Miami, Kansas City, and Detroit, using the 1980 and 1990 PUMS data, African American women and men were also found to be more likely than whites and Hispanics to rely on public transit for their worktrip, thus requiring significantly longer commuting times.

Other studies (Preston et al., 1993) have provided evidence that commuting patterns among women vary with family status. Commuting times for married women are shorter than for single women. When compared to married women or single women with children, single, childless women with fewer domestic responsibilities have the longest commute. However, while the presence of children in a household results in shorter commuting times for all racial groups, the greatest impact of child care responsibility is on white women.

The commuting times of minority women are less affected. In 1992, two-thirds of all married mothers worked, and as such were a significant part of the female workforce. Recent studies suggest that married mothers are twice as likely to work full time all year as were their predecessors 20 years ago (Hayghe and Bianchi, 1994), although the part-time work rate for women is still

considerably greater than for men.

Youth employment has also been affected by the exodus of entry level jobs from the center city to the suburbs, making the journey to work an important concern to this segment of the workforce. In 1990, the youngest workers (ages 16 to 19) had the highest poverty rate (10 percent) among workers, mainly because they were new workers in entry level jobs or students working only part time or part of the year (Gardner and Herz, 1992). Recent analysis of the teenage labor market concluded that black youths have considerably worse access to jobs when compared to white youths (Ihlanfeldt and Sjoquist, 1990). Using 1980 PUMS data, Ihlanfeldt and Sjoquist compared mean commuting times for low-wage black youths and low-wage white youths in Philadelphia. The results were 26 minutes and 18.5 minutes, respectively.

Transportation cost forms a major percentage of a teenager's earnings and because teens work fewer hours and receive relatively lower wages, they have relatively higher journey-to-work costs than adults. Limited access to jobs by black youths have important implications for part-time employment among this segment of the population. Using data from the National Longitudinal Survey Youth Cohort for 1981 and 1982, Holzer et al. (1994) explored the question of how job search and commuting behavior of young white and black inner-city residents are impacted by employment decentralization and what effects these responses have upon employment outcomes for these two groups.

It is assumed that commuting distance is the initial consideration in every job-search situation. Holzer et al. (1994), therefore, estimated a model in which the probability of receiving an acceptable offer, as well as the wage on such an offer, would be positive functions of the distance traveled. The expected value of the distance traveled both ways while commuting was also said to be a positive

function of the distance traveled while searching, with the former being less than or equal to the latter.

One of the significant results of the study suggests that black youths spend more time traveling to work than whites, but cover less distance (at least among males). The time-cost per mile traveled is therefore significantly higher for blacks than for whites, partly because of lower rates of automobile ownership among blacks. Because these costs reduce the labor market benefits, the authors argued that it may be a sensible behavior for young inner-city youths to travel the shorter distances they do in their work and during their job search. In another study of 43 Standard Metropolitan Statistical Areas (SMSAs), Ihlanfeldt and Sjoquist (1991) also found that the probability of a teenager getting a job is inversely related to the required commute.

Transportation Mode

The mode of transportation is an important factor in the journey to work by part-time workers. There is a dearth of literature on transportation modes used by part-time workers in their daily commute. In terms of current policy, the question of transportation is vital to the welfare-to-work goals. Part-time workers are likely to work nonstandard hours and evenings, so their transportation mode is an important factor in their daily commute. Public transit may not completely satisfy their needs. The automobile provides much needed flexibility for these workers, as they can get to and from their place of work regardless of the hour.

Reliable transportation for getting to work on time is vital for job retention. This becomes an even bigger issue for low-income workers who might be entering the workforce following a period of dependence on public assistance. While the automobile remains the most popular mode of transportation, access to vehicles varies greatly across subpopulations, with females in female-headed

households and minorities among those owning fewer vehicles.

In some inner-city neighborhoods, the cost of owning an automobile may be high when automobile insurance is taken into consideration. Despite some of these constraints however, the percentage of households without vehicles has continued to drop over the years. In 1960, 21.53 percent of households were without vehicles, but by 1990 only 11.53 percent had no vehicle (DOT, 1993).

Contributing to the increase in ownership are rising household incomes, growth in the number of workers per household, and decentralization of jobs and residences (U.S. Department of Transportation, 1993). Contributing to the dearth of vehicles in a household are a lower than average income, a center-city location, and a female-headed household (Lave and Crepeau, 1994). Approximately a third of the households with no vehicles have a family member in the workforce. Nonvehicle owners commute to work primarily by private vehicles (i.e. those who were driven to work by someone else who then drove back home or to a nonwork destination), public transport, or on foot. In a recent analysis of the 1990 PUMS data for Chicago, Houston, Los Angeles, and the Twin Cities by Myers et al. (1996), use of public transportation was found to increase the travel time across racial/ethnic groups and between cities. Getting to work by public transport required an extra 9 to 20 minutes. In a recent analysis by the Joint Center for Political and Economic Studies (1995), public transit was found to be the transportation mode of choice of nearly 6 million workers, close to half of whom commute by bus. Other modes of public transit are subways or elevated trains, commuter rail cars, streetcars, and ferry boats. While low-income transit users depend primarily on bus transportation, commuter rail and ferry transportation are disproportionately the transit modes of high-income workers.

African American women and men are more likely than whites and Hispanics to travel to work by public transport (Wilson and Johnston-Anumonwo, 1996), which most likely accounts for the longer travel times experienced by blacks. Using travel time as a measure of locational access, the authors examined whether blacks and Hispanics in Miami, Kansas City, and Detroit experienced greater difficulties than whites in their journey to work. They observed that even when access to an automobile is not a constraint, African American men and women still spend a longer time commuting when compared to whites. However, even though blacks with access to automobiles spent a longer time getting to work, the difference, though statistically significant, was negligible. The authors concluded that the longer times spent by black workers in their journey to work might disappear if these workers were given greater access to automobiles.

The mode of transportation to work impacts on the incomes of both male and female workers. In analyzing the 1980 PUMS data, McLafferty and Preston (1992) showed that higher weekly earnings are associated with longer commuting times, while lower earnings, particularly among workers in the consumer service sector, are associated with shorter commutes. African American women were also found to have longer commutes and lower levels of spatial containment when compared to Latina or white women.

According to the authors, the long commuting time of black women reflects, among other things, their heavy reliance on mass transit, as well as their limited access to jobs and lower earnings in the jobs in which they usually work. While mass transit may be popular among women, evidence shows that motor vehicle driving among women has been changing over time. It has been speculated that the increase in the number of automobiles over the last 30 years is probably the result of the rapid growth of the female workforce. Overall, as is evidenced from all of the studies, automobile

commutes are generally faster than those of public transit and as such may be a flexible mode of commute for part-time workers.

TECHNOLOGY AND THE NEW WORKPLACE

The information technology revolution has tremendous potential to impact the spatial arrangement between the workplace and the residential location. As we enter the twenty-first century, the flexibility of the new information technology will gain significance and more people will be capable of working at home. A growing body of literature analyzes this phenomenon in both its current and futuristic perspectives. The impact of this revolution may be felt more by the voluntary part-time workforce as they evaluate transportation costs in the journey to work.

Much of the research on the information technology and urban form has focused on agglomeration economies and transport cost. The versatility of computer technology has been applied to a wide range of service industries. As of 1993, the U.S. Bureau of Census reported that the top four private sector industries with the highest percentage of workers using computers were service-related industries (McConnell, 1996). The new information technology has been a stimulus in the growth of the service sector, which is one of the driving forces behind the growth of part-time employment. The flexibility of the technology implies a flexible labor force, which could mean more job turnover and more use of part-time workers.

Analysis of the 1977 and 1983-84 National Personal Transportation Studies by Kumar (1990) suggests changes in worktrip length for information workers. Information workers are found mostly in occupations that primarily involve producing, processing and distributing information. More than half of all information workers are in the three office-related industries: finance, insurance,

real estate (FIRE); business services; and professional services. These include jobs such as computer specialists and systems analysts; managers, salespeople, and administrative support workers; and other professionals.

One way in which information technology has influenced commuting is the rise of telecommuting as a working arrangement in the new workplace. While the definition is still evolving, the term generally refers to workers who spend all or part of their workweek linked to their workplace from their residence via electronic means such as telephones, computer modems, and fax machines. According to the May 1991 CPS, home-based work is on the increase. Approximately 20 million nonfarm employees were engaged in some work at home as part of their primary job in May 1991 (Deming, 1994), with women slightly more likely to work at home than men. Moreover, the U.S. Department of Transportation estimated the number of telecommuters in the United States, at close to 2 million and projected that the number will increase to between 6.4 and 10.9 million by the year 2000 (Deming, 1994).