

A comparison of youth unemployment in Australia and the United States

Once remarkably low, youth joblessness in Australia has risen steadily with recession and the end of the long postwar period of labor scarcity; recent unemployment rates rival the high rates among U.S. youth

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Neither Australia nor the United States has escaped the international "unemployment plague." In common with the other industrialized countries in the Organization for Economic Cooperation and Development area (the most notable exception being Japan), Australia and the United States are experiencing high rates of overall and youth unemployment. This article examines the comparative labor market situation of youth in both countries. It also reviews the most frequent explanations of the causes of youth unemployment, which relate to high labor costs, demography, and the general economic situation.

Youth unemployment rates are affected by the overall job market. Thus, the emergence of youth unemployment as a major problem in Australia and its growing seriousness in the United States cannot be understood independently of the general growth in unemployment.

Overall unemployment

The beginning of the world economic recession in 1974, precipitated by steep price rises for Middle East oil in late 1973, marked the collapse of full employment in Australia and a deterioration in labor market conditions in the United States. Indeed, the world recession adversely affected the labor markets of virtually all of the industrialized nations.

By the end of 1981, the unemployment rate in the United Kingdom had reached 10.6 percent, the highest in the Western world. At the same time, the unemployment rate was 8.5 percent in Italy, 7.6 percent in the United States and Canada, 7.3 percent in France, 4.8 percent in Germany, and 2.2 percent in Japan.¹

The Australian unemployment rate stood at 6.3 percent²—a relatively moderate rate compared with the American rate and prevailing international rates. With rare exceptions, these rates represented the highest incidence of unemployment in each country since World War II and the highest absolute number of unemployed workers since the Great Depression of the 1930's.

Recently, the progressive economic decline that began in 1974 accelerated quite sharply in Australia. Domestic demand flattened out in the fourth quarter of 1981 and began to deteriorate in the first half of 1982. The 3 previous years had seen some economic growth spurred on by investment in the mining and basic metal industries. The recent decline in the Australian economy has been such that in the first quarter of 1983 real gross nonfarm product—the measure of the industrial sector of the economy—represented the poorest economic performance in 8 years.

The recent accelerated decline of the Australian economy and the 1981–82 U.S. economic recession have led to sizable increases in the unemployment rate over a very brief period. The seasonally adjusted U.S. unemployment rate reached a 42-year peak of 10.7 percent in December 1982,³

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while the Australian unemployment rate peaked at 10.3 percent in March 1983.⁴ These unemployment rates represented 12,036,000 unemployed Americans out of a total labor force of 112,794,000 and 714,000 unemployed Australians out of a labor force of 6,950,000.

There was modest improvement in Australia toward the end of 1983, but in January 1984 unemployment again stood at 10.3 percent. By May 1984, however, the overall unemployment rate (the most recent figure) was approximately 9 percent. By contrast, the U.S. unemployment rate has been slowly declining since January 1983 and by May 1984 had reached 7.5 percent.

Although Australia's 1983 unemployment rate was only marginally higher than that of the United States, the Australian rate represents a relatively more serious problem to that country. Even prior to the world economic recession, U.S. unemployment rates were high compared with Australia's. Rates in excess of 5 percent were experienced in 1949–50, 1954, 1958–64, 1971–72 and in each year since 1974.⁵ In contrast, Australia's past employment performance has been impressive. At the end of 1950, the unemployment rate stood at 0.2 percent—the all-time low. Between 1945 and 1973, it exceeded 2 percent only in the recession years of 1952–53, 1960–62, and 1972. During most of this period, the labor force grew rapidly and the unemployment rate averaged between 1 and 1.5 percent.⁶ Indeed, for more than 25 years following World War II, Australia's manpower problems were defined as labor *shortages* and the solution was massive immigration. For two decades, immigration contributed 40 percent of the annual growth in the Australian labor force.⁷

In view of Australia's postwar experience of nearly uninterrupted full employment, the labor market situation since 1974 represents a much more severe and rapid deterioration than that of comparable Western economies. Bettina Cass wrote in 1981 that Australian figures show a steeper decline in the rate of growth of employment and a higher rate of growth in unemployment in comparison with, for example, the United States and West Germany.⁸

Labor force surveys

Australian and U.S. labor force survey data can be compared because the survey methods are similar: they are a central component of monthly population surveys involving interviews with members of a sample of representative households. The Australian population survey covers more than 33,000 households, while the U.S. sample survey covers approximately 60,000 households.

The definition of the labor force is fundamental to any labor force survey. Comparison between the labor force data of the two countries is facilitated by the similarity in the definitions of employed and unemployed persons, definitions which conform to the international standard definitions specified by the International Labor Organization. Revisions of the ILO definitions in 1982 specified that student job-

seekers should be classified as unemployed. However, even prior to 1982, the labor force survey data of Australia and the United States were comparable. This is because both countries departed from the practice of most others by including in their unemployment figures unemployed teenagers in full-time education who sought jobs during the school year.⁹

However, there are some differences between the definitions used in the labor force surveys. Although nominally covering all teenagers from age 15 to 19, the Australian data effectively cover 15- to 17-year-olds only. This is because the definition of students relates only to those enrolled full time at regular secondary schools, which few 18- or 19-year-olds attend. Excluded from the student work force figures are persons enrolled at colleges, universities, and trade and business schools. Because of these exclusions, as well as the exclusion of part-time students, the Australian proportion of the teenage student labor force is understated, compared with the U.S. measure.

Also, there is a difference between the two countries with regard to the lower limit of the youth segment of the labor force captured by the labor force surveys. The lower age limit is generally considered to be the age at which compulsory schooling ends and the age at which teenagers may enter the labor market on a full-time basis. This lower age limit is 15 in Australia and 16 in the United States. However, both countries define the upper age limit of the youth labor force as 24 years of age.

Composition of the youth labor force

The labor force activity of students features prominently in American analyses of the dimensions of youth unemployment. A recent international study of unemployment observed that the working student is very much an American phenomenon, whereas young workers or jobseekers in other countries are mainly out-of-school youth.¹⁰ In 1979, nearly 45 percent of U.S. teenage students held a job and, between 1967 and 1977, student labor force participation rates increased by about 5 percentage points for male teens and 13 percentage points for female teens.¹¹

Yet the observation made by the international study is less true of Australia today than it was a decade ago. Australia experienced considerable growth in part-time youth employment during the 1970's and a substantial part was accounted for by the rising proportion of full-time students who were in the labor force—from 5 percent in 1971 to 27 percent in 1981.¹²

Students manifest a particular proclivity to frequently enter and exit the labor force because, as noted, they are typically employed in part-time (often casual) jobs. Consequently, student unemployment tends to magnify overall youth unemployment rates. Thus, while there appears to be a gradual confluence in Australian and American trends with regard to student labor activity, the higher U.S. student participation rate exerts a stronger upward pressure on youth

unemployment rates than does the comparatively lower Australian student participation rate.

Most countries have certain groups within the labor force that are more prone to unemployment than others. In the United States, blacks and Hispanics have fared far worse in the labor market than whites. Consequently, racial-ethnic distinctions characterize American labor force surveys. In contrast, the composition of the Australian labor force is primarily differentiated in terms of socioeconomic status. Thus, given the differences in the composition of the Australian and U.S. labor forces, youth unemployment is described only in terms of the common dimensions of sex and age.

Youth unemployment rates by age and sex

Australian youth unemployment rates have steadily increased over the last decade or so. While youth unemployment rates hovered around 3 percent between the mid-1960's and early 1970's, 1974 marked a turning point. In that year, the youth unemployment rate reached 4.9 percent and grew steadily in succeeding years—9.7 percent in 1975, 10 percent in 1976, 12 percent in 1977, 12.6 percent in 1978, and 13 percent in 1979. U.S. youth unemployment rates also rose with the onset of the world economic recession, increasing by 4.3 points between 1974 and 1975 alone to 16.1 percent. The balance of the 1970's witnessed a slow decline in U.S. unemployment rates, but the 1979 rate of 11.7 percent was still as high as the 1974 rate.¹³

The turn of the decade saw the continued growth in Australian youth unemployment and a reversal of the slow decline in U.S. youth unemployment rates to the high levels reached in both countries by March 1983. (See table 1.)

The absolute numbers of unemployed Australian youth translate into youth unemployment rates of 24.3 percent for teenagers, 15.4 percent for young adults, and 19.1 percent for the youth segment of the labor force as a whole. The corresponding unemployment rates for the United States are 23.5 percent, 15.4 percent, and 18.1 percent. Clearly, teenagers in both countries are experiencing unemployment levels well in excess of young adult levels.

The male youth unemployment rate is higher than the female rate in both Australia (19.8 percent compared with

18.3 percent) and the United States (19.5 percent compared with 16.6 percent). However, when the male and female youth unemployment rates are further disaggregated by age (teenagers versus young adults), the Australian data indicate that the apparent labor market advantage of female youth is confined to the 20- to 24-year-old age group. Thus, for 15- to 19-year-olds the male unemployment rate was 23.2 percent while the female rate was 25.6 percent. This pattern is reversed in the 20- to 24-year-old age group where the male unemployment rate is 17.6 percent and the female rate is 12.5 percent. In the United States, female teenagers and female young adults fared better in the labor market than their male counterparts. Thus, the male teenage unemployment rate was 25.3 percent and the female rate was 21.5 percent while those for young adults were 16.6 percent (male) and 14.1 percent (female).

The figures on the incidence of youth unemployment in Australia and the United States underscore the gravity of the problem in both countries. Indeed, both are experiencing youth unemployment rates that are 2 to 3 times higher than adult unemployment rates. Part of this differential is because of the higher job mobility of students and of youth in general. Further, youth account for an acutely disproportionate share of the unemployed labor force—50.4 percent in Australia and 37 percent in the United States in March 1983.¹⁴ As in 1980, Australia still probably shares with Britain and Italy the dubious distinction of having the highest proportions of youth among the unemployed in the Western industrialized countries.¹⁵

Discouraged workers

The unemployment figures cited so far in this article actually understate the extent of the unemployment problem. This is because they exclude the individuals of working age who have been discouraged from seeking work because they believe there is none to be found.

Data on discouraged workers are gathered by Australia and the United States. Questions dealing with these workers were first included in the Australian labor force surveys in 1975 and data are collected twice a year—in March and September. U.S. data on discouraged workers, gathered on a quarterly basis, were first published in 1969.

Both labor force surveys use similar definitions of the discouraged worker, namely, unemployed persons who want a job but are not actively seeking work because they believe there is none to be found for any of the following reasons: (1) no jobs in their locality or line of work; (2) lack the necessary training, skill, or experience; (3) considered by employers to be either too young or too old; and (4) have personal or social handicaps such as language or racial difficulties.

In both countries, changes in the number of discouraged workers have generally paralleled cyclical changes in the overall unemployment rate.¹⁶ In March 1983, there were 113,200 discouraged workers in Australia who represented

Table 1. Youth unemployment rates in Australia and the United States by age and sex, March 1983, seasonally adjusted

[In percent]

Age	Australia			United States		
	Men	Women	Both sexes	Men	Women	Both sexes
All youth	19.8	18.3	19.1	19.5	16.6	18.1
Teenagers ¹	23.2	25.6	24.3	25.2	21.5	23.5
Young adults ²	17.6	12.5	15.4	16.6	14.1	15.4

¹Includes persons who are 15 to 19 years old in Australia and those who are 16 to 19 years old in the United States.

²Includes persons 20 to 24 years old for both countries.

15.5 percent of all unemployed persons.¹⁷ At the same time, there were 1,871,000 discouraged U.S. workers.¹⁸ The proportion of discouraged workers among America's unemployed was the same as Australia's.

American labor force surveys have shown large numbers of discouraged teenagers and young adults.¹⁹ This contrasts markedly with the Australian situation. Thus, in March 1983, there were slightly more than a half million discouraged youthful workers in the United States, and they represented 11.6 percent of the approximately 4.5 million out-of-work American youth. Discouraged youthful Australian workers totaled a modest 15,800 or 4.4 percent of Australia's out-of-work youth.

Labor costs

The cost of youthful labor has been advanced as an explanation of rising youth unemployment in the two countries. Although the theoretical foundations and posited effects are similar, American analysts have focused upon the price of youthful (mainly teenage) labor relative to the market-clearing wage, while Australian analysts have focused upon youths' wages in *direct* relation to adults' wages. The reasons for this difference are twofold: first, the institutional mechanisms for the determination of youth's wages differ in the two countries and, second, the trend in the ratio of youth wages relative to adult wages in Australia is opposite to that of the U.S. trend.

The United States and Australia, among other countries, have minimum wage laws. The United States passed its minimum-wage legislation in 1938 as part of the Fair Labor Standards Act. With the exception of an exemption introduced in 1961 permitting full-time students to be hired at a subminimum wage of 85 percent of the basic minimum wage (the Student Certification Program), a uniform minimum wage prevails. In contrast, the institutional mechanism for establishing wage levels (and some other working conditions) in Australia is the industrial tribunal. There are many Federal and State tribunals in that country covering a diversity of occupations and industries. The tribunals prescribe minimum, or "award," wages for "juniors" (that is, teenagers). Award wages for juniors are based on vague notions of need in relation to the cost of living and the work value of juniors in comparison with adults. However, in the main, they tend to vary according to changes in adult award wages. There are currently several thousand awards in existence.²⁰

United States. The issue of the minimum wage has assumed considerable importance in discussions of youth unemployment in the United States because of the supposed negative correlation that exists between the level of the minimum wage and the level of employment of young people in minimum-wage jobs where they are disproportionately represented—44.2 percent of 16- to 19-year-olds in 1980.²¹ In the standard competitive model, a minimum wage,

if it is to be effective in achieving any of its goals, must be established *above* the market-clearing wage leading firms to reduce the quantity of (demand for) labor. In view of their disproportionate representation among minimum-wage employees, teenagers are thought to be particularly vulnerable to minimum-wage hikes.

The minimum wage, however, can also affect the supply of labor: an increase in the going price of labor consequent to an increase in the minimum wage may produce a positive response on the supply side if the supply of labor is positively sloped,²² that is, low-wage workers may be attracted to reenter the labor market in search of the higher remuneration represented by the improved minimum-wage level. In accounting for youth unemployment, analysts assume that the unemployment effects of a hike in the minimum wage (a decrease in the demand for youthful labor) will be stronger than the employment effect (an increase in the supply of labor) leading to an overall net reduction in employment.

Based on available studies of the effect of the minimum wage,²³ it would appear that while the minimum wage has been argued as a primary cause of youth unemployment in the United States, empirical evidence suggests that its contribution to youth unemployment is small. Clearly, the minimum wage is unable to account for the bulk of U.S. youth unemployment.

Australia. In Australia, the relationship of youth wages to adult wages has been seen as an important cause of youth unemployment. During the 1970's, Australia experienced tremendous upward pressure on wages and salaries in general. Many analysts have asserted that this produced a situation referred to in Australia as "wage overhang," which arises when earnings increases outpace productivity gains. This results in a rise in the cost of labor relative to the cost of capital, which serves as a disincentive to the use of labor as a factor of production. The high cost of labor is viewed by many Australians as a major cause of their country's high overall unemployment and inflation rates.

While young and older workers alike benefited from the improved wage levels in Australia, analysts have argued that the young worker benefited more. The progressive increase in youth unemployment since 1974 has been directly attributed to the higher price of young labor. Thus, employers tended to hire adult workers in preference to youth who could command similar wages.

By contrast, between 1967 and 1977, American youth experienced a decrease in their wages relative to adult wages despite upward adjustments in the minimum wage. Drawing on traditional supply-and-demand analysis, Richard B. Freeman and David A. Wise argue that the downward trend in youth wages relative to adult wages was the product of the increasing proportion of youth in the population.²⁴

Just as the evidence provided by American studies on the impact of the minimum wage on youth unemployment is mixed, so is the evidence provided by Australian studies.

With regard to the trend in youth-adult wage relationships, one study found that youths' wages relative to adults' wages remained virtually static between 1966 and 1976²⁵ while another, focusing upon individual industries, found that wages in *some* jobs in a small number of industries had risen.²⁶

Perhaps the most comprehensive study of the relationship between youth wages and employment was recently released by the Australian Bureau of Labor Market Research.²⁷ The Australian Bureau's study, which drew on the most current data available, found that a sudden compression in the wage spread between youth (juniors) and adults occurred during 1972 and 1975. Indeed, the compression in wages largely occurred *before* the onset of the recession in 1974. Junior award wages rose by 8 percent relative to those of adults between early 1972 and mid-1974, and both sexes experienced similar compressions in junior-adult wages. The compression was greatest for the youngest juniors (for example, a 13.6-percent compression for 17-year-olds), and declined with increasing age so that 20-year-olds experienced the least compression (5.2 percent). Market forces played some role in the compression in junior and adult wages between 1972 and 1974. While the economic forces of demand and supply have led to a downward trend in the wages of American youth relative to adult wages, these forces have failed to reverse the wage compression in Australia in the period since 1974.

What has been the impact of changes in youth-adult wages on the demand for and supply of youth labor? When the sudden compression in wage spreads between juniors and adults occurred, the youth labor force participation rate remained high while the youth unemployment rate steadily grew. But the Australian evidence on the precise influence of wages on youth labor demand and supply is sparse.

In reviewing the few earlier studies, the Australian Bureau of Labor Market Research found analytical deficiencies. The Bureau then undertook further research of its own and found that increases in youth wages relative to those of adults decreased employment and increased labor supply, thereby adding to unemployment. While youth unemployment levels rose, the Australian Bureau was unable to precisely quantify the magnitude of the effect.²⁸

Demography

A popular explanation for youth unemployment is the post-World War II baby boom experienced in both Australia and the United States. Analysts have asserted that the baby boom led to a bulge in the size of the youth population from the late 1950's to the early 1960's, and continuing into the 1970's. The surge in the youthful population, together with increased labor force participation by the young, resulted in supply exceeding demand and, other things being equal, higher youth unemployment rates.

In Australia, the youth population grew rapidly. During 1966–82, the teenage population grew by approximately 22 percent and the young adult population grew by about 52

percent, while the civilian population age 15 years or more grew by 39 percent.²⁹ However, Australian analysts have shown that the growth in the number of young people of working age arising from the baby boom had largely ceased well before the commencement of the recession in 1974.³⁰ Between 1976 and 1982, the male teenage population grew by only 3.7 percent and the female teenage population, by 1.3 percent,³¹ suggesting that the labor market difficulties of teenagers in recent years have been less than they otherwise would have experienced had their population numbers continued to grow at earlier rates.

The United States also experienced a steady increase in the proportion of youth in the working-age population—from about 20 percent in the late 1950's to about 27 percent by the mid-1970's. The Congressional Budget Office estimated that the youth population bulge added perhaps 4 percentage points to the teenage unemployment rate and 1 percentage point to the unemployment rate for 20- to 24-year-olds. However, by the mid-1970's, the decline in the proportion of teenagers in the American population had already begun and in 1980, the decrease in 20- to 24-year-olds began.³²

A surge in the size of the youth population of working age does not completely translate into an equivalent increase in the size of the youth labor force because not all working-age youth are either working or seeking employment. Over the last two decades, a higher proportion of Australian youth has entered the labor market than that of American youth; indeed, the only country with consistently higher youth participation rates than Australia is Great Britain. Relative to the United States, Australian youth participation rates have been historically high and have fluctuated by only a few percentage points. In contrast, U.S. teenagers and young adults have had progressively increasing rates over most of the past two decades. Thus, between 1960 and 1980, American youth participation rates rose by almost 12 percent from 56 to 68 percent. Over a slightly briefer period (1964 to 1980), Australian youth participation rates increased by only 2 percent—from 69 to 71 percent.³³

The figures on labor force participation for all youth mask some pronounced differences in participation trends between teenagers and young adults. However, in Australia only the young adult participation rate rose; the teenage population manifested a long-run trend of falling activity. This downward trend has reversed itself though during the course of the recession. In the United States, participation rates for both groups steadily increased from 1960 to 1980.

The early 1980's have witnessed slow declines in teenage activity rates and increases in the number of young people in full-time education. Deteriorating labor market conditions have led youth to stay on at school longer. However, only about 35 percent of Australian students complete secondary school (compared with 70 to 90 percent in the United States).

Data for the United States, then, indicate that the working-age children of the baby boom and the steady increase in

their labor force participation may have contributed to high unemployment rates of youth. However, the effects of the baby boom in both countries had largely dissipated by the late 1970's. In Australia, it appears that the reversal (until recently) in the long-run trend of falling participation over a period when the economy had been in a state of protracted downturn played a more significant role in rising youth unemployment than the continuing, but decelerated, growth in youth population levels.

Effects of recession

The business cycle has a major impact on unemployment in general and youth unemployment in particular. The argument that has received the widest acceptance (certainly in Australia) is that the dramatic increase in youth unemployment in Australia since 1974 is because of the malaise of the country's economy and this has dampened the demand for young workers more than it has for older workers. (This same view applies to the United States as well.)

A number of reasons have been advanced for the greater dampening in the demand for youthful labor during the recession. These include: a preference on the part of employers to hire mature, adult workers rather than the young during a period of excess labor supply because of the former's presumed greater productivity and the latter's job-changing proclivities; changes in industry structure; and deficiencies in the stock of youthful human capital. With regard to the last two reasons, many youth find their first employment in unskilled jobs. Yet many unskilled jobs are disappearing in both Australia and the United States and entry-level jobs are increasingly requiring some skills. Thus, the production of manufactured goods that may have formerly required a sizable, unskilled work force has either been curtailed in the face of both slackened demand and competition from imported products or now involves more sophisticated, capital-intensive processes than previously, in order to maintain a competitive edge. This situation has led to a mismatch between the skills demanded by employers and those available in the youth labor force.

Conclusion

Each of the reasons advanced to explain why youth have borne a disproportionate share of the increase in unemployment during the recession certainly has merit. However,

high youth unemployment in Australia and the United States is by no means a recent development. On the contrary, youth unemployment rates in excess of adult rates and the high representation of youth among the unemployed are factors which emerged before the 1970's.

In Australia, above-average unemployment rates for youth appeared well before the watershed year of 1974. In 1969, for example, the adult male unemployment rate was 0.7 percent, and the female rate was 0.9 percent. The corresponding male and female rates for persons under 21 years of age were 1.7 percent and 2.3 percent—approximately 2½ times higher than the adult rates.³⁴ With regard to the share of unemployment borne by Australian youth, this began to rise for teenagers during 1953–54 and 1965–66 when their proportion increased from 13.5 to 38.2 percent. For young adults (20- to 24-year-olds), their share of unemployment rose most rapidly during 1965–66 and 1970–71—from 16 to 21 percent.³⁵

As in Australia, the United States' youth unemployment rates have also been historically higher than those for adults, but the disparity between youth and adult rates appears to have been greater. Indeed, between 1966 and 1969, for example, the unemployment rate for both sexes combined for persons between age 16 and 19 was more than five times higher than the male unemployment rate, age 20 and over.³⁶

The foregoing analysis of the causes of youth unemployment most frequently advanced by analysts in Australia and the United States bears testimony to the elusiveness of a consensus on the causes of youth unemployment and the futility of seeking a single-factor explanation. Logic would suggest that youth unemployment in its current dimensions is the product of the interplay of a number of factors with differing saliency. The analysis indicates that the labor market has long been adverse for youth, a situation that has been exacerbated by an economic recession accompanied by movements in youth labor costs and a changed demographic profile.

Perhaps the major distinguishing feature of youth unemployment today is the magnitude of the numbers of unemployed youth. Certainly within the Australian context, youth unemployment as a problem only began to receive the attention it had long deserved when the incidence of youth unemployment and the numbers of unemployed youth began a steady upward climb in 1974. □

FOOTNOTES

¹ OECD *Economic Outlook 32* (Paris, Organization for Economic Cooperation and Development, December 1982), p. 35.

² Australian Bureau of Statistics, *The Labour Force, Australia, December 1981* (Canberra, Commonwealth Government Printer, Catalogue No. 6203.0, January 1982), p. 9.

³ *Employment and Earnings* (Bureau of Labor Statistics, April 1983), table A-1, p. 18.

⁴ Australian Bureau of Statistics, *The Labour Force, Australia, July 1983*

(*Preliminary Estimates*) (Canberra, Commonwealth Government Printer, Catalogue No. 6202.0, August 1983), table 2, p. 5.

⁵ *Employment and Earnings* (Bureau of Labor Statistics, April 1983), table A-1, p. 18.

⁶ *Understanding Unemployment* (Melbourne, Australian Industries Development Association, 1978), p. 2.

⁷ Bettina Cass, "The Numbers Games," *Australian Society*, August 1983, p. 21.

⁸Bettina Cass, "Employment: Causes, Consequences and Policy Implications," *Reports and Proceedings* (Sydney, Social Welfare Research Centre, No. 11, 1981), p. 2.

⁹Beatrice G. Reubens, "Foreign Experience," *The Teenage Unemployment Problem: What Are the Options?* (Washington, Congressional Budget Office, 1976), p. 54.

¹⁰*International Comparisons on Unemployment*, Bulletin 1979 (Bureau of Labor Statistics, 1978), p. 63.

¹¹*Youth Unemployment: An International Perspective*, Bulletin 2098 (Bureau of Labor Statistics, September 1981), p. 19.

¹²Bureau of Labor Market Research, *Youth Wages, Employment and the Labour Force* (Canberra, Australian Government Publishing Service, Research Report No. 3, 1983), p. 8.

¹³*Youth Unemployment: An International Perspective*, Bulletin 2098 (Bureau of Labor Statistics, September 1981), table 1, p. 5.

¹⁴All Australian data for March 1983 are drawn from the following source: Australian Bureau of Statistics, *The Labour Force, Australia, March 1983* (Canberra, Commonwealth Government Printer, Catalogue No. 6203.0, March 1983).

¹⁵Keith Windschuttle, *Unemployment: A Social and Political Analysis of the Economic Crisis in Australia* (Ringwood, Victoria, Penguin Books, 1980), p. 44.

¹⁶For example, see Paul O. Flaim, "Discouraged workers and changes in unemployment," *Monthly Labor Review*, March 1973, pp. 8-16; and Carol M. Ondeck, "Discouraged workers' link to jobless rate reaffirmed," *Monthly Labor Review*, October 1978, pp. 40-42.

¹⁷The Australian data on discouraged workers are drawn from Australian Bureau of Statistics, *Persons Not in the Labor Force, Australia, March 1983* (Canberra, Commonwealth Government Printer, Catalogue No. 6220.0, August 1983).

¹⁸The U.S. data on discouraged workers are drawn from *Employment and Earnings* (Bureau of Labor Statistics, April 1983), tables A-52-A-55, pp. 63-66.

¹⁹Constance Sorrentino, "Youth unemployment: an international perspective," *Monthly Labor Review*, July 1981, p. 9.

²⁰Bureau of Labor Market Research, *Youth Wages, Employment and the Labour Force* (Canberra, Australian Government Publishing Service, Research Report No. 3, 1983), pp. 35-37.

²¹*Report of the Minimum Wage Study Commission* (Washington, 1981), Vol. 1, table 1-1, p. 9.

²²Robert Swidinsky, "Minimum Wages and Teenage Unemployment," *Canadian Journal of Economics*, February 1980, p. 158.

²³E.G. West and M. McKee, *Minimum Wages: The New Issues in Theory, Evidence, Policy and Politics. A Study Prepared for the Economic Council of Canada and the Institute for Research on Public Policy* (Quebec, Canadian Government Printing Centre, 1980). Cited in "The Impact of Minimum Wages on Youth Employment," *The OECD Observer*, July 1982, p. 15.

The salience of the issue of the impact of minimum wages on youth

unemployment is reflected in the numerous empirical studies that have emerged in recent years. Virtually the entire literature is confined to analyses of experience in the United States and Canada. The evidence is mixed. Thus, of the 13 studies completed since 1970 and reviewed by E.G. West and M. McKee, nine reported reductions in employment, one found no significant effects, while the remaining three showed varying results for different labor force groups. The U.S. Minimum Wage Study Commission, established in 1977, sought to improve past studies through using more recent data and more sophisticated analytical techniques. The commission found lower minimum-wage effects than those previously obtained, and estimated that a 10-percent increase in the minimum wage lowers teenage employment by between 0.5 and 1.5 percent.

²⁴Richard B. Freeman and David A. Wise, "The Youth Labor Market Problem: Its Nature, Causes and Consequences," in Richard B. Freeman and David A. Wise, eds., *The Youth Labor Market Problem: Its Nature, Causes and Consequences* (Chicago, Ill., The University of Chicago Press, 1982), pp. 10-11.

²⁵Peter Sheehan, "Economic Aspects of Youth Unemployment," in Ronald F. Henderson, ed., *Youth Unemployment: Proceedings of the Second Academy Symposium* (Canberra, Academy of the Social Sciences in Australia, 1977), pp. H14-H15.

²⁶National Institute of Labour Studies, *Australian Bulletin of Labour*, September 1977.

²⁷Bureau of Labour Market Research, *Youth Wages, Employment and the Labour Force* (Canberra, Australian Government Publishing Service, Research Report No. 3, 1983).

²⁸*Youth Wages, Employment and the Labour Force*, p. 96.

²⁹Australian Bureau of Statistics, *The Labour Force, Australia, August 1982* (Canberra, Commonwealth Government Printer, Catalogue No. 6203.0, September 1982); Australian Bureau of Statistics, *The Labour Force, Australia, 1978* (Canberra, Commonwealth Government Printer, Catalogue No. 5204.0, 1979).

³⁰Peter Stricker and Peter Sheehan, "Youth Unemployment in Australia: A Survey," *Australian Economic Review*, First Quarter 1978, pp. 16-18.

³¹See footnote 29.

³²*Youth Unemployment: The Outlook and Some Policy Strategies* (Washington, Congressional Budget Office, April 1978), pp. 5-6.

³³Constance Sorrentino, "International comparisons of labor force participation, 1960-81," *Monthly Labor Review*, February 1983, table 3, p. 29.

³⁴Department of Labour and National Service, *An Analysis of Full Employment* (Melbourne, Labour Market Studies No. 2, 1970), p. 29. Cited by Adam Jamrozik and Marilyn Hoey, "Workforce in Transition: Implications for Welfare," *Reports and Proceedings* (Sydney, Social Welfare Research Centre, No. 8, 1981), p. 18.

³⁵Peter Stricker and Peter Sheehan, "Youth Unemployment in Australia: A Survey," *Australian Economic Review*, First Quarter 1978, pp. 16-18.

³⁶*Economic Report of the President* (Washington, U.S. Government Printing Office, 1982), table B-31, p. 269.