employment statistics. Roy Davies gives an account based on a study in former mining areas of the interaction between unemployment and sickness. Humphrey Southall reports on research on the relationship between insured unemployment and poor relief in the 19th century and in the interwar period.

GARSIDE gives a account of unemployment statistics and of many studies using unemployment statistics, covering the period from the middle of the 19th century up to the late 1970 and including a few paragraphs on the LFS measure first produced in 1973. Garside covers statistics from trade unions and the Censuses of Population as well as registered and insured unemployment. Garside reports on many studies of the relationship between unemployment and vacancies made in the 1970s, and indicates that debates on the measurement problems were fuller in the 1970s than in later decades.

WEBSTER provides a well-informed entry point to the problems associated with the measurement and investigation of unemployment problems on a local scale. Sampling error limits the usefulness of LFS statistics at local level, but the lack of a denominator for the calculation of unemployment rates limits the use made of Count of Claimants statistics. Webster explains how the use of "travel to work areas" disguises the growing concentration of unemployment in inner cities. The use of "workforce" unemployment rates for local authority areas, published in 1998, systematically misleads, by understating the level of unemployment in urban areas, and overstating the level in suburban and rural areas.

THOMAS (1998a) provides an account which complements that of Webster in examining the historical and statistical aspects of the development of "workforce" unemployment rates. The use of workforce rates was defendable in earlier eras of full-employment, when unemployment was frictional, and the characteristics of the unemployed were similar to those in employment in an employment exchange area. However, the growth of commuting and of structural unemployment undermined these assumptions. The travel to work areas provide a solution only by enlarging the area covered, disguising the statistical error of using a denominator for the calculation of unemployment rates that does not include the numerator.

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Unemployment theories

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Theories of unemployment have their origin in KEYNES' influential book, published in 1936. He recognized that the level of effective demand for goods and services determined employment. Cyclical or demand deficient unemployment occurred when the number of unfilled job vacancies was insufficient to match the number of workers seeking employment. Prior to this, economists considered cyclical fluctuations in unemployment to be a natural phenomenon.

Keynes' break with neoclassical thinking was associated with the failure of markets to resolve the persistently high involuntary unemployment during the Great Depression of the 1930s. Following Marx and Kalecki, he rejected Say's law, a neoclassical theory in which aggregate demand was always sufficient to absorb full employment output. Keynes argued that unemployment could be involuntary in the sense that there were insufficient jobs at the prevailing money wage rates. Neoclassical economists pointed to rigidities in the labour market, notably excessive real wages relative to marginal productivity, as the explanation of the mass unemployment and asserted that unemployment was voluntary.

Keynes showed that, even if money wages were reduced within the labour market, it did not follow that the real wage would fall, given that competitive firms would be forced to pass on the lower costs in the form of lower prices. Further, even if the real wage were lower, firms would only hire additional workers if there were sufficient demand for the additional output. He convincingly demonstrated that the government could use fiscal and monetary policies to offset a cyclical decline in private demand, thereby maintaining low levels of unemployment. The experience of the Western economies after World War II until the mid 1970s vindicated this viewpoint.

By the mid 1960s, it was recognized that the use of aggregate demand management policies by government to maintain lower unemployment rates carried with it the cost of higher inflation. Underpinning this argument was the famous PHILLIPS curve in which the government had a menu of policy choices, represented by different combinations of real output (unemployment) and inflation.

In the late 1960s, neoclassical theorists, including FRIEDMAN were critical of the apparent lack of microfoundations in Keynesian macroeconomics. They argued that macroeconomics should not be based on a separate conceptual structure to microeconomics. Consequently they did not

have a macroeconomic explanation for the mass unemployment of the Great Depression and subsequent episodes of high unemployment. Friedman also challenged the notion that policymakers could rely on a stable Phillips curve to justify their stabilization policies.

Friedman and other orthodox economists reasserted the neoclassical microfoundations. They followed Irving Fisher and identified misperceptions of inflation as the factor that prevented Say's law from working according to the market-clearing model. Under their natural rate of unemployment hypothesis, Say's law imposed itself in the long run. The unemployment rate would tend to the natural rate without government intervention. Keynesian policy was alleged to be based on the misguided notion that unemployment was due to deficient aggregate demand. Policymakers would only create inflation if they tried to drive the unemployment rate below the natural rate, a level reflecting the unfettered functioning of the market.

This attempt to reassert Say's law by neoclassical economists was challenged by the work of CLOWER and of LEIJON-HUFVUD. They demonstrated how neoclassical models of optimizing behaviour were flawed when applied to macroeconomic issues like mass unemployment. Clower showed that an excess supply in the labour market (unemployment) was not usually accompanied by an excess demand elsewhere in the economy, especially in the product market. An unemployed worker who had latent product demand could not signal this information to an employer, a seller in the product market. Leijonhufvud argued that, in disequlibrium, price adjustment was sluggish relative to quantity adjustment.

Neoclassical microeconomists, including PHELPS et al. also attacked the Keynesian viewpoint from the perspective of search theory in the 1970s. Phelps et al. argued that, while unemployed, workers pursue a voluntary, maximizing strategy of job search to achieve career advancement. They choose to become unemployed because the returns from their current employment are viewed as inferior to the expected returns from searching and securing a new position. Thus unemployed workers and unfilled vacancies coexisted. Frictional unemployment (and foregone earnings) are the costs of generating information about the labour market. The search explanation was deficient, however, as the predominant cause of the observed unemployment. The majority of search behaviour is done on the job, measured quits do not vary counter-cyclically, so a high quit rate tends to accompany low unemployment, and many workers who are unemployed experience frequent spells of unemployment in between taking low-skill, low-paid jobs.

Economists also point to the impact of structural change on unemployment. The skills and/or location of the unemployed do not always coincide with the skills and/or location of available jobs, so that labour mobility and/or retraining is required. Since the 1970s, the employment shares of manufacturing in the older industrial economies have declined. ROWTHORN & WELLS have challenged the theory of deindustrialization that is based on the increasingly global aspect of production and trade being the source of the diminishing opportunities for manufacturing workers. They argue that the links between economic expansion and structural change are more complex than those described by the theory and the effects of economic development on the manufacturing sector must be incorporated into the analysis.

One branch of the contemporary literature that includes LAYARD, NICKELL & JACKMAN has reasserted that structural factors are the ultimate constraint on the level of employment. The concept of the NAIRU defines a long-run equilibrium rate of unemployment at which the competing claims of income earners are consistent. It is the minimum sustainable rate of unemployment. In contrast to Friedman's natural rate it is underpinned by imperfect competition. The size of the NAIRU is a manifestation of supply side imperfections, notably price setting by imperfectly competitive firms and wage bargaining by workers. The latter reflects factors including replacement ratios and the effectiveness of the unemployed as an alternative supply of labour. An unacceptably high equilibrium unemployment rate signals the need for supply side reform, in the form of policies that include scrapping minimum wages and weakening union power.

On the other hand, contributors to the edited volume by ARESTIS & MARSHALL and other writers emphasize that the rise in unemployment has been accompanied by a resistance to corporatist institutions and labour market deregulation. The restoration of full employment requires both demand expansion and supply side reform. They identify the key problem as being to try to make lower unemployment compatible with the prevailing low rate of inflation. This requires the development of consensual arrangements to underpin wage determination and policies to promote investment so that demand expansion is not stymied by the emergence of inflation or balance of payments problems.

MARTIN J. WATTS AND WILLIAM F. MITCHELL

See also Natural rate of unemployment and NAIRU, Say's law, Unemployment - historical experience, Unemployment international experience, Unemployment - Keynesian, Unemployment - technological

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