CHAPTER 7

Labor Force

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The labor force refers to all members of the population above a minimum age who are either working or looking for work.[1] In terms of national economic accounts, the labor force can be thought of as the labor supply, the producers of the goods and services that are valued in the Gross National Product. In an early review, Jaffe (1959) notes that the significance of the labor force is that all members of a population consume goods and services, but only the members of the labor force produce those goods and services.

Because of its relationship to production and consumption, the labor force and its size, composition, and changes are significant to demographers, sociologists, and economists. Particularly in modern economies, where work is typically separated into times and places distinct from other life activities, the labor force is a useful subdivision of the adult population for further study.

This chapter first explores the relationship of the labor force to levels of economic development, which is a macrolevel approach to understanding the labor force. In the next section, the chapter distinguishes macrolevel from microlevel approaches to the labor force. Several theoretical approaches to the labor force are discussed, and a variety of methods and measurements relating to the labor force are presented. Several key empirical findings concerning the labor force are discussed, and the chapter concludes with directions for future research.

[1] The term *labor force* is used principally in the United States; in other countries, the more commonly used term is the *economically active population*. Both terms refer to the population that is working plus those actively seeking work.

SUBSTANTIVE CONCERNS

Labor Force and the Level of Development

One important issue in labor force research has been the differences in the labor force in advanced industrial countries versus developing nations. Typically, the concept has worked better in advanced developing countries, where there is usually a set of relationships between employers and employees that constitute more or less stable jobs, and where the distinction between the home and the workplace has been relatively sharp. In economies that are moving toward an industrial or postindustrial economy, however, the labor force participation rate for a demographic group or for an industry may be a powerful proxy variable for the development process.

The labor force concept assumes a monetized economy. As more types of work become incorporated into the money economy, the occupational structure of the labor force diversifies. Services that were previously performed at home enter the market economy, and previously unpaid workers (typically women) become labor force participants. Presser and Kishor (1991) document how labor force participation rates first declined and then increased for women as Puerto Rico experienced economic growth. Charles' (1992) work suggests that the incorporation of more women into the labor force may intensify occupational segregation because the new women workers are still doing traditionally women's work, only now for pay.

The self-employed, especially those in subsistence agriculture, have not always been adequately accounted for in labor force measurement. For this reason, the labor force has not always been an adequate measurement of the productive population in developing countries. Similarly, where many people are employed by other members of their own household, or where they may receive their pay as shares of produce or other in-kind provisions, the distinction between those in and not in the labor force becomes less obvious.

In addition, even in the advanced industrial countries labor force analysts typically ignore the nonmonetary contributions made by volunteers, housewives, and certain other adults, such as inmates of institutions whose work is typically not counted in the Gross National Product. The military are typically but not universally included in the labor force, although the reported labor force statistics may be limited to the civilian labor force. In advanced industrial countries, there are typically a fairly large number of retirees and students who do not work or who work only sporadically. Individuals who are sick or disabled may be unable to participate in the labor force.

The labor force is divided into two parts: the employed, those who are actively at work or who have a job from which they are temporarily absent, and the unemployed. Although the definition of unemployment varies from country to country, typically unemployment is defined as the active search for work by someone who does not currently hold a job. It is assumed that the unemployed person is legally of an age to work and is willing and able to work. Again, this is a concept that may better describe conditions in advanced industrial countries, especially those with transfer payments available for the unemployed. In countries with lower levels of living, the otherwise unemployed may pick up some casual labor or receive payment in kind rather than having a regular job. Whether they are truly employed or unemployed may be a matter of judgment.

Macrolevel versus Microlevel Approaches

One stream of demographic literature has viewed the labor force in macrolevel terms, analyzing its size, composition, and changes. These studies are typically undertaken with census or survey data that refer to an entire geographical area, such as a state or nation. The size of the labor force, especially relative to the entire population, is an indicator of considerable interest to demographers. For example, Bauer (1990) examined labor force growth and labor costs in Asian countries. A relatively large labor force indicates a large number of productive people to support the dependent population. A relatively small labor force may indicate high levels of dependency, either because the age structure is relatively young or old, or because many people in the usual working ages are unable or unwilling to work.

The composition of the labor force is also interesting. For example, a labor force that is principally made up of citizens of a country is likely to differ in important respects from a labor force with a high proportion of guest workers or immigrants. A receiving country's labor force may change in ways that reflect the presence of migrant workers (Shah 1995). Similarly, when a labor force is evenly divided between men and women, the population may have different norms about sex roles and lower fertility rates than a population whose labor force is predominantly male. Higher levels of economic development are typically associated with a larger share of women workers (Clark, Ramsbey, and Adler 1991).

Finally, there is great interest in the changes in the labor force, including accession rates of new workers, retirement rates of older workers, and movement in and out of the labor force by students, seasonal workers, temporary workers, or others.

Probably the most commonly used measure for comparative labor force studies is the labor force participation rate, which is defined as the number of eligible people in the labor force (employed or unemployed) divided by the number of people of working age eligible to be in the labor force, and evaluated for a specific time and place. Because it can be calculated for geographical subregions, the labor force participation rate is often used to evaluate local or regional labor markets (Odland 2001).

The female labor force participation rate is an indicator that has been of pervasive interest in understanding social change. The percent of the labor force engaged in agriculture can be a proxy variable for the level of economic development because nonagricultural employment typically grows as the economy develops (Nielsen and Alderson 1995; by contrast, Bollen and Appold 1993, use percent employed in industry as a proxy).

The unemployment rate, defined as the number of unemployed persons divided by the labor force, is a leading economic indicator and is closely watched in the advanced industrial countries. Unemployment rates are used to define recessions and to chart business cycles. The unemployment rate is often used as an indicator of hardship and is sometimes used in formulas for distributing block grants in aid to localities.

Another macrolevel indicator often used is the employment-population ratio, the ratio of employed persons to the total population. An indicator called the dependency rate is the ratio of people too young to work plus those older people who do not work, divided by the number of working age adults. Although the definition of working age varies among different countries, a conventional age grouping used in dependency ratios is ages 16 to 64. This ratio can be interpreted as the number of dependents supported, on average, by each worker.

Microlevel studies use data for individuals, typically from surveys or census microdata samples. These studies can examine the reciprocal interactions of migration and fertility decisions with work behavior. Because labor force behavior typically differs among demographic groups, microlevel studies are often used to understand these differences. In the United States, for example, the labor force participation rate of black women has historically exceeded that for white women, but the unemployment rate for blacks has typically been twice that of whites. Labor force participation has been shown to be high for the well educated (Hill 1995), migrants (Borjas and Tienda 1993), and married men.

Such issues can be better understood with multivariate models that control other variables, such as education, that are known to affect labor force behavior. In such studies, labor force participation is typically the dependent variable. Bound, Schoenbaum, and Waldmann (1995), to take one example, discovered that health status differentials helped to clarify the differences in labor force participation among older black and white men. These differences explained most of the gap in participation attributed to education. In another study, the availability of cash and noncash transfers was related to declines in the labor force participation of young nonwhite males (Sanders 1990).

More frequently, labor force participation is an independent or control variable that is used to help understand other variables of interest. Fertility, for example, is lower for women who are labor force participants. Fertility studies commonly control for labor force participation. It is logical that labor force participation affects income, because most personal income comes from salaries and wages. Women's labor force participation, by increasing family income, affects inequality and income distribution (Maxwell 1990). But analysts have also found that women's labor force participation helps explain other phenomena, including the gender gap in U.S. presidential politics (Manza and Brooks 1998), grade retention of children (Guo, Brooks-Gunn, and Harris 1996), gender differences in child mortality (Kishor 1993), and even femicide (Avakame 1999).

Besides these uses of the labor force variables, there are also ecological studies that may use the local labor force participation rate or unemployment rate as control variables. Murthi, Guio, and Dreze (1995) used women's labor force participation among other district-level variables in India to explain differences in fertility, child mortality, and gender bias in child survival.

THEORETICAL CONSIDERATIONS

As the earlier section has suggested, labor force participation plays a role in macrolevel theories of economic development and social change. Although not always linked explicitly to the demographic transition, there is a close connection between the decline of fertility and the increase in women's participation, and there is likewise an association between the changed age structure of the early demographic transition and increased labor force participation (Avakame 1999). More commonly, however, labor force plays a role in the development of microlevel theory.

Human Capital Theory

Human capital theory is used to understand why some workers command high income while others do not. By extension, human capital theory also seeks to explain why some

workers are more likely to be unemployed than others. Because labor force participation precedes earnings, the same variables used to predict income may also be used to predict labor force participation. Personal characteristics and endowments may increase or decrease a person's human capital. Education is the usual operational measurement, but levels of training, specialized licensure, and migration are also conceptually part of human capital theory.[2]

Enchautegai (1992) finds that geographical differences in the earnings of Puerto Rican women are due to their differing human capital characteristics. Wenk and Garrett (1992) find that human capital variables are significant in predicting employment exit after the birth of a baby. But Tienda and Wilson (1992) have found that the earnings return to migration are negligible, contrary to the expectation of human capital theory.

More recently, the concept of social capital has been introduced to account for the effect of social networks in helping to match workers with jobs. Workers with relatively extensive social networks through their extended families, churches, classmates, and other links may have an advantage in the labor market in terms of shorter search times for work and in terms of finding better jobs (see Lin 2001; Lin, Cook, and Burt 2001; Field 2003).

Labor Market Discrimination

Theories of labor market discrimination examine racial, ethnic, and gender differences in labor force participation, occupational attainment, or earnings. According to these theories, human capital variables alone are insufficient to explain the persistent differences in work experience. These differences are instead attributed to mechanisms within the labor market that steer certain workers to certain jobs, occupations, or industries. Such labor markets may be variously described as "split," "dual," or "segmented."

An important aspect of these studies is that ascriptive demographic characteristics, such as race or sex, are used to divide the labor supply into more preferred or less preferred workers. This is sometimes called statistical discrimination. The least preferred workers will not enter even the lowest-paid segments of the market, resulting in their higher levels of unemployment. Most such studies control for human capital variables such as education and attempt to identify the effect of discriminatory mechanisms that operate beyond the endowments of individual workers.

When it is impossible to examine discrimination directly, its presence may be inferred when differences persist even after many control variables have been applied. Stratton (1993), for example, finds that only 20% to 40% of the difference in unemployment rates between black and white men can be explained by variables such as education or local labor market conditions. Tienda, Donato, and Cordero-Guzman (1992) find that over a period of 20 years the labor market conditions of minority women worsened and that they received unequal returns to education. Evans and Kelley (1991), by contrast, found little evidence of discrimination against immigrants in Australia.

[2] For a concise assessment of human capital theory see Robinson and Browne 1994: 581–585.

Fertility and Women's Labor Force Participation

An important area of theorizing has been why some women and not others pursue paid work in the labor force. Structural characteristics of the economy help to shape the general demand for women's labor (Cotter et al. 1998). Women's family responsibilities, both as wives and as mothers, have often been seen as intervening variables between their human capital endowment and their eventual labor force participation. The relationships vary by generation, ethnicity and immigrant status (Stier and Tienda 1992), and religion. More recently, analysts have examined characteristics of jobs that facilitate or impede women's labor force participation. The availability of child care, or the ability of husbands and wives to work different shifts so that they can care for their children themselves, are currently important areas of research for understanding the circumstances under which mothers can participate in the labor force.

The Easterlin Effect is a theory that incidentally seeks to explain changes in women's labor force participation. The Easterlin Effect posits that the relative income of cohorts is inversely proportional to cohort size. Small cohorts are in high demand in the labor force. Large cohorts are in lower demand and may therefore have higher women's labor force participation, later marriage, and lower fertility (Pampel and Peters 1995). But both Pampel (1993, looking at Europe) and Carlson (1992, looking at Korea) suggest that institutional structures mediate the operation of the Easterlin Effect.

The empirical findings of this stream of research are reviewed below.

METHODS AND MEASURES

The fundamental concepts of labor force, employment and unemployment, and their corresponding rates, have already been introduced. These rates can be computed for different demographic groups and for different geographical areas. Labor force data are gathered from surveys or censuses because most administrative records of employment are incomplete. In particular, unemployment compensation records exclude a large number of the unemployed, including entrants to the labor force who have not yet found a job.

Combined with information concerning age structure, labor force participation rates form the basis for labor force projections, which are used by government agencies, employers, and insurers (Fullerton and Toossi 2001). The United States government makes labor force projections based on 136 age, sex, race, and Hispanic origin groups. The civilian labor force of the United States is projected to reach 158 million in 2010, with the share of women increasing slightly from 47% to 48%. The rates can also be combined into more complex measures.

Tables of Economically Active Life

Labor force participation rates can be used in multiple increment-decrement tables to model not only the effect of mortality but also the effect of entry and exit into the labor force on the expectation of economically active life (Willekens 1979). This measure can be interpreted as the expected length of working life if current age-specific labor force

participation and mortality rates persist indefinitely. These measures are useful for predicting future labor supply and for making decisions concerning, for example, the investment of pension funds. Where labor force participation rates are changing rapidly, or whenever workers experience many exits and reentries into the labor force, these tables will be inaccurate. Recent developments have focused on successfully smoothing the transition probabilities to improve the tables (Land, Guralnik, and Blazer 1994).

In or Out of the Labor Force

In the United States and many other countries, the unemployed are a residual category identified only after all the employed have been counted. After the employed and the unemployed have been counted, the remainder of the adult population is counted as "not in the labor force," or NILF.

To be employed, it is sufficient to have worked for just 1 hour a week for pay, or to work 15 hours unpaid in a family enterprise. It is also sufficient to have a job if one is only temporarily absent, such as a worker with a short-term illness, a vacation, or a holiday. Persons who are not employed are then counted as unemployed if they have actively sought work or are awaiting the results of a recent search. Norwood and Tanur (1994) describe the current measurement process in the United States.

One criticism of this measurement technique is that the line between the not in the labor force adults and the unemployed is blurry. Gonul (1992) finds that these two states are distinct for young women but not for young men. Kreider (1999) finds that nonworkers in the Health and Retirement Survey overreport work limitations, suggesting that these people may have exaggerated their health conditions to justify their nonparticipation in the labor force. Retirement or disability are face-saving reasons for not seeking work.

The concept of the *discouraged worker* refers to people who would accept work but who are no longer looking for work because they believe that no work is available (Buss and Redburn 1988). The National Commission on Employment and Unemployment Statistics (1979) recommended counting discouraged workers in the labor force, but government agencies do not yet include discouraged workers among the labor force.

Another line of critique is directed at the very concept of "not in the labor force." Donahoe (1999) argues that the contemporary measurement methods underestimate women's productive activity, in particular. Bener'ia (1999) argues from feminist theory that the omission of women from labor force measurement renders women and their work invisible. Empirical data indicate that the simple participant/nonparticipant dichotomy is oversimplified for women who have recently experienced their first birth (Vandenheuvel 1997).

Underemployment: Refining the Employment Rate

Typically over 90% of the labor force is counted as employed. The employed status covers a wide range of job situations, from a person employed only one hour during a week at the minimum wage to the highest-paid corporate executive. A number of criticisms have been leveled at the great heterogeneity of the "employed" measure.

In developing countries, where the job market may have a large informal component, employment may also be informal and an unreliable source of income. Such employment is common in some developing countries, especially in urban areas (Cerrutti 2000).

In the advanced industrial countries as well, measured employment may disguise a fair amount of underemployment, a term that has been measured with the Hauser-Sullivan-Clogg labor utilization framework (Clogg and Sullivan 1983; Clogg 1979; Sullivan 1978). This framework identifies several types of employment that may nevertheless be considered normatively inadequate.

The first type of underemployment is involuntary part-time work. Although many workers are voluntarily part-time, others work only part-time because of partial layoff, slack work, or other economic reasons. Stratton (1996) finds that those classified as involuntarily part-time are 50% more likely than the voluntarily part-time to be full-time workers a year later, suggesting that the involuntary term is correctly applied. Involuntary part-time work varies with the business cycle. Many seasonal workers are also involuntarily part-year workers.

The second type of underemployment results from low pay rates. The underemployed under this criterion are full-time workers but earn less than some normative standard (such as the minimum wage or poverty rate). The third type of underemployment reflects a mismatch of skills and occupation and occurs when a worker's job requires significantly less education than the worker has. Using unemployment and these three types of underemployment, Clogg (1979) estimated that about 75% of the labor force was nonmarginal. These studies are reviewed in Sobel (1996).

Longitudinal Measures

A problem with all labor force indicators is that they are measured for a fairly short period of time and then presented in time series. These repeated cross-sections give a picture of changes in the labor force for the population, but they do not track changes in the behavior of individuals. Longitudinal studies or career studies permit the study of work histories for individuals, and the conclusions from these studies may often differ from those drawn from repeated cross-sections.

In the United States, the Current Population Survey provides a one-year retrospective supplement once a year. With this supplement, it is possible to answer questions such as, ''How many people worked all year?'' or alternatively, ''How many people worked only seasonally?'' (Mellor and Parks 1988). One finding from this study is that many more people are employed during the year, and many more people are unemployed at some time during the year, than the monthly surveys indicate.

Because the relationship between job market experiences and current job market behavior is strong and stable (Clogg, Eliason, and Wahl 1990), it is valuable to have information about the work background of workers. Moreover, workers who expect interruptions in their labor force participation tend to have lower earnings (Blau and Ferber 1991). Work histories are one tool for such studies (Rosenfeld 1996). Using the Panel Study of Income Dynamics, Harris (1993) found substantial work activity among single mothers on welfare, a conclusion that had not previously been drawn from studies using annual data.

EMPIRICAL FINDINGS

The Loss of the M-Curve

One of the most important changes in the labor force has been the shift in women's age-specific labor force participation rates (Bianchi 1995). In the middle of the 20th century, these rates when graphed against age formed the shape of the letter *M*. The rates rose through the young adult years, declined after marriage (or later, after first birth), rose after the children had left home, and finally declined again after retirement age. But with each succeeding year, the *M* shape changed. The graph rose higher each year as the overall labor force participation rates increased. In 1950, women represented less than 30% of the labor force, but by 1980 women were 42% of the labor force (Kutscher 1993). Along with this general rise, the center of the *M* shape slowly disappeared. Fertility began to decline after 1965. In addition, women were less likely to leave the labor force for any significant length of time following the birth of a child, thus removing the middle of the *M*. By 1990, the women's age-specific labor force participation rates looked like an inverted *U,* very much resembling the age-specific pattern traditionally found for men. An important set of empirical studies help to explain why the *M* shape disappeared.

An increase in the demand for female labor accompanied the development of advanced industrial economies, with greater numbers of service, sales, and clerical occupations (Charles 1992; Zsembik and Peek 1994). These are occupations that traditionally employ large numbers of women. Gender differences in labor force participation in many places and at many times appear to covary with the demand for female labor (Cotter et al. 2001).

In addition, the marital context for women still affects labor force participation, although wives' participation rates have risen relative to the 1950s (Gurak and Kritz 1996). Brinton, Lee, and Parish (1995), examining East Asian cases, found that where labor demand increases, married women joined the labor force, even where working wives had not been culturally accepted. Marital instability and divorce also lead to more continuous female employment (South 2001).

The increased number of single-parent households has fueled the continuous work participation of young mothers (Edin and Lein 1997a, 1997b). Although work may not be the only survival strategy that young mothers use, it is an important strategy both in the United States and in other countries (Parrado and Zenteno 2001). Several studies indicate that young women combine work and welfare to a greater extent than previously anticipated (Harris 1993, 1996). Lerman and Radcliffe (2001) find that single mothers find jobs without displacing other workers from jobs.

Married couples may also decide as a family investment strategy to have both partners work (Duleep and Sanders 1993). Immigrant families may have working wives even if that arrangement would have been stigmatized in the home country (Geschwender 1992; Gurak and Kritz 1996).

The most important reason for the change, however, has been the altered relationship of fertility to work (Carrasco 2001; Brewster and Rindfuss 2000). Fertility declines certainly play a role in the more continuous labor force participation of young women (Jacobsen, Pearce, and Rosenbloom 1999). Rindfuss, Brewster, and Kavee (1996) argue that the normative proscriptions on work for mothers of young children have also been reduced substantially.

For women who do bear children, one question has been whether the institutional arrangements friendly to working mothers have made a difference. Klerman and Leibowitz (1999) show that maternity leave provisions have relatively little impact on return to the labor force after delivery, but Glass and Riley (1998) find that employer policies such as leave reduced attrition. Gustafsson et al. (1996) find that social policy contributes to the return of women to work after childbirth.

The characteristics of a job also affect the likelihood that a woman with young children will work. Self-employment or work at home are possible arrangements for young mothers (Edwards and Hendry 2002). Desai and Waite (1991) find that occupations that raise the cost of labor force withdrawal (for example, occupations with a high education requirement) are associated with greater retention of young mothers. Women with better market skills are more likely than other new mothers to return to work (Klerman and Leibowitz 1994). But Stinebrickner (2002) finds that 67% of exiting female teachers leave the labor force entirely, most often to care for newborn children.

Child care costs form a major barrier to continuous labor force participation by young mothers (Baum 2002). Child care costs do lower women's labor force participation (Han and Waldfogel 2001). One-third of a sample of Detroit-area mothers of preschool-aged children reported that child care problems had reduced their employment (Mason and Kuhlthau 1992). Browne (1997) finds that the presence of children under the age of six, together with less than high school education and long-term welfare receipt, help to explain the black-white gap in labor force participation in women-headed households.

Some attention has been given to the women's labor force participation later in life. The likelihood of labor force reentry varies with education and marital status (Moen, Downey, and Bolger 1990). An interesting additional issue to consider is the withdrawal of women from the labor force to care for aging parents. One study has suggested that coresidence with a disabled parent leads to labor force withdrawal among women (Ettner 1995). With the baby boomers reaching the age at which their parents are becoming fragile, the care of elders might begin to affect the measured labor force participation of older women.

Marginalization of Workers

An issue that is closely associated with the topic of underemployment, discussed above, is the extent to which the labor force—the labor supply—is matched with labor demand in the labor market (Solow 1990). This issue is sometimes viewed in terms of the adequacy of the labor supplied, with examination of the numbers of available workers or of their human capital. More commonly, however, this issue is addressed in terms of the labor demand, especially the ways in which labor demand has been structured.

Many types of structure affect employment (DiPrete et al. 1997). The state, for example, may develop laws concerning the minimum working age, hours of work, minimum wage, and taxation of workers and of payrolls. The firm, or other employer, determines the number of workers hired, their job assignments, and changes therein. A firm may decide, for example, to close a plant in a relatively high-wage city and open a new plant in another country with lower prevailing wages, thereby affecting the labor force in both locations.

Workers also seek to gain some control over their employment through other structures, such as professions or unions. Both professions and unions seek to limit access, to prescribe minimum qualifications, to maintain some control over what work may be assigned to their members versus nonmembers, and to participate in disciplinary and job termination decisions.

The effect of state, firm, and worker decisionmaking is to limit the demand for workers, especially for workers with the best jobs—jobs that are the most skilled and the best paid. The labor supply nearly always exceeds labor demand, at least in recent decades, with the result that a larger or smaller fraction of the labor force must accept work that is poorly paid, unstable, boring, or in other ways undesirable. These are marginal jobs and the process of creating them is marginalization. The operation of these two sets of forces creates two tiers within the labor market: one that enjoys some job security and full-time employment, higher wages, and more interesting work, and a second tier with none of these benefits. Nonwork options, such as welfare or crime, may also compete with the labor force for the time of the lower tier of workers.

A number of studies have tried to define and analyze this dichotomizing process. In advanced industrial countries, the distinction can be expressed in terms of primary and secondary labor markets, or core and peripheral labor markets. In developing countries, the distinction is often made between formal and informal labor markets. In formal markets, jobs are contractual, comply with relevant laws, and are likely to be found in large, stable organizations. The informal labor markets involve casual labor for a short period of time, often are paid in cash or in kind, and are usually for a small firm or for an individual employer (Levin, Ruel, and Morris 1999). The secondary, peripheral, or informal market is also more likely to have temporary, part-time, or seasonal jobs (Hodson and Sullivan 2002: 352–375). Another conceptualization is that the two sectors represent the persistence of the traditional sector (the lower tier) with a modernizing sector (Nielsen 1994).

These dichotomizing trends are also associated with some division of the labor force into more preferred and less preferred groups of workers (Kerckhoff 1995). To some extent, the preferences are based on greater human capital, with more educated workers more likely to be in primary, core, or formal markets. In addition, there is often a demographic sorting, with urban males from dominant ethnic groups more likely to be preferred, and with women, minority group members, the very young and the very old, the disabled, and perhaps immigrants in the less preferred group (DeJong and Madamba 2001; DeAnda 2000). Hsueh and Tienda (1996) find that there is greater labor force instability for women and minority groups than for men and whites.

One interesting aspect of the research into two-tier labor markets is that there has been some effort to link real or imagined psychological outcomes, as well as economic and social outcomes, to the type of job one holds. The bottom-tier workers, who often have a work history of many short-term jobs, may then be thought of as unstable by future employers. By contrast, steady work is thought to produce psychological traits of responsibility and agency in workers (Roberts, Helson, and Klohnen 2002; but also see Kohn 1977 and Kohn et al. 1983 for a different argument about causation).

A key issue in this line of work is whether the bottom tier is growing or shrinking with respect to the top tier (Blank 1995). The development of temporary workers in many occupations is seen as a sign of marginalization. In addition, the growing use of nonstandard work arrangements is sometimes taken as a sign of greater instability and

marginalization throughout the labor market (Kunda, Barley, and Evans 2002; Kalleberg 2000). Finally, globalization is seen as a means of decreasing job security for workers in several countries simultaneously because of the threat that jobs will flow to the areas with the lowest wages (Parrado and Zenteno 2001). An important and unresolved issue is how much the demographic and economic aspects of a two-tier system will overlap.

RESEARCH DIRECTIONS

Many of the most important labor force studies will continue the lines of research mentioned in the preceding section, but there are important additional research directions that are now receiving attention from researchers.

Age Structure and Retirement

In the advanced industrial societies, labor force participation rates have typically declined with advancing age. In many countries, there is a customary or even legally enforced retirement age. Programs such as Social Security must carefully model the number of retired dependents who will be eligible for transfer payments. Declining mortality rates have lengthened the number of years that elders will spend out of the labor force (Gendell 2002). In addition, declining fertility rates throughout the industrialized world have made it difficult to replace older workers with younger native-born workers. Thus, the rates of retirement are closely tied to issues of state spending and immigration policy (Coleman 1992).

In developing countries, older workers often continue to work almost until the time of death. In advanced industrial countries, the pattern is different (Clark, Ramsbey, and Adler 1999). American labor force participation rates at older ages dropped after the introduction of Social Security and private employer-sponsored pension plans (Wise 1997). Workers also have less available in savings upon retirement. Meanwhile the average length of expected time in retirement has increased (Lee 2001).

In the United States, where there is no longer mandatory retirement, the modeling of retirement is also important for projecting the future size of the labor force. Although this modeling is important, it has also become more difficult because retirement timing has become more irregular (Han and Moen 1999). Many researchers are looking for demographic regularities in retirement now that the institutional regularities are in abeyance (Guillemard and Rein 1993).

Some studies have shown that formerly married women plan much later retirements than formerly married men because they have had lower earnings and expect only small retirement payments (Hatch 1992). More generally, working and nonworking life expectancy vary according to occupation, class of worker, education, race, and marital status (Hayward and Grady 1990; Burr et al. 1996). Moreover, these economic and social characteristics, because they are related to income during working life, are also related to postretirement income (Pampel and Hardy 1994).

Given the economic and social significance of retirement and the growing share of the elderly in the population, it seems likely that labor force demographers will pay greater attention to retirement.

Youth Labor Force Attachment

Another issue of great interest to labor force demographers is how young people become attached to the labor force. It is known that youth do so over a period of time, often with multiple entries and reentries. The attachment process appears to differ for men and women. Attachment also seems to differ for blacks and whites (Deseran and Keithly 1994). Working during high school has a positive effect on many labor force behaviors, such as labor force participation and income, even 10 years later, but working during high school also appears to be negatively related to later finishing college (Carr, Wright, and Brady 1996).

Moreover, at least one study has found that time spent out of the labor force by youths is positively related to becoming engaged in crime (Crutchfield and Pitchford 1997). Thus, crime may be an alternative to work for some young men. Other studies have indicated that welfare may be an alternative to work for some young women, especially those who have had children.

Because young adulthood is a time for acquiring many roles simultaneously, there is great interest in how youths order family formation, schooling, and work, and the ways in which these statuses are entered and the overlap in statuses. Because of changes that occur in cohorts, it seems likely that the conclusions reached for previous generations may not hold for younger generations, leading to a continued need for additional research.

The Future of Work

A durable issue for labor force demographers is how the labor force will look when the demographic transition is complete and after the sectoral transition from agriculture to industry to services has been completed. By 2010, the median age of the U.S. labor force will be over 40, with a continuing shift toward knowledge work. One in five workers will be in a professional or related occupation (Francese 2002).

Demographers have become fairly sophisticated in projecting the labor supply, including the composition of potential workers who are available for work. Future progress in this area will rely more heavily on understanding labor demand and its intersection with the labor supply in the form of actual employment for specific workers. It is foreseeable that the effects of improved productivity, either because of technology or human capital improvements, will continue to affect the demand for labor. But a variety of institutional and organizational effects are more difficult to forecast and are likely to play a key role in shaping the future labor force.

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