

International unemployment rates: how comparable are they?

Adjusted to U.S. concepts, the Canadian unemployment rate is reduced by 1 percentage point; effects of adjustments on European unemployment rates are smaller

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Comparative unemployment rates are used frequently in international analyses of labor markets and are cited often in the press. In the United States, the comparative levels are considered to be an important measure of U.S. economic performance relative to that of other developed countries. Comparative unemployment rates also provide a springboard for investigating the economic, institutional, and social factors that influence cross-country differences in joblessness.

The Bureau of Labor Statistics (BLS, the Bureau) has adjusted foreign unemployment rates to U.S. concepts since the early 1960s. Three other organizations—the Organization for Economic Cooperation and Development (OECD), the International Labor Office (ILO), and the Statistical Office of the European Communities (Eurostat)—also adjust national data on unemployment to a common conceptual basis. The resulting “standardized” or “harmonized” rates are intended to provide a better basis for international comparison than the national figures on unemployment offer.

The standardized rates, as currently published by the three organizations that make comparisons outside of Europe (BLS, OECD, and ILO), all show a similar result: a significant gap in unemployment rates between the United States, on the one hand, and Canada and Europe, on the other. In 1998, for example, when

the U.S. unemployment rate was 4.5 percent, Canada’s rate was 8.3 percent, and the rate for the European Union was even higher, at 9.9 percent.¹ It is of interest to find out how much of this gap is attributable to measurement differences that may not have been accounted for. If the gap is due mainly to conceptual differences, then there is no reason to study why some countries appear to be doing better than others at keeping unemployment low.²

All of the comparative programs have noted that some differences remain for which adjustments are not made, either because they are believed to be too small to matter or because there is no basis upon which to make regular adjustments. Recent evidence, however, suggests that it might be useful to revisit this issue. For example, in 1998, a Statistics Canada study used unpublished tabulations to reveal surprisingly significant differences between U.S. and Canadian measures of unemployment, owing to different implementations of similar concepts. In particular, although both countries require a person to be available for work and to have conducted a job search in order for that person to be classified as unemployed, the requirements are interpreted in different ways. The main difference, in terms of impact, is the treatment of so-called passive jobseekers—persons who conduct their search for work merely by reading newspaper ads. Such individuals are included in the unemployed in Canada, but are

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excluded therefrom in the United States. The impact of this difference inched upward from a very small level in the 1980s to a significant level in the 1990s. The overall impact of making all the adjustments was to lower the Canadian unemployment rate by a little less than 1 percentage point. Although this did not mean that the Canadian unemployment rate fell below the U.S. rate, it reduced the differential between the respective rates by one-fifth.

The BLS comparisons program covers Australia, Canada, Japan, and six European countries: France, Germany, Italy, the Netherlands, Sweden, and the United Kingdom.³ The result of the Canadian study has inspired this article's investigation of the comparisons of the United States with Europe. A later phase of the project will extend the work to Japan and Australia.⁴

The investigation begins with a discussion of the labor force definitions recommended by the ILO and the varying interpretations of these guidelines in the U.S., Canadian, and European labor force surveys. Measurement differences are sorted out and classified according to the direction of their impact. The size of the impact of these differences is then assessed, on the basis of the Canadian study and published and unpublished data for the European Union countries provided by Eurostat.

Next, adjustments of U.S. unemployment rates to European and Canadian concepts are presented to see if this reverse comparison arrives at different results. Then, limitations of the study are discussed, and the article concludes by setting out and evaluating some implications of the results for the BLS comparative series.

Although some references are made to the other three international comparisons programs, the article focuses on the BLS program. All four programs, which now yield virtually the same results, are described in the appendix.

The ILO definition and its interpretations

Unemployment, like most social phenomena, can be defined in different ways. No single definition can satisfy all analytical purposes.⁵ However, in the interests of international comparability, the ILO provides national statistical offices with recommendations on the definition and measurement of unemployment.⁶ These guidelines have become the standards for many countries; consequently, definitions used in labor force surveys are now broadly similar in outline and spirit if not in all of their details.

The ILO guidelines are the result of meetings of experts and discussions at periodic international conferences of labor statisticians attended by delegates representing national governments, employer's organizations, and labor unions. Compromises are made among the various constituencies, as well as among countries at different levels of development. Sometimes the guidelines must be deliberately vague or provide options in order to achieve consensus. The guidelines cer-

tainly facilitate cross-country comparisons, because they serve to draw countries toward a common conceptual framework. The OECD has worked toward making the guidelines more specific in order to enhance comparisons among its member countries,⁷ and Eurostat's Community Labor Force Surveys have helped to establish common interpretations within the European Union.

According to the latest ILO guidelines, the unemployed are persons over a certain specified age who are without work, available for work, and actively seeking work. Virtually all countries agree that an unemployed person should be without any work at all; that is, employment takes precedence over unemployment. They also agree that unemployed persons should be available for work and actively seeking work. However, countries have chosen to implement these latter two criteria differently, which causes certain incompatibilities in the measurement of unemployment internationally. Further, in a number of other areas, the ILO definition has been either interpreted differently or not followed at all, particularly in regard to the treatment of students, persons on layoff, persons waiting to start a new job, and unpaid family workers. Lower age limits and the treatment of the Armed Forces also differ.

The varying interpretations of unemployment and the labor force (the sum of the employed and the unemployed) derive from different national circumstances and needs. Countries generally have very good reasons for their own interpretations of, or deviations from, the ILO definitions. But these differences, of course, create problems for international comparisons. The ILO recommends that those countries which choose to deviate from the guidelines collect data that permit one to convert from the national to the international standards. Some countries do this; others do not.

Exhibit 1 compiles the latest ILO guidelines, U.S. and Canadian concepts, and the Eurostat interpretation of the ILO guidelines used in European Union labor force surveys. The U.S. concepts are those of the Current Population Survey (CPS) from 1994 onward, Canada's concepts are those of the Labor Force Survey from 1997 onward, and the Eurostat concepts are those of the Community Labor Force Survey from 1992 onward. In this article, for the European countries, it is more convenient to present adjustments based on the Eurostat data rather than the data from the national labor force surveys.⁸ Sweden's national concepts, however, will be referenced with regard to that country's treatment of students. The Bureau adjusts the Swedish national data on this point in its unemployment comparisons program, as do Eurostat and the other comparative programs.

The ILO states that population censuses and sample surveys of households or individuals (often called labor force surveys) constitute a comprehensive means of collecting data on the labor force. Establishment surveys and administrative records may also serve as sources for obtaining more precise, more frequent, and more detailed statistics on particular com-

Exhibit 1. Synopsis of coverage and concepts of unemployment in labor force surveys, International Labor Office (ILO), United States, Canada, and Eurostat

Item	ILO standard (1982 onward)	United States (1994 onward)	Canada (1997 onward)	Eurostat (1992 onward)
Frequency of survey	At least biannually	Monthly	Monthly	Annual, in spring ¹
Scope of survey:				
Households or persons	Unspecified	Households	Households	Households or persons
Institutional population	Included	Excluded	Excluded	Excluded
Collective households (hotels, motels, and so forth)	Included	Included	Included	Excluded
Special exclusions	None	None	Yukon and Northwest Territories; Indian reserves	Persons doing compulsory military service are excluded from the population of private households and regarded as members of collective households, even if, during the reference week, they are present in the private household to which they belong.
Labor force denominator:				
Age limits	Unspecified	16 years and older	15 years and older	15 years and older
Civilian or total	Total	Civilian	Civilian	Includes career military ²
Treatment of unpaid family workers working fewer than 15 hours per week	Employed	Not in labor force; potentially unemployed	Employed	Employed
Unemployment				
Job search:				
Reference period for job search	Specified recent period	4 weeks	4 weeks	4 weeks
Search only by reading newspaper ads	Excluded	Excluded	Included	Included
Waiting to start new job	No search required	Search required	No search required; job must start in 4 weeks	No search required
Temporarily laid off	Search optional	No search required	No search required	Search required
Availability criterion:	Yes	Yes	Yes	Yes
When Availability question asked	Unspecified	During reference week	During reference week	Within 2 weeks of interview
Exceptions	Yes	Yes	Yes	Yes
	Unspecified	Temporary illness and waiting to start new job	Temporary illness, personal or family responsibilities, vacation, awaiting new job	None
Treatment of those temporarily laid off	Employed if formal job attachment; unemployed if no attachment and available for work; job search requirement is optional in such cases.	Unemployed if expecting to be recalled to job in 6 months or employer gives recall date. Must be available for work, but no job search required.	Unemployed if expecting to be recalled within 1 year and available for work; no search required.	Unemployed if actively looking for for work in the last 4 weeks and if available to start work in 2 weeks; otherwise classified as inactive. (See text for "zero hours" case.)
Treatment of full-time students seeking full-time work and available for work	Unemployed	Unemployed	Not in labor force	Unemployed
Treatment of unpaid family workers working fewer than 15 hours per week and available for work and seeking work	Employed	Unemployed	Employed	Employed

¹ A new EU regulation calls for labor force surveys on a continuous basis, with quarterly results.

² If residing in private households.

SOURCE: Prepared by the Bureau of Labor Statistics from the following documents: *ILO Resolution Concerning Economically Active Population, Employ-*

ment, Unemployment, and Underemployment (on the Internet at <http://www.ilo.org/public/120stat/res/ecacpop.htm>); "Explanatory Notes on Household Data," *Employment and Earnings* (Bureau of Labor Statistics, published monthly); "Notes on the Survey," *The Labour Force* (Statistics Canada, published monthly); and *The European Union Labour Force Survey: Methods and Definitions* (Eurostat, 1996).

ponents of the labor force. Although not explicitly stated by the ILO, it is well recognized that labor force surveys are the desirable source for international comparisons of unemployment. In most countries, such surveys cover the entire noninstitutional population of working age and broadly follow the ILO standard definitions. Administrative data on employment office registrations are not suitable for international comparisons, because they do not cover all persons who may be unemployed and because administrative regulations differ greatly across countries.⁹ Therefore, exhibit 1 focuses on labor force survey sources of unemployment statistics.

A number of differences in frequency and scope of labor force surveys are apparent.

Frequency. The ILO recommends that countries collect and compile statistics on the labor force at least twice a year. The U.S. and Canadian surveys are conducted monthly, while the Eurostat survey is taken annually, each spring. A new European Union (EU) regulation calls for labor force surveys on a “continuous” basis, with quarterly results. Currently, Italy, the Netherlands, and the United Kingdom conduct quarterly surveys, Sweden’s is monthly, and France and Germany conduct their surveys only in the spring of each year. France will begin continuous surveys next year, while Germany has not yet announced plans for more frequent surveys. Annual estimates of unemployment and the labor force for France and Germany are constructed by Eurostat and the national authorities on the basis of other indicators, such as employment office registrations and establishment surveys, that are available more frequently.

Scope. Exhibit 1 indicates that there are also some differences in the scope of the various surveys with regard to whether households or persons are surveyed and whether collective households are covered. Canada excludes the Yukon and Northwest Territories, as well as Indian reserves, from its survey.

The labor force denominator for calculating the unemployment rate also may differ in its composition, in several ways.

Lower age limits. The ILO advises that lower age limits should be established for the labor force, but it does not say what those limits should be. The United States has chosen to use an age limit of 16 years, while Canada and the EU countries cover persons 15 years and older.

Armed Forces. The ILO recommends including all members of the Armed Forces, whether career military or draftees (conscripts), as paid employees and, hence, in the labor force. The United States and Canada exclude all the Armed Forces and present their data on a civilian labor force basis, while Eurostat includes career military personnel residing in private households. From 1983 to 1993, the Bureau published U.S. unem-

ployment rates on both a civilian and a total labor force basis.

Unpaid family workers. Unpaid family workers are to be counted among those in the labor force (employed), with no cutoff on the number of hours worked, according to the ILO. By contrast, the United States includes only those unpaid family workers who worked 15 or more hours in the reference week. Canada and the European Union follow the ILO definition.

Exhibit 1 also shows a number of differences in the definition of unemployment.

Active job search. The reference period for demonstrating that one is actively undertaking a job search is now 4 weeks for all the surveys. But the *meaning* of “active job search” may differ across countries. The ILO says that unemployed persons should be actively seeking work and that their job search activities should be tested. The ILO lists the following activities that can qualify a person as actively undertaking a job search:

- Registering at an employment exchange
- Applying to employers
- Checking work sites
- Placing or answering newspaper ads
- Seeking assistance of friends or relatives
- Looking for land, building, or machinery to establish one’s own enterprise
- Applying for a business-related license
- Etc.

Note that there is no listing for “reading newspaper ads” or “studying newspaper ads”; the ILO clearly refers to “placing or answering ads.” But “reading or studying ads” could enter the list under “Etc.”

In the U.S. cps, conducting an objectively measurable job search is a necessary condition for being classified as unemployed, except for those on temporary layoff. The cps makes a distinction between search methods that are “active” and “passive” and excludes those who use passive methods alone from the count of the unemployed. Only methods that could result in a job offer without further action on the part of the jobseeker are considered “active.” These methods include answering or placing newspaper ads, visiting employment offices or businesses, calling to inquire about a position, sending job applications, and asking friends and family members for job leads.

No such active/passive distinction is made in Canada and Europe, where activities aimed at gathering information about job opportunities are also considered legitimate job search methods, particularly when such activities are reported in the wake of a declaration of interest in finding work. Therefore, persons available for work whose only search method was looking at want ads in the newspaper¹⁰ are counted as unem-

ployed in Europe and Canada, but not in the United States.¹¹

Waiting to start a new job. According to the ILO, persons waiting to start a new job should be classified as unemployed without being required to have searched for a job during the previous 4 weeks. This definition is followed by Canada and Eurostat. Prior to 1994, the United States also subscribed to the ILO definition. Since 1994, the U.S. CPS requires that such persons engage in an active job search in the previous 4 weeks in order to be counted as unemployed.

Layoffs. ILO guidelines recommend classifying persons on layoff as employed if they have a strong attachment to their job (as determined by national circumstances and evidenced by payment of salary or the existence of a recall date, for example). If they are only weakly or not at all attached to their job, they are to be counted as unemployed. The ILO standards allow the job search to be optional in such cases, but require that the person be available to work. Countries have made divergent decisions on these points. Eurostat says that persons on layoff should be seeking work and be available for work in order to be classified as unemployed; otherwise, they are counted as not in the labor force.

In addition, Eurostat enumerates as employed a group of persons who could be considered similar to persons on layoff in other countries: persons who are classified as employed, but who are not at work due to “slack work for technical or economic reasons.” These persons are so classified because they have a formal job attachment.

The United States and Canada count persons on layoff as unemployed and do not require them to be searching for a job. Since 1994 in the United States, persons on layoff must expect to be recalled to the job in 6 months, or the employer must have given them a recall date. Canada requires that persons on layoff have a recall date within a year in order to be classified as unemployed.

Current availability. The ILO definition says that the unemployed should be available for work in the reference period, but no particular reference period is specified, and no exceptions are noted. The United States and Canada interpret “current availability” to mean “availability to take up work in the reference week.” Eurostat, by contrast, allows availability to extend to within 2 weeks after the time of the interview.¹² Canada makes exceptions to the availability criterion to allow persons who are temporarily unavailable because of illness, personal or family responsibilities, or vacations to be counted as unemployed. The only exceptions allowed by the U.S. CPS are for persons who respond that they are not available due to temporary illness or because they are waiting to start a new job.

The more restrictive interpretation of current availability by the United States is related to the fact that many students are in the labor force. The strict application of the criterion serves

to count students only when they are truly available for work and not looking for a job to take up after the school term ends. This consideration may not be as important in countries without a large student workforce, and it perhaps helps to explain the wider window of availability allowed by Eurostat. Canada, which also has a large student workforce, contends with the issue in a different way, discussed next.

Students. The ILO definition says that students who satisfy all the criteria for classification as unemployed should be classified as such. They should not be treated as a special group. Canada and Sweden, however, treat students differently from other labor force groups. In the official national statistics of Canada, full-time students seeking full-time work are omitted from the ranks of the unemployed on the grounds that they could not be currently available, even if they respond that they are. In Sweden, full-time students seeking work (whether full or part time) are excluded from the unemployed. In the United States, it is not uncommon for full-time students to hold either full-time or part-time jobs; consequently, those who are seeking work are classified as unemployed if they also respond that they are currently available for work.

Canada and Sweden both have their reasons for not counting students as unemployed. In Canada, the labor market behavior of full-time students indicates that there is a peak of searching for full-time work in the spring and that the students do not tend to start the jobs until the school year is over, despite what they say about their availability. Therefore, most are not regarded as a current supply of full-time labor. Their omission overcompensates to some extent, because some would indeed take full-time work while attending school full time.¹³ Sweden’s government made a decision in 1986 that full-time students should be excluded even if they fulfill the three ILO criteria of being without work, seeking work, and being available for work.¹⁴ Many of these students are enrolled in educational programs to increase their employability.

Eurostat follows the ILO guidelines with regard to students: the harmonized unemployment rate for Sweden is adjusted to include students who seek jobs. Likewise, the Bureau already makes this adjustment, which is a large one. (See BLS section in the appendix.)

Unpaid family workers. Because unpaid family workers working fewer than 15 hours per week are excluded from the CPS employment count, they are asked the questions that determine whether they are or are not counted as unemployed. If they are available for and actively seeking work, they are classified as unemployed. According to the ILO, Canadian, and European definitions, they *cannot* be unemployed, because they are classified as employed. (Because the number of unpaid family workers is already small, and the number unemployed would be even smaller, this difference is ignored in the sections that present adjustments of unemployment to U.S.

concepts. The only accommodation made is to subtract all unpaid family workers working fewer than 15 hours per week from the denominator of the rate calculation.)

Differences in concepts

Differences in labor force and unemployment concepts among the United States and other countries derive from three situations: (1) The U.S. CPS does not follow the ILO definitions on a number of points on which other countries do follow the guidelines (see exhibit 2); (2) conversely, some countries diverge from the ILO definitions on elements for which the CPS is in accord with the ILO; and (3) in instances where the ILO guidelines are vague or optional, countries have chosen different interpretations.

The differences across countries can be summarized according to the direction of their impact on the U.S. unemployment rate: (1) differences causing U.S. rates to be understated in international comparisons; and (2) differences causing U.S. rates to be overstated in international comparisons. Concepts of “Europe” refer to the concepts of Eurostat rather than to national concepts, except for the references to students in Sweden.

Differences causing U.S. rates to be understated. The following differences make up this category:

- The U.S. lower age limit is 16 years. Canada and Eurostat use a lower limit of 15 years. Youths aged 15 tend to have higher-than-average unemployment rates.
- “Passive jobseekers” (persons reading or studying help-wanted ads in newspapers as their *sole* means of searching for a job) are not included in the U.S. unemployed; they are included in Canada and Europe.
- The criteria counting a person as currently available for work are broader in Canada and Europe than in the United States.
- In the United States, since 1994, persons waiting to start a new job are required to conduct a job search; no search activity is required for such persons in Canada or Europe.

Differences causing U.S. rates to be overstated. This category comprises the following differences:

- All persons on temporary layoff are counted as unemployed in the United States and Canada, with no requirement that the person conduct a job search. In Europe, persons on temporary layoff either must be

Exhibit 2. U.S. divergence from ILO guidelines

- The CPS data are on a civilian labor force basis; the ILO recommends a total labor force basis (including all Armed Forces personnel).
- The CPS excludes unpaid family workers working fewer than 15 hours per week from the labor force (although some may be included in the unemployed if they are actively seeking work and are available for work); the ILO recommends including all unpaid family workers in the labor force.
- The CPS classifies all persons on layoff (who have a recall date or who expect to be recalled within 6 months) as unemployed; the ILO recommends that a distinction be made between those persons laid off, but who have a strong attachment to their job, and those laid off and who have a weak attachment to their job; those with a strong attachment (as evidenced by a recall date) should be counted as employed.
- The CPS requires those waiting to start a new job to search for work in order to be classified as unemployed; the ILO recommends that such persons be exempt from any requirement to search for work.

classified as employed (because they have a strong attachment to their job) or must be actively seeking work (because they have a weak attachment to their job) in order to be counted as unemployed. Those with a weak attachment to their job and who are not seeking work are classified as not in the labor force.

- In the United States, students who are available for work and who are seeking a job are classified as unemployed. In Canada, full-time students who are available for work and who are seeking full-time work are classified as not in the labor force. In Sweden, full-time students who are available for work and who are seeking (either full-time or part-time) work are omitted from the labor force.
- In the United States, only family workers who worked 15 or more hours per week are included in the labor force denominator. *All* unpaid family workers are included in the denominator in Europe and Canada.
- The career military are not included in the labor force denominator in the United States or Canada. EU surveys include the career military residing in private households.

Adjustments made for comparability

During the 1960s and 1970s, the Bureau made numerous adjustments to foreign data to render them more comparable to U.S. data.¹⁵ The need for large adjustments diminished considerably during the 1980s and 1990s as more countries began to conduct regular labor force surveys that generally followed the ILO recommendations. Nowadays, labor force surveys have become the norm for measuring unemployment, probing questions have been added, and search and availability tests have been included and applied to all potentially unemployed persons. These improvements, however, often have not been implemented in exactly the same way, as described in the foregoing section.

Currently, the Bureau makes adjustments for only a few of the differences that remain. Foreign data are adjusted to a civilian labor force basis by excluding military personnel from the labor force for countries where they are included. Unpaid family workers working fewer than 15 hours per week are also excluded. These adjustments are usually facilitated by published national data. The numbers of unpaid family workers were fairly large in some countries in the 1960s, but they have tapered off to the point that they are now so small that adjustments are generally negligible or nil. The only adjustment to unemployment made by the Bureau is to add students seeking a job to the Swedish unemployed, based on data published by Statistics Sweden. (Note that Eurostat also makes this adjustment for Sweden.)

Heretofore, the Bureau has accepted foreign data on unemployment as comparable to U.S. concepts if availability and job search tests were applied. The Bureau did not investigate or adjust for any differences in how these requirements were implemented. The *BLS Handbook of Methods* and semiannual and monthly releases of comparative unemployment rates alert data users to the fact that, on certain points where countries apply different concepts or methods of implementation, no adjustments are made. Thus, no adjustments are currently made on a number of disparities, on the grounds that (1) the adjustments would make very little, if any, difference, (2) the information needed is not readily available in published form, or (3) the adjustments should not be made.

The Bureau does not make any adjustments to omit the passive jobseekers in the Canadian and European unemployment figures. The reason is twofold: first, such data have not been available on a regular and consistent basis, and second, the Canadian data remain unpublished. Neither are adjustments made for the differences in the implementation of the current-availability criterion, for lack of specific data on this point. By contrast, data on persons waiting to begin a new job are generally available, but adjustments are not made because the numbers are thought to be very small. The “waiting” status is usually a classification that is based on information volunteered in surveys, rather than information elicited with a spe-

cific question, which would be likely to yield higher numbers. Also, some persons waiting to start a new job may have sought work in the previous 4 weeks and would therefore be properly classified as unemployed.

The BLS comparisons program has long taken the position that other countries’ lower age limits should not be standardized to the U.S. age limit of 16, but that they should be adapted to the age at which compulsory schooling ends in each country. Accordingly, data for Canada, Germany, Italy, and the Netherlands are left reflecting age 15 or older, whereas data for France, Sweden, and the United Kingdom are adjusted, if necessary, to age 16 or older. It could be argued, however, that all of the foreign data should be adjusted to the U.S. age limit of 16 years of age or older, for stricter comparability with the U.S. definition.

The BLS program does not adjust for differences in the treatment of layoffs, on the grounds that American and European layoffs are fundamentally different situations that should remain under national definitions. This position, explained in detail in a 1981 article,¹⁶ is reassessed here in view of the change in the BLS definition of temporary layoffs in 1994. Since that time, an expectation of recall or a recall date given by the employer is required for being classified as laid off in the United States. This change raises the possibility that adjustments should be made to the European data to include persons on layoff (the “zero hours” group mentioned earlier) in the unemployed on the grounds that they are not working at all and are likely to have a recall date or expectation of recall, as is the case with U.S. layoffs. On the other hand, it could also be argued that Europeans in such circumstances are more likely to be called back to their jobs than their U.S. counterparts and should *not* be included in the unemployed. At any rate, an adjustment will be included in this article to illustrate the impact of that group.

The sections which follow show that reasonable estimates are feasible for many of the differences that are not currently accounted for. The availability of previously unpublished data for Canada, as well as for the European Union countries via Eurostat, allows for the quantification of many of the differences. The adjustments can be made for a long historical span of years for Canada, but are confined to just a single year, 1998, for the European countries. Further work is needed to see if reasonable adjustments can be made back in time for these countries. Adjustments back to 1994 appear to be feasible.

It will be shown that many of the adjustments are indeed small and have to be taken out to at least two decimal places to be visible. In addition, the adjustments both add and subtract categories and, to some degree, cancel out.

Canadian unemployment rates

Even though both the United States and Canada subscribe to most of the standard concepts established by the ILO and ask

very similar questions in their labor force surveys, a Statistics Canada analysis reveals that differences remain that affect the comparability of the respective unemployment rates. Statistics Canada published an article in 1998 that identified the following differences between Canadian and U.S. concepts:¹⁷

- 15-year-olds are included in the labor force in Canada, but are excluded therefrom in the United States.
- Reading newspaper ads qualifies as a job search in Canada, but not in the United States.
- In Canada, persons waiting to start a new job are counted as unemployed without having to search for a job; in the United States, a job search has been required for these persons since 1994.
- Those unavailable for work due to personal or family responsibilities or vacations are included in the unemployed in Canada, but not in the United States.
- Full-time students seeking full-time work who are available for work are excluded from the unemployed in Canada, but included in the United States.

Statistics Canada identified a few other differences, but considered them too small to matter:

- Canada excludes the Yukon and Northwest Territories and Indians on reservations from the scope of its survey.
- With regard to layoffs, Canada requires that the person have a recall date within a year in order to be classified as unemployed without having to undertake a job search. The United States puts no time limit on the recall date.¹⁸
- Unpaid family workers are counted in the Canadian labor force, with no lower limit on their weekly hours worked. The United States requires that they work at least 15 hours to be counted in the labor force.

The Canadian article presented an adjustment of the Canadian unemployment rate to U.S. concepts. The data used in making the adjustment were from unpublished tabulations by Statistics Canada from the Canadian labor force survey for the period 1976 to 1997. A later article updated the adjustments to 1998.¹⁹

Table 1 shows the Statistics Canada analysis. The table indicates that the unemployment rate gap between Canada and the United States was reduced from 4.3 percentage points to 3.5 percentage points in 1997. In 1998, the gap declined from 3.8 percentage points to 3.0 percentage points. The figures are given in the following tabulation:

	<i>1997</i>	<i>1998</i>
Official Canadian rate	9.2	8.3
Official U.S. rate	4.9	4.5
Adjusted Canadian rate	8.4	7.5

Of interest is the fact that the impact of the differences has grown over time. In 1976–81, the adjustments had virtually no

impact. During the rest of the 1980s, the impact grew from 0.3 percentage point to 0.4 percentage point. From 1990 to 1998, the impact of the differences rose from 0.4 percentage point to between 0.7 and 0.9 percentage point.

There was a slight impact (0.1 to 0.2 percentage point) from the combined effect of the removal of 15-year-olds, persons waiting to start a new job, and persons unavailable because of personal or family responsibilities or vacations. A significant impact in recent years (0.7 percentage point to 0.8 percentage point) was due to the removal of passive jobseekers. On the other hand, the inclusion of full-time students seeking full-time work increased the Canadian unemployment rate by 0.3 percentage point, partly offsetting the other differences that decreased the rate.

A Statistics Canada analysis of job searches notes that the unemployed changed their approach to looking for work over the past two decades.²⁰ Unemployed jobseekers were making greater use of job advertisements and personal networks and less use of formal institutions such as public employment agencies and unions. The growth in reading ads as the only method of search was most evident among the long-term unemployed, and the incidence of long-term unemployment increased in Canada over the period. Among the reasons cited is that reading of help-wanted ads becomes more common as other methods of search are exhausted and as the jobseeker approaches “burnout.”

European unemployment rates

Table 2 presents adjustments of EU unemployment rates to U.S. concepts for spring 1998. The adjustments are shown for the European Union as a whole, as well as for the six member countries that are included in the BLS comparisons series. To summarize, greater comparability is achieved by applying the following two measures:

- Removing from the labor force 15 year-olds, unpaid family workers working fewer than 15 hours per week, career military personnel, and those omitted from the unemployed. (See next.)
- Removing from the unemployed 15 year-olds, passive jobseekers, persons waiting to start a new job, and those not available for work in the reference week and adding an adjustment for layoffs and for double-counting the removed groups.

Another way to organize the adjustments shown in table 2 is by the direction of their impact on the unemployment rate. Eurostat rates are adjusted upward by

- including among the unemployed those persons on temporary layoff who are not seeking work,
- excluding career military from the denominator, and

Table 1. The Canadian unemployment rate adjusted to U.S. concepts, 1976–98

Year	Unemployment rate		Modification to Canadian rate due to—					Total modifications to Canadian unemployment rate	Official gap	Modified gap
	Official Canadian	Official United States	Removal of 15-year-olds	Then removal of—			Then addition of—			
				Passive job search	Future starts beginning 1994	Those unavailable because of personal or family responsibilities or vacations	Full-time students looking for full-time work			
1976	7.2	7.7	-0.1	-0.2	0.0	-0.1	0.2	-0.1	-0.5	-0.6
1977	8.1	7.1	.0	-2	.0	.0	.2	-.1	1.0	.9
1978	8.4	6.1	-1	-2	.0	.0	.2	-.2	2.3	2.1
1979	7.5	5.8	-1	-2	.0	.0	.2	-.2	1.7	1.5
1980	7.5	7.1	-1	-2	.0	.0	.2	-.2	.4	.2
1981	7.6	7.6	-1	-3	.0	.0	.2	-.2	.0	-.2
1982	11.0	9.7	-1	-4	.0	.0	.2	-.3	1.3	1.0
1983	11.9	9.6	.0	-5	.0	.0	.2	-.3	2.3	2.0
1984	11.3	7.5	-1	-5	.0	.0	.2	-.4	3.8	3.4
1985	10.5	7.2	.0	-5	.0	.0	.2	-.4	3.3	2.9
1986	9.6	7.0	-1	-5	.0	.0	.2	-.4	2.6	2.2
1987	8.9	6.2	-1	-5	.0	-1	.2	-.4	2.7	2.3
1988	7.8	5.5	-1	-5	.0	-1	.2	-.4	2.3	1.9
1989	7.5	5.3	.0	-5	.0	-1	.2	-.4	2.2	1.8
1990	8.1	5.6	.0	-5	.0	-1	.2	-.4	2.5	2.1
1991	10.4	6.8	-1	-6	.0	.0	.2	-.5	3.6	3.1
1992	11.3	7.5	-1	-7	.0	.0	.3	-.5	3.8	3.3
1993	11.2	6.9	.0	-8	.0	.0	.3	-.5	4.3	3.8
1994	10.4	6.1	-1	-8	-2	-1	.3	-.8	4.3	3.5
1995	9.5	5.6	.0	-8	-2	-1	.3	-.8	3.9	3.1
1996	9.7	5.4	-1	-8	-2	-1	.3	-.9	4.3	3.4
1997	9.2	4.9	-1	-7	-2	.0	.3	-.8	4.3	3.5
1998	8.3	4.5	-1	-6	-3	.0	.2	-.8	3.8	3.0

SOURCE: Statistics Canada, *Labour Force Update*, autumn 1998, p. 35, and summer 1999, p. 32. These data do not reflect recent revisions to incorporate 1996 census results and a new method of estimation. Thus, the figures

differ slightly from the revised rates shown in table A-1 of the appendix.

NOTE: Components may not add to total modifications column due to rounding.

- excluding unpaid family workers working fewer than 15 hours from the denominator.

Eurostat rates are adjusted downward by excluding from the unemployed

- passive jobseekers,
- those who were not currently available for work in the reference week,
- 15-year-olds, and
- persons waiting to start a new job who did not seek work.

The rationale behind the upward adjustments is as follows.

Layoffs. According to Eurostat, persons on temporary layoff and seeking work constitute a negligible group, accounting for about 0.2 percent of total EU unemployment.²¹ Thus, this small group is already counted as unemployed. As mentioned earlier, some persons reported as employed are working “zero hours” in the reference week for technical or economic reasons and could be considered laid off in the U.S. sense of the

term. Whether they should be classified as unemployed for comparisons is debatable; an adjustment will be made here to illustrate the impact.

Eurostat publishes the number of persons absent from work during the reference week due to economic and technical reasons. The figures indicate that the EU unemployment rate would be increased by only 0.1 percentage point by including these persons among the unemployed.

Military personnel and unpaid family workers. Together, the exclusion of the career military and unpaid family workers working fewer than 15 hours per week would result in an upward adjustment of less than 0.1 percentage point. The total upward adjustment, from these two sources and those working “zero hours” in the reference week for technical or economic reasons, rounds to 0.2 percentage point.

The reasoning behind the downward adjustments is as follows.

Passive jobseekers. In the Eurostat labor force surveys through 1997, the reporting on methods of job search was

fairly limited and restricted to the main method used. Beginning in 1998, Eurostat asked for all methods used from a list of 12. The results indicate that in the EU countries, 46 percent of the unemployed studied advertisements as at least one of their methods of job search, but that only 2.15 percent of the unemployed used this search method exclusively. The results for selected countries are given in the following tabulation, which lists the percent of total unemployment engaged in each of the two activities shown:

	<i>Studied ads</i>	<i>Studied ads only</i>
France	73.14	0.15
Germany	37.53	.44
Italy	31.07	5.43
Netherlands	0	0
Sweden	4.00	0
United Kingdom	85.98	2.51

Clearly, there is a wide range in both categories within the European Union. The United Kingdom had, by far, the largest proportion (86 percent) of the unemployed who used reading advertisements as a method of searching for a job, and Italy

had, by far, the largest proportion (5 percent) who used that method exclusively. In France and Germany, significant proportions of the unemployed studied ads, but very few used the method as their only way of looking for work.

The zero figures for the Netherlands and Sweden warrant some explanation. The Netherlands survey continues to collect data on the main method of search only. The preceding tabulation indicates that no unemployed person studied ads as his or her main method of searching for a job; hence, none used the method exclusively either. Only about 10 percent of the Dutch unemployed replied that they *inserted* or *answered* help-wanted ads as their main method of job search. This percentage indicates that use of the help wanted ads is low in the Netherlands. As regards Sweden, only a very small proportion of persons studied ads as one of their methods of search, and none used it as their only method. Thus, no adjustment appears to be needed for these two countries on the passive-search issue.

National data from a few countries help to corroborate the 1998 results from Eurostat. Special tabulations by the U.K. Office for National Statistics for 1997 report that one-third of

Table 2. Adjustment of European Union data to U.S. concepts, spring 1998, all 15 EU countries and six selected EU countries

[Numbers in thousands]								
Item	Source	All 15 EU countries	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Reported labor force	Eurostat	169,408	25,568	39,393	22,915	7,742	4,333	28,661
Less 15-year-olds	Eurostat	220	9	24	58	72	—	—
Less unpaid family workers working fewer than 15 hours per week	Eurostat	362	35	129	29	19	8	58
Less career military	Eurostat	436	—	228	4	33	15	—
Less other adjustments to unemployment (net) ¹	Eurostat	1,029	226	152	242	13	11	105
Adjusted civilian labor force	Eurostat	167,361	25,298	38,860	22,582	7,605	4,299	28,498
Reported unemployment	Eurostat	17,330	3,099	3,856	2,849	340	387	1,778
Less 15-year-olds	Eurostat	57	2	2	21	19	—	—
Less passive jobseekers	Eurostat	373	5	17	155	—	—	45
Less those waiting to start a new job	Eurostat ²	430	185	75	59	10	5	36
Less those not available for work in reference week	Estimate ³	347	62	77	57	7	8	36
Plus double-count adjustment	Estimate ⁴	121	25	17	29	4	1	12
Plus layoffs	Eurostat	177	15	7	56	—	9	34
Adjusted unemployment .....	...	16,421	2,886	3,709	2,642	308	385	1,707
Unemployment rate (in percent):								
Reported .....	...	10.2	12.1	9.8	12.4	4.4	8.9	6.2
Adjusted to U.S. concepts .....	...	9.8	11.4	9.5	11.7	4.0	8.9	6.0
Ratio of adjusted rate to reported rate .....	...	.96	.94	.98	.94	.92	1.00	.97
Current BLS adjusted rates .....	...	(⁵)	12.1	9.8	12.5	4.4	9.0	6.2
Ratio of adjusted rate to reported rate .....	...	(⁵)	1.00	1.00	1.01	1.00	1.01	1.00

¹ Net sum of passive jobseekers, those waiting to start a new job, those not available for work in the reference week, and double-count adjustments. Persons on layoff are already counted in the labor force and are deemed employed.

² Estimated as half of those reported as waiting to start a new job, in order to eliminate those seeking work from the adjustment.

³ Estimated as 2 percent of the unemployed.

⁴ Estimated as 10 percent of the sum of the subtracted categories.

⁵ Not applicable; the Bureau does not adjust data for all 15 EU countries.

NOTE: Dash indicates negligible or nil.

SOURCES: Eurostat, *Labour Force Survey Principal Results 1998*, Theme 3, November 1999; unpublished results provided by Eurostat; and BLS adjustments.

the unemployed said that their main method of job search was reading newspaper ads.²² Most persons, however, used more than one job search method, and the average was four to five methods. All of the other methods listed qualify as “active” in the U.S. sense of the term. Studying advertisements was the sole method of search for only 7 percent of those for whom it was the main method. Overall, 2.4 percent of the unemployed were in this “only passive search” category. This is about the same proportion yielded by the 1998 Eurostat data. Further corroboration from national data appears in an OECD paper on methods of job search. The paper established that persons using *only* passive methods amounted to 0.1 percent of the unemployed in France and 1 percent in Norway.²³ At the current time, national statistics for other EU countries are not available on the passive-search issue.

In table 2, the reported spring 1998 Eurostat data on the percentage of persons studying newspaper ads as their sole method of search is used to make the adjustment to exclude passive jobseekers. Overall, this adjustment eliminates about 0.2 percentage point from the unemployment rate for the European Union. The magnitude of the adjustment is highest for Italy, where 0.6 percentage point is subtracted from the unemployment rate. For the United Kingdom, 0.2 percentage point is subtracted. For all the other EU countries examined in this article, the impact of removing the passive jobseekers is practically nil.

Availability. The number of unemployed persons who were not currently available for work in the reference week is difficult to estimate. Some indication of the order of magnitude is available from the Danish labor force survey, which collects information according to the period the person can start working (within 1 week, within 2 weeks, within 1 month, and so forth). For 1998, Statistics Denmark reported that 96 percent of the unemployed said that they would be available to work within a week rather than within the 2 weeks allowed for being classified as unemployed.²⁴ Of course, “within a week” overlaps with, but goes beyond, “the reference week.” Therefore, the figure obtained is not precisely the figure needed. In addition, under U.S. concepts, those temporarily ill or waiting to start a new job should be considered unemployed even though they are not currently available for work. A reasonable estimate, used in table 2, is that the impact is 2 percent of the unemployed, resulting in a reduction of almost 0.2 percentage point in the EU unemployment rate. This estimate is about the same magnitude as the estimated impact of expanding the availability window in the United States, discussed in a later section.²⁵

15-year-olds. Unpublished Eurostat data indicate that the unemployment rate of 15-year-olds is high—about 25 percent—but that the numbers of unemployed 15-year-olds are so small that the overall EU unemployment rate is reduced by only 0.02 percentage point. The 1998 Netherlands rate, however, is more

visibly affected: the jobless rate declines by 0.2 percentage point, from 4.4 to 4.2 percent, with the elimination of 15-year-olds from the rolls of the unemployed.

Waiting to start a new job. In the Eurostat survey, the number of persons waiting to start a new job amounts to 5.5 percent of total unemployment in 1998. There is no information as to how many were seeking work, however, because this group is not asked the question on job search. Assuming that half of these persons should be excluded from the unemployed under U.S. concepts because they were not actively seeking work in the past 4 weeks, the estimated reduction in the EU unemployment rate would be about 0.2 percentage point. For France, the adjustment on this point has a much larger impact. The reported unemployment rate of 12.1 percent is reduced to 11.5 percent when this group is subtracted. Possibly, the reason for the relatively large number of such persons in France is that the French survey asks a question directly about this issue rather than relying on volunteered information.

Double-counting. Overall, the reductions in the EU unemployment rate total 0.6 percentage point (rounded). This figure is then adjusted slightly by adding back an estimated 10 percent of the sum of the downward adjustments to the unemployed, to take into account the possibility of double-counting among the groups that were eliminated. (For example, a 15-year-old may also be a passive jobseeker.) This further adjustment does not change the overall reduction of 0.6 percentage point.

Overall adjustment. On balance, the overall adjustment for the European Union is 0.4 percentage point downward (up by 0.2, down by 0.6). Thus, the spring 1998 EU unemployment rate of 10.2 is reduced to 9.8. Extrapolating from this result, the annual average EU unemployment rate of 9.9 percent in 1998 is reduced to 9.5 percent.

Europe’s 5.5-percentage-point gap with the United States, obtained by using the current standardized rate in 1998, is reduced to 5.1 percentage points, explaining less than 10 percent of the total gap. A large differential between the U.S. and Europe remains unaccounted for by the measurement differences.

The overall small reduction in the EU unemployment rate masks somewhat larger adjustments for particular countries. Table 2 indicates that France’s unemployment rate falls from 12.1 percent to 11.4 percent with the additional adjustments, mainly due to the adjustment to exclude persons waiting to start a new job. The rate for the Netherlands declines from 4.4 percent to 4.0 percent, chiefly due to the exclusion of 15-year-olds. For Italy, the downward adjustment for passive job searches is the main reason for the reduction of the rate from 12.4 percent to 11.7 percent. For Germany, Sweden, and the United Kingdom, on the other hand, the adjustments have a negligible impact.

The next-to-last line of table 2 also shows what the Eurostat

rates would be if only the adjustments the Bureau currently makes were applied.²⁶ The figures are virtually the same as the reported rates, because the current BLS adjustments are so small; they simply subtract the number of unpaid family workers working fewer than 15 hours and the number of career military from the labor force. No adjustments are made in the Eurostat unemployed.

U.S. rates under European concepts

Another way of looking at the comparison is to adjust U.S. rates to European concepts. This is important in assessing the comparative programs of the OECD and the ILO, which do not currently adjust the unemployment data for the United States, presenting them as comparable with data from the other OECD countries. The following adjustments should be made to U.S. data for greater comparability with Eurostat concepts:

Adjust U.S. rates upward by

- including passive jobseekers,
- loosening the current-availability requirement,
- including 15-year-olds, and
- removing the search requirement for persons waiting to start a new job.

Adjust U.S. rates downward by

- excluding persons on temporary layoff,
- including all career military in the denominator, and
- including unpaid family workers who worked fewer than 15 hours per week in the denominator.

The upward adjustments are rooted in the following considerations.

Passive jobseekers. An unpublished BLS analysis (based on 1997 data) indicates that if passive jobseekers who were without work and available for work had been included in the unemployed, they would have composed about 3.4 percent of total U.S. unemployment.²⁷ Their inclusion would have increased the unemployment rate only marginally, by about 0.15 percentage point.

Availability. According to unpublished BLS tabulations, if all persons who would have met the unemployment criteria except for the fact that they were not available for work during the reference week were added to the U.S. unemployed, the rate would rise by 0.3 percentage point. The figure for those who would be available within the 2-week Eurostat time frame is likely to be lower. Persons who are temporarily ill or waiting to start a new job are classified as unemployed by the CPS if they are not currently available for work. In addition, the Canadian adjustment to remove from among the unemployed per-

sons who are unavailable for work in the reference week because of personal or family responsibilities was only nil to 0.1 percentage point. An assumption of an increase of 0.1 percentage point in the U.S. rate for greater comparability with Europe on the availability criterion thus seems reasonable.

15-year-olds. These young persons are enumerated by the CPS, but are not included in the U.S. labor force. Unpublished BLS data indicate that including 15-year-olds would raise the unemployment rate by 0.08 percentage point.

Waiting to start a new job. Unpublished BLS data show that the impact of adding to the unemployed persons waiting to start a new job who are not seeking work would be even smaller than adding 15-year-olds (0.05 percentage point).

Overall, the upward adjustments total 0.4 percentage point. Because the groups are mutually exclusive, there is no need to enter an adjustment for double-counting.

The downward adjustments are based on the following points.

Layoffs. The number of persons on temporary layoff in the United States in 1998 made up 14 percent of total U.S. unemployment. Most likely, some of the Americans on layoff would be classified as employed by Eurostat because they have a recall date or an expectation of recall and they are not seeking work. BLS tabulations indicate that approximately 40 percent of those classified as laid off said that they had been looking for work in the previous 4 weeks. (It is not known how many were actively seeking work and how many were passively seeking work, because no further inquiries were made into their job search.) Assuming that the entire 40 percent were actively seeking work (and therefore should continue to be counted as unemployed), the adjustment removes 60 percent of those on layoff from the U.S. unemployed, lowering the U.S. rate by 0.38 percentage point.

Unpaid family workers and military personnel. The number of unpaid family workers working fewer than 15 hours is so small as to have no impact, but including the Armed Forces in the denominator would lower the U.S. rate slightly, by 0.04 percentage point.

Overall, the downward adjustments total 0.4 percentage point, which is identical in magnitude to the upward adjustments. Thus, the U.S. unemployment rate of 4.5 percent in 1998 remains unchanged when EU concepts are applied.

Table 3 summarizes the adjustments of the spring 1998 European unemployment rate to U.S. concepts (derived from table 2) and the adjustment of the annual average 1998 U.S. rate to European concepts, in terms of percentage points.

The outcome of the two modes of adjustment is given in the following tabulation:

Table 3. Fraction-of-a-percentage-point impact of two modes of adjustment, 1998

Item	Spring European unemployment rate to U.S. concepts	Annual average U.S. unemployment rate to European concepts
Passive jobseekers	-0.198	+0.146
Availability criterion	-.184	+.100
15-year-olds	-.020	+.080
Waiting to start a new job	-.228	+.055
Double-count adjustment	+.064	-
Subtotal	-.6	+.4
Layoffs	+.104	-.378
Unpaid family workers	+.022	-
Military	+.026	-.040
Subtotal	+.2	-.4
Total adjustment	-.4	0

NOTE: Dash indicates category not applicable.

SOURCES: Column 1 calculated from table 2, column 2 from unpublished BLS data.

years who are seeking full-time work. The adjustment is based on unpublished data from the CPS that include “doesn’t matter” responses to the question whether the student is seeking full- or part-time work. Statistics Canada does not use this response category, but advised the Bureau that if it did, then such persons would be classified together with students seeking full-time work. This adjustment results in a decrease of 0.1 percentage point in the U.S. unemployment rate. On balance, all of the aforesaid adjustments raise the U.S. unemployment rate by 0.2 percentage point. The 1998 Canada-U.S. comparisons yield the following results:

	United States	
	Canada	States
Unemployment rate, U.S. concepts	7.5	4.5
Unemployment rate, Canadian concepts	8.3	4.7

Applying U.S. concepts indicates that the gap between the Canadian and American unemployment rates is 3.0 percentage points. Under Canadian concepts, the gap is 3.6 percentage points. The latter is closer to the gap (3.8 percentage points) based on the unadjusted rates for each country.

Unemployment rate

	EU	U.S.
EU concepts	10.2	4.5
U.S. concepts	9.8	4.5

U.S. rates under Canadian concepts

The following adjustments are made to fit the 1998 U.S. unemployment rate to Canadian concepts:

Fraction of a percentage point

Passive jobseekers	+0.146
15-year-olds	+0.080
Waiting to start new job	+0.055
Availability criterion	+0.050
Students	-0.100
Net adjustment	+0.2

The first three adjustments are the same as the previously discussed adjustments of the U.S. rate to European concepts. The adjustment for the difference in availability criterion is different, however. Including among the unemployed persons unavailable for work for personal or family reasons would raise the U.S. rate by an estimated 0.05 percentage point—half the magnitude, in terms of percentage points, of the availability adjustment applied to European countries when one is adjusting their data to U.S. concepts.

An additional adjustment is needed to fit the U.S. treatment of students to Canadian concepts. This adjustment subtracts from the U.S. unemployed full-time students aged 16 to 24

Limitations of the analysis

The analysis presented in this article has several limitations. First, in the case of Europe, the adjustments presented here are based upon only 1 year: 1998. The Canadian study shows that the impact of adjustments can change over time. Further, U.S., Canadian, and Eurostat definitions have changed over the years, and such changes would have to be taken into account in a historical analysis. For example, prior to 1994, the U.S. treatment of persons waiting to start a new job was identical to that of Canada and Eurostat, and adjustments would not need to be made for that factor in those years.

Another limitation is that some of the data needed to make the adjustments are not available in precisely the form required. Unpublished tabulations fill a number of the gaps, but some estimation is still involved regarding such factors as the impact of including or excluding passive jobseekers among the unemployed, differences in the current-availability criteria, and the treatment of layoffs.

Questions remain as to whether some of the adjustments should be made at all. For instance, should adjustments be made to add student jobseekers in with the unemployed for Canada and Sweden when statistical offices in those countries have omitted them on the grounds that their availability is uncertain? Are U.S. and European layoffs so fundamentally different that adjustments should not be made on their account? Are the adjustments to the U.S. age limit of 16 years justified for all countries?

Unmentioned thus far in the analysis for lack of any factual basis for adjustment are *nonconceptual* differences that could

have an impact on the comparisons, but for which the direction of bias, if any, is unknown. Among these are such elements as the frequency and scope of surveys, the wording and ordering of questions, proxy responses, and the survey's sample design and mode of data collection. National experiences with changes in these matters tell us that they can have an influence on unemployment figures.²⁸ Further, hidden or illegal activities may not be captured in labor force surveys to the same degree across countries. Clearly, any total accounting of country differences would have to consider all sources, but this would, equally clearly, be beyond the scope of statistical inference. Data users should be cognizant of this realm of nonconceptual differences.

Finally, the article does not cover two countries in the BLS comparisons: Japan and Australia. In one BLS study, adjustments for Japan covering the period 1984–92 tended to cancel out and leave the official Japanese rate virtually unchanged under U.S. concepts.²⁹ But this work needs to be updated to the late 1990s to see if the results have changed. Neither Japan nor Australia includes passive jobseekers in the unemployed.

THE CURRENTLY PUBLISHED FOREIGN UNEMPLOYMENT RATES adjusted to U.S. concepts are imperfect, but further adjustments

can be made to bring them conceptually closer together. These additional adjustments, however, do not change the main outcome of the current BLS comparisons. The analysis presented in this article indicates that the U.S. unemployment rate in the late 1990s really was lower than the European and Canadian unemployment rates, whether looked at from U.S., Canadian, or European concepts.

At some point, rates could converge to a greater extent, and then the small adjustments discussed here would matter in ranking countries by unemployment rate, especially for Canada vis-à-vis the United States. With that possibility in mind, later this year the Bureau plans to incorporate the adjustments to the Canadian unemployment rates from 1976 onward into its comparative series. Statistics Canada has agreed to supply all the data needed on an ongoing basis.

The Bureau also is considering further adjustments to the EU countries' data. However, these adjustments are more difficult to make, and they also seem less necessary, given their smaller impact. Yet the effects on the French, Italian, and Dutch unemployment rates are probably significant enough to warrant adjustments. Further study is needed to see if adjustments are feasible, at least for 1994 onward, for the European countries in the BLS comparisons program. □

Notes

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In April 2000, the paper was presented at the annual meeting of the OECD Working Party on Employment and Unemployment Statistics in Paris. Comments from representatives of international organizations and national statistical offices at that meeting have also informed the work.

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Any errors that remain are the sole responsibility of the author.

¹ The BLS comparisons program does not adjust rates for Canada or the European Union. Canada's 8.3-percent rate is that country's official figure, and the 9.9-percent rate quoted for the European Union is based upon the OECD Standardized Unemployment Rates program, derived from Eurostat figures. Note also that the OECD does not adjust the U.S. unemployment rate for comparability with EU concepts.

² Explaining the non-measurement-related reasons for cross-coun-

try differences in unemployment is one of the main purposes of the project titled "Understanding Unemployment and Working Time: A Cross-Country Comparative Study," being conducted under grants from the Ford and Rockefeller Foundations. See the acknowledgments for more information.

³ See tables 43 and 44 in the "Current Labor Statistics" section of this issue of the *Review*. See also table 1 in the appendix to this article.

⁴ Earlier work has already been done on Japan, but it will need to be updated because of revisions made to U.S. definitions in 1994. For that earlier work, see Sara Elder and Constance Sorrentino, "Japan's low unemployment: a BLS update and revision," *Monthly Labor Review*, October 1993, pp. 56–63.

⁵ The recognition of the diversity in the uses of unemployment data led Julius Shiskin, former Commissioner of the Bureau of Labor Statistics, to formulate and introduce the range of labor market measures $u-1$ through $u-7$ in 1976. (See Julius Shiskin, "Employment and unemployment: the doughnut or the hole?" *Monthly Labor Review*, February 1976, pp. 3–10.) International comparisons based on $u-1$ through $u-7$ were published in Constance Sorrentino, "International unemployment indicators, 1983–93," *Monthly Labor Review*, August 1995, pp. 31–50. In October 1995, the Bureau introduced a revised set of alternative measures in John E. Bregger and Steven E. Haugen, "BLS introduces new range of alternative unemployment measures," *Monthly Labor Review*, October 1995, pp. 19–26.

⁶ The latest ILO international definitions of unemployment were adopted in October 1982 at the Thirteenth International Conference of Labor Statisticians meeting in Geneva. The definitions represented an update and clarification of standards set in 1954. For the text of the 1982 resolution, see the ILO Web site at <http://www.ilo.org/public/english/120stat/res/ecacpop.htm>.

⁷ The OECD Working Party on Employment and Unemployment Statistics has been influential in harmonizing the interpretation of the ILO guidelines among its member countries. In 1983, for example, the Working Party recommended that OECD countries fix the job search reference period at 4 weeks. At that time, countries were using reference periods varying from 1 week to 60 days. Since 1983, 4 weeks has become the common job search period in most OECD countries, eliminating an important source of incompatibility in unemployment statistics.

⁸ BLS adjustment procedures are based upon data from the national labor force surveys of Italy, Sweden, and the United Kingdom. Eurostat data are used directly for France and Germany.

⁹ Despite the preference for labor force survey data in international comparisons, administrative data may be used as a component in the generation of monthly comparative unemployment rates. For countries that carry out only quarterly or annual surveys, comparative monthly rates are produced from the monthly administrative data on registered unemployment, adjusted by information from the labor force surveys. This is the method currently used by the Bureau and Eurostat for France and Germany, for example.

¹⁰ Reading job ads on the Internet is becoming a popular method of searching for jobs in many countries. In the U.S. survey, such persons would be treated in the same way as persons reading newspaper ads and would not be counted as unemployed, unless they took a more active step, such as submitting a job application.

¹¹ The relevant Eurostat search category is “studied advertisements in newspapers,” whereas Canada’s questionnaire uses “looked at job ads.”

¹² Eurostat states in its definitions that “currently available” should mean “available to start work within 2 weeks of the reference period.” Further elaboration in explanatory notes reveals that this means “2 weeks from the day of the interview.” (See *The European Union Labour Force Survey: Methods and Definitions* (Eurostat, 1996), pp. 13, 69.)

¹³ Information based on communication with Statistics Canada. (See also “The UR gap—small differences in measurement may matter,” *Labour Force Update* vol. 2, no. 4 (Statistics Canada, autumn 1998), p. 33.)

¹⁴ Information based on communication with Statistics Sweden.

¹⁵ The earlier adjustments were described in detail in *International Comparisons of Unemployment*, Bulletin 1979 (Bureau of Labor Statistics, August 1978).

¹⁶ See Joyanna Moy and Constance Sorrentino, “Unemployment, labor force trends, and layoff practices in 10 countries,” *Monthly Labor Review*, December 1981, pp. 3–13 (esp. pp. 8–11), for a discussion of why the Bureau does not make adjustments for temporary layoffs in other countries.

¹⁷ “The UR gap,” pp. 31–35.

¹⁸ U.S. definitions specify that, in order to be classified as unemployed, the person on layoff must expect to be recalled to the job in 6 months or the employer must have given the person a recall date. There is no time restriction on the latter.

¹⁹ “Supplementary Measures of Unemployment,” *Labour Force Update*, vol. 3, no. 3 (Statistics Canada, summer 1999), p. 32.

²⁰ Lee Grenon, “Looking for Work,” in *Perspectives on Labour and Income* (Journal of Statistics Canada), autumn 1998, pp. 22–25.

²¹ *Labour Force Survey: Methods and Definitions, 1992 Series* (Eurostat, June 1992).

²² “Job Search Statistics: The U.K. Perspective” (no author listed), paper presented at the July 6–7, 1998, meeting of the Paris Group on Labour and Compensation, London.

²³ Andrew Clark, “Methods of Jobsearch by the Unemployed in OECD Countries,” paper presented at the 17th meeting of the Working Party on Employment and Unemployment Statistics, Paris, April 22 and 23, 1999.

²⁴ Communication from Statistics Denmark.

²⁵ The estimated impact of expanding the current availability window in the United States is 0.1 percentage point, or 2 percent of the unemployed.

²⁶ The figures are hypothetical for Italy, Sweden, and the United Kingdom, because the BLS adjustment procedure is not based on the Eurostat data for these countries. Instead, the procedure uses the various national labor force surveys. For France, Germany, and the Netherlands, the procedure uses the Eurostat data in combination with OECD data.

²⁷ Phil Rones, “Comparison of the Labor Market Outcomes of Active and Passive Job Search,” paper presented at the July 6–7, 1998, meeting of the Paris Group, London; see especially table 1. However, it was difficult to identify all passive jobseekers, because there are many paths through the CPS questionnaire and some passive jobseekers would not have been presented with the question on current availability and hence would not have been included in the tabulation.

²⁸ For a discussion and assessment of the impact of the revised 1994 U.S. questionnaire, see Anne E. Polivka and Stephen M. Miller, “The CPS after the Redesign: Refocusing the Economic Lens,” in John Haltiwanger, Marilyn E. Manser, and Robert Topel (eds.), *Labour Statistics Measurement Issues*, National Bureau of Economic Research, Studies in Income and Wealth, vol. 60 (Chicago, University of Chicago Press, 1998), pp. 249–89.

²⁹ Elder and Sorrentino, “Japan’s low unemployment.”

APPENDIX: The four programs compiling international comparisons of unemployment

Comparisons of unemployment rates across countries “approximating U.S. concepts” were first made on a regular basis by the Bureau of Labor Statistics (BLS, the Bureau) in the early 1960s. During the late 1970s, the Organization for Economic Cooperation and Development (OECD) entered the field, with its Standardized Unemployment Rates (SURS) program; the Statistical Office of the European Communities (Eurostat) began a monthly comparative series in the mid-1980s. In the late 1980s, the International Labor Office (ILO) initiated a program of annual ILO-Comparable Unemployment Rates. All of these programs make adjustments in national data to a common conceptual base. The BLS program adjusts such data to U.S. concepts, while the other three comparative programs adjust their data to ILO concepts, with some variations in

interpretation. Exhibit A–1 (page 20) presents a synopsis of the four series.

Rates based on the standardized data published by these four organizations used to be quite different for some countries; in recent years, however, the rates have converged to the point that they are virtually identical.¹ In late 1996, the OECD accepted the Eurostat figures for the EU countries in its SURS series. The ILO-Comparable series is meant to conform with the SURS, although the methodology has not been fully implemented.² The one remaining significant difference among the three series was removed in October 1999 when the Bureau modified its comparative series for Germany to cover unified Germany. Previously, the Bureau had maintained its series for the former West Germany only.

Eurostat's survey uses common definitions that are applied across the EU countries. Like the Bureau, the OECD and the ILO adjust national data for some, but not all, of the conceptual differences. All four agencies adjust the Swedish data by adding the students who are seeking work to the unemployed. Like the Bureau, the OECD and the ILO do not adjust for the different treatments of current availability and active job search. OECD's SURS are on a "civilian labor force" basis, but some career military remain in the figures for the EU countries. The OECD makes no adjustment to exclude them. The ILO adjusts national data, where relevant, to include all unpaid family workers and all the Armed Forces (resident and stationed abroad) in the labor force, unless the numbers are very small.

The latest tabulations of standardized BLS and OECD rates are shown in tables A-1 and A-2. Because the OECD SURS are currently identical to the Eurostat figures for the EU countries, there is no need to show a separate Eurostat tabulation. The data from the ILO-Comparable series are not shown either, because, in theory, those data correspond to the OECD SURS. There are some small differences, however, in virtue of the ILO's inclusion of all the Armed Forces in the labor force denominator.

None of these organizations claim that perfect comparability has been achieved; nevertheless, they assert that, for international comparisons, their adjusted series form a better basis for analysis than the unadjusted national data available from each country.

Bureau of Labor Statistics

The BLS series is the longest in existence, but has the smallest coverage of countries among the comparative programs. Currently, 10 developed countries are included in the series. (See table A-1, which excludes one of the countries, the Netherlands, for which data are compiled only on an annual basis.) Companion variables, such as employment ratios and participation rates, are published in a semiannual compendium of labor force statistics.³

The BLS series is expressed as "approximating U.S. concepts," indicating some inexactitude in the figures. In its *Handbook of Methods*, the Bureau acknowledges that there are differences for which no adjustments are made, most of which are very small in impact, but that the differences in interpretation of what constitutes a job search for qualification for being classified as unemployed may be more significant.⁴

The BLS adjustment process works on national labor force surveys for Canada, Australia, Japan, Italy, Sweden, and the United Kingdom. All of these countries have either monthly or quarterly labor force surveys. For France, Germany, and the Netherlands, the BLS adjustments proceed from data published by Eurostat and the OECD, rather than from the national data. It is more convenient to work from the international data for these countries for several reasons. For instance, France and Germany conduct only annual surveys, whereas the international organizations provide monthly

Table A-1. Unemployment rates in nine countries, civilian labor force basis, approximating U.S. concepts, seasonally adjusted, 1990-2000

Year and quarter or month	United States	Canada	Australia	Japan	France	Germany ¹	Italy ²	Sweden	United Kingdom
1990	5.6	8.1	6.9	2.1	9.1	5.0	7.0	1.8	6.9
1991	6.8	10.3	9.6	2.1	9.6	³ 5.6	³ 6.9	3.1	8.8
1992	7.5	11.2	10.8	2.2	³ 10.4	6.7	7.3	5.6	10.1
1993	6.9	11.4	10.9	2.5	11.8	7.9	³ 10.2	9.3	10.5
1994	³ 6.1	10.4	9.7	2.9	12.3	8.5	11.2	9.6	9.7
1995	5.6	9.4	8.5	3.2	11.8	8.2	11.8	9.1	8.7
1996	5.4	9.6	8.6	3.4	12.5	8.9	11.7	9.9	8.2
1997	4.9	9.1	8.6	3.4	12.4	9.9	11.9	10.1	7.0
1998	4.5	8.3	8.0	4.1	11.8	9.3	12.0	8.4	6.3
I	4.7	8.6	8.1	3.7	12.0	9.8	11.8	8.8	6.4
II	4.4	8.3	8.0	4.2	11.7	9.5	12.0	8.7	6.3
III	4.5	8.2	8.1	4.3	11.7	9.1	12.0	8.5	6.3
IV	4.4	8.1	7.7	4.5	11.5	8.9	12.0	7.6	6.3
1999	4.2	7.6	7.2	^p 4.7	^p 11.1	^p 8.7	11.5	7.1	^p 6.1
I	4.3	7.9	7.5	4.7	11.3	8.9	11.9	7.2	6.3
II	4.3	7.8	7.4	4.8	11.2	8.8	11.6	6.9	6.1
III	4.2	7.6	7.1	4.8	11.0	8.8	11.6	7.0	5.9
IV	4.1	7.0	7.0	4.7	10.6	8.7	11.1	7.1	5.9
October	4.1	7.1	7.1	4.7	10.8	8.8	11.1	7.1	5.9
November	4.1	6.9	6.8	4.6	10.6	8.7	—	7.2	5.9
December	4.1	6.8	7.0	4.7	10.4	8.5	—	7.0	5.9
2000									
I	4.1	6.8	6.8	4.9	10.0	8.4	11.3	6.9	—
January	4.0	6.8	6.9	4.7	10.3	8.4	11.3	6.9	—
February	4.1	6.8	6.7	4.9	10.0	8.4	—	6.9	—
March	4.1	6.8	6.9	5.0	9.8	8.4	—	6.8	—

¹ Unified Germany for 1991 onward. Prior to 1991, data relate to the former West Germany.

² Quarterly rates are for the first month of the quarter.

³ Break in series. See notes in "Current labor statistics," pp. 50-51, this issue.

SOURCE: Bureau of Labor Statistics, May 5, 2000.

NOTE: Quarterly and monthly figures for France and Germany are calculated by applying annual adjustment factors to current published data and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. For further qualifications and historical data, see "Comparative Civilian Labor Force Statistics, 10 Countries, 1959-1999," April 17, 2000. ^p = preliminary. Dash indicates data not available.

Table A-2. OECD standardized unemployment rates, May 2000 release

[Percent of civilian labor force unemployed]

Country	1997	1998	1999	Quarterly data (seasonally adjusted)		
				1999		2000, first quarter
				Third quarter	Fourth quarter	
Total OECD ¹	7.4	7.1	6.8	6.8	6.6	6.6
Canada	9.1	8.3	7.6	7.6	7.0	6.8
United States	4.9	4.5	4.2	4.2	4.1	4.1
Japan	3.4	4.1	4.7	4.7	4.7	4.8
Australia	8.5	8.0	7.2	7.1	6.7	6.7
New Zealand	6.7	7.4	6.8	6.8	6.3	—
Austria	4.4	4.5	3.7	3.6	3.6	3.5
Belgium	9.4	9.5	9.0	9.0	8.8	8.6
Czech Republic	4.8	6.5	8.8	9.0	9.2	—
Denmark	5.6	5.2	5.2	5.1	4.9	4.9
Finland	12.6	11.4	10.2	10.0	10.1	10.4
France	12.3	11.8	11.3	11.2	10.8	10.4
Germany	9.9	9.4	8.7	8.7	8.7	8.4
Hungary	8.9	8.0	7.1	7.1	7.0	—
Ireland	9.9	7.6	5.8	5.7	5.3	5.0
Italy	11.7	11.9	11.4	11.2	11.1	—
Luxembourg	2.7	2.7	2.3	2.3	2.2	2.2
Netherlands	5.2	4.0	3.3	3.3	2.8	—
Norway	4.1	3.3	3.2	3.3	3.7	—
Poland	11.2	10.6	—	—	—	—
Portugal	6.8	5.2	4.5	4.4	4.2	4.2
Spain	20.8	18.8	15.9	15.6	15.2	15.0
Sweden	9.9	8.3	7.2	7.1	6.8	6.5
Switzerland	4.2	3.5	—	—	—	—
United Kingdom	7.0	6.3	6.1	6.0	5.9	—
Fifteen EU countries	10.6	9.9	9.2	9.1	8.9	8.8

¹ Only the countries listed are included.

NOTE: The standardized unemployment rates for the European Union (EU) member countries are from Eurostat. The OECD is responsible for the calculation of the standardized unemployment rates for the non-EU countries. The latter have been adjusted when necessary and as far as the data allow, to bring them as close as possible to ILO (and Eurostat) guidelines for international comparisons of labor force statistics. The standardized rates are, therefore, more comparable between countries than the unemployment rates published in national sources. Dash indicates data not available.

SOURCE: OECD News Release, *Standardised Unemployment Rates*, May 12, 2000.

estimates of unemployment under ILO concepts. And although the Netherlands conducts quarterly surveys, the national definitions diverge substantially from ILO concepts.

The Bureau currently makes no adjustments to the Canadian data, and few adjustments are made to the data for the five EU countries covered in its program. The only adjustment the Bureau makes to unemployment figures is a rather large increase in the Swedish unemployed to add students seeking work and available for work, who are not counted as unemployed in Sweden. In 1998, when the national Swedish unemployment rate was 6.5 percent, the Bureau raised it to 8.4 percent for comparability with U.S. concepts. (Eurostat makes a similar adjustment for Sweden.)

Eurostat

The EU labor force survey covers the 15 member countries.⁵ The survey is a joint effort by member states to coordinate their national surveys, which must also serve their own requirements. Many of the variables of a full labor force survey are published.

The survey questionnaires are not harmonized, and the wording and ordering of the questions differ. The Eurostat labor force survey is, in effect, a retabulation of the data from national surveys under Eurostat concepts. Generally, questions are added to the national survey instruments so that Eurostat concepts can be obtained. Despite close coordination, inevitably some differences in the surveys remain from country to country. It is difficult for an outsider to assess the degree of comparability achieved by Eurostat, which has not publicly documented the adjustments made to the national statistics. Eurostat states:

Perfect comparability among 15 countries is difficult to achieve, even were it to be by means of a single direct survey, i.e. a survey carried out at the same time, using the same questionnaire and a single method of recording. Nevertheless, the degree of comparability of the EU labor force survey results is considerably higher than that of any other existing set of statistics on employment and unemployment available for Member States.⁶

Because of its unique ability to harmonize the EU country statistics, Eurostat is in a better position than the Bureau, the OECD, or the ILO to claim that its adjusted unemployment rates are closely comparable with each other. Also, the Bureau, the OECD, and the ILO must contend with comparing the Eurostat data with data from countries that are outside the European Union.

OECD SURS

OECD SURS cover 24 of the organization's 29 member countries, including several Eastern European countries in transition. (See table A-2.) A full array of comparative variables is not yet part of the SURS program. Only breakdowns of unemployment by sex are published.

The SURS are presented as rates that "are more comparable between countries than the unemployment rates published in national sources."⁷ The OECD notes that the Eurostat rates it adopted in 1996 are "based on slightly different data and methodology compared to the former standardized rates that were calculated by the OECD."⁸ Currently, the OECD makes no adjustments to the U.S. or the Canadian unemployment rate.

In its SURS press releases, OECD states that data for non-EU countries "have been adjusted when necessary, and as far as [they] allow, to bring them as close as possible to ILO (and Eurostat) guidelines for international comparisons of labour force statistics."

ILO-Comparable series

The ILO-Comparable series is unique in its coverage of both developed and developing countries. Currently, 32 countries are in the database, but data are published for only 24.⁹

The ILO claims that its data are consistent with the ILO guidelines for the measurement of employment and unemployment, "except where adjustments are negligible and therefore can be disregarded."¹⁰ The program depends on national statistical offices to supply the data needed for adjustments. The ILO states,

The impact of adjustments which appear necessary is looked at together with the total effect on the direction of the resulting labor force estimates and unemployment rates. Adjustments are only recommended when it is clear that the factors they address are important; not where their impact is marginal, or tends to cancel out in combination with one or more other factor(s).

Exhibit A-1. Four standardized series on unemployment

Category	BLS	OECD	Eurostat	ILO
Name of series	Unemployment Rates Approximating U.S. Concepts	Standardized Unemployment Rates (SURS)	Harmonized Unemployment Rates	ILO-Comparable Unemployment Rates
First published	Early 1960s	Early 1980s	Late 1980s	Late 1980s
Beginning year of data	1959	1974; 1982 for EU countries	1982	1981
Periodicity	Annual, quarterly, and monthly	Annual, quarterly, and monthly	Annual, quarterly, and monthly	Annual only
Conceptual basis	U.S. concepts	General ILO concepts; Eurostat interpretation for EU	Own interpretation of ILO concepts	ILO concepts; accepts OECD SURS
Labor force basis	Civilian	Civilian, but EU countries use Eurostat basis	Civilian, but includes career military living in private households	Total, including all members of Armed Forces, both regular and temporary
Number of countries	10	24	15	32 in database, 24 published
Other variables	Age-sex unemployment rates, participation rates, employment ratios, employment by sector	Unemployment rate by sex	All variables of a full labor force survey	Age-sex unemployment rates, participation rates, employment by sector
Web site	http://stats.bls.gov/fls data.htm	http://www.oecd.org/news_and_events/new-numbers/	http://europa.eu.int/en/home.htm (click on press releases for latest)	http:// laborsta.ilo.org

The decision to adjust or not is agreed upon together with the national statistical offices.

One of the premises of the ILO-Comparable program is that its data conform with the OECD's SURS. The program was designed that way to avoid the dissemination of dissimilar "comparable" statistics for the same countries. Since the autumn of 1996, how-

ever, when the OECD adopted the Eurostat methodology and rates, the ILO and OECD figures have begun to diverge. The main divergence is that the ILO continues to include the Armed Forces in the denominator of the unemployment rate calculation. The two organizations were to renew their collaboration in order to resolve the differences.

Notes to the appendix

¹ Differences are generally on the order of 0.1 to 0.2 percentage point and are due to whether the Armed Forces are included or excluded and to technical factors, such as the method of interpolation and updating.

² See Sophia Lawrence, "ILO-Comparable annual employment and unemployment estimates (1999)," *ILO Bulletin of Labour Statistics*, 1999-3, pp. XII-XIII.

³ The compendium is available at the Web site noted in exhibit A-1.

⁴ *Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, April 1997), pp. 112-13.

⁵ Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden,

and the United Kingdom.

⁶ *The European Union Labour Force Survey: Methods and Definitions* (Eurostat, 1996), pp. 11-12.

⁷ See note, table A-2.

⁸ "Standardized Unemployment Rates," *OECD Quarterly Labour Force Statistics*, second quarter 1999, p. 134.

⁹ The 24 countries for which data are published are Australia, Canada, Finland, France, Germany, Hong Kong (China), Indonesia, Ireland, Japan, the Republic of Korea, the Netherlands, New Zealand, Norway, the Philippines, Poland, Portugal, Romania, Singapore, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United States.

¹⁰ *ILO Bulletin*, p. XI.