



2011 EDITION

CHARTING INTERNATIONAL LABOR COMPARISONS

U.S. Department of Labor • Bureau of Labor Statistics





2011 EDITION
**Charting International Labor
Comparisons**

U.S. Department of Labor
Hilda L. Solis, *Secretary*

U.S. Bureau of Labor Statistics
Keith Hall, *Commissioner*

August 2011

PREFACE

With ever-expanding global markets, international labor statistics have assumed a greater role in assessing the relative performance of individual economies and in influencing both national and international policy decisions. However, direct comparisons of statistics across countries can be misleading, because concepts and definitions often differ. To improve the comparability of international labor statistics, the Bureau of Labor Statistics (BLS) [International Labor Comparisons](#) (ILC) program adjusts data to a common conceptual framework.

The BLS 2011 edition of *Charting International Labor Comparisons* features 2009 data, as well as trends over time, for the main indicators published by ILC: [gross domestic product](#), [labor force](#), manufacturing

[hourly compensation costs](#) and [productivity](#), and [consumer prices](#). To increase country and indicator coverage, data from other organizations also are included. (Notes are provided at the end of each section to detail sources used and to furnish helpful definitions.)

This edition of *Charting International Labor Comparisons* updates the previous edition, with a revised set of countries and indicators. Country coverage varies by chart and is based primarily on data available from the ILC program. In recent years, ILC has improved its coverage of emerging economies; as a result, country coverage for many indicators has been expanded.

For the latest ILC key indicators by country, see [Country at a Glance](#).

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ACKNOWLEDGMENTS

This edition of *Charting International Labor Comparisons* was prepared by the BLS International Labor Comparisons (ILC) program, under the coordination of Elizabeth Crofoot and the overall guidance of Marie-Claire Sodergren and Chris Sparks. ILC team members are: Amy Bixler, Aaron Cobet, Rich Esposito, Jacob Kirchmer, Christopher Morris, Bradley Nicholson, and Andrew Petajan. Cover art and layout design were created by Bruce Boyd, and editorial services were provided by Monica R. Gabor, both of the Office of Publications and Special Studies.

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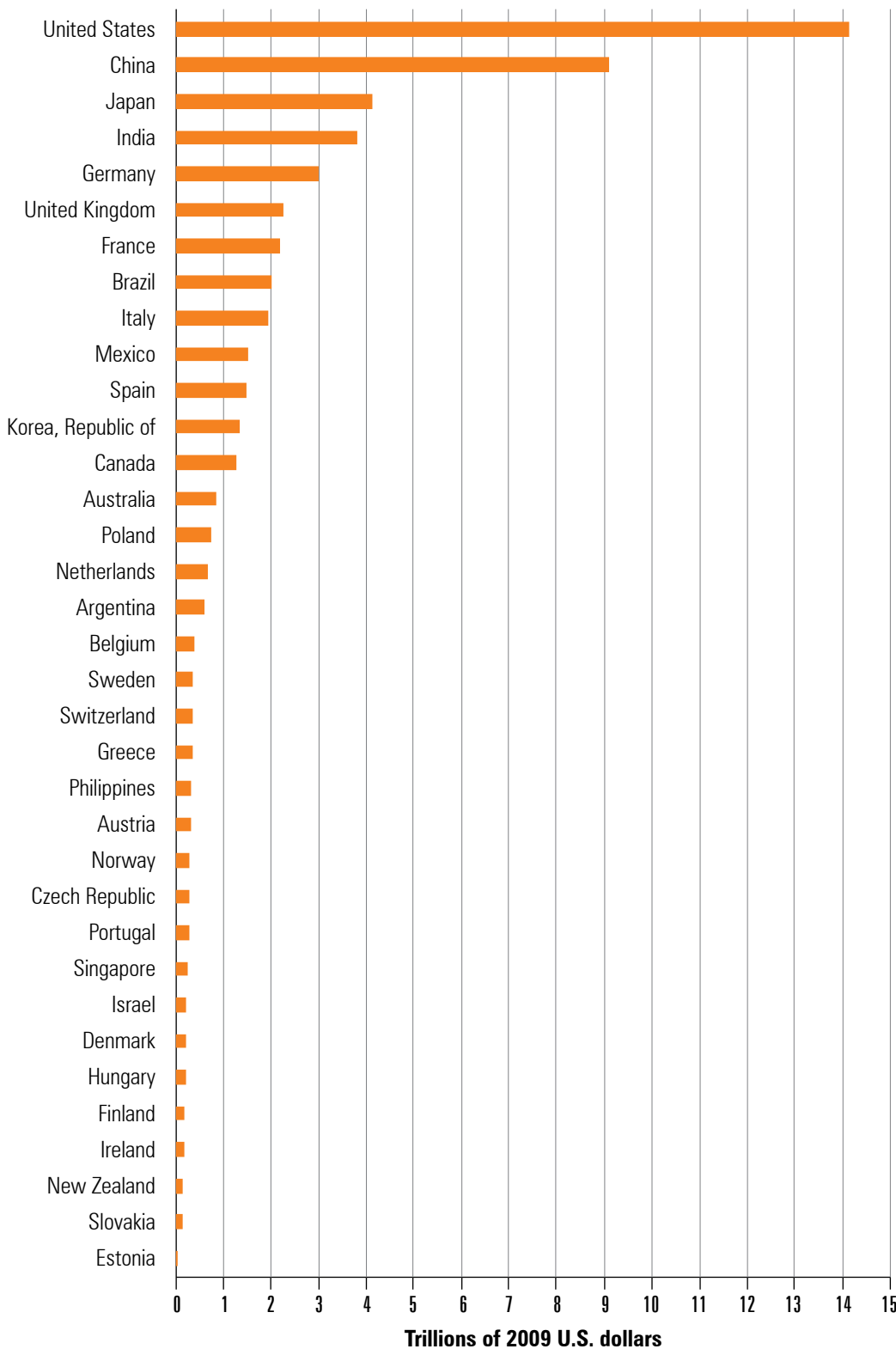
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1 SECTION

Gross Domestic Product

Gross domestic product (GDP) is a measure of a country's economic output. GDP per capita and GDP per employed person are related indicators that provide a general picture of a country's well being. GDP per capita is an indicator of overall wealth in a country, and GDP per employed person is a general indicator of productivity.

Gross domestic product, selected countries, in U.S. dollars, 2009



NOTE: GDP is converted to U.S. dollars using purchasing power parities (PPP). See section notes.

SOURCES: Bureau of Labor Statistics and The World Bank

CHART

1.1

Gross domestic product (GDP) was over 14 trillion dollars in the United States and exceeded 3 trillion dollars in only three other countries: China, Japan, and India.

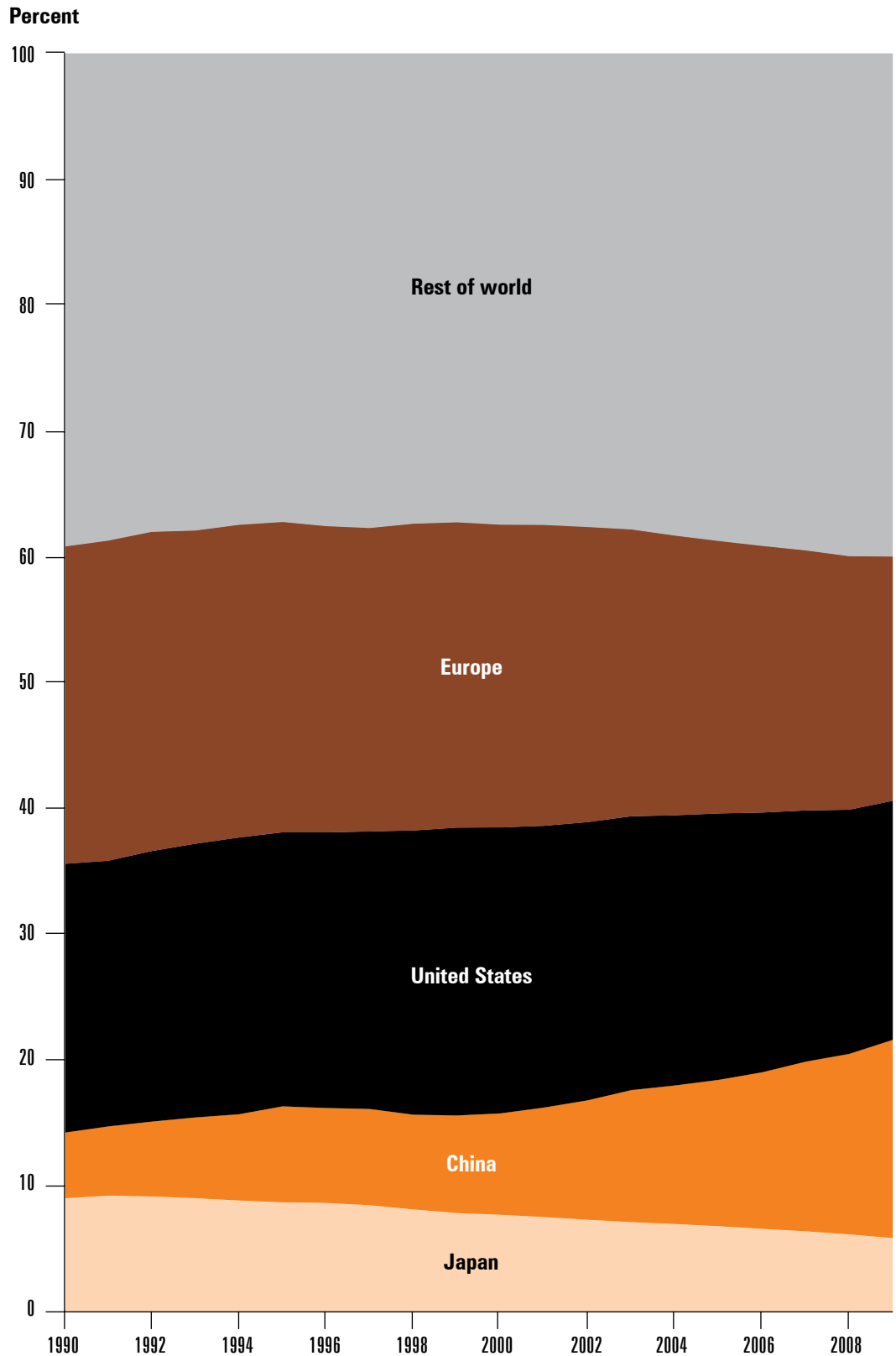
- In addition to China and India, other large emerging economies, such as Brazil and Mexico, were among the 10 largest countries in terms of GDP.
- The GDP of the United States was roughly 5 times larger than that of Germany, 10 times larger than that of the Republic of Korea, and 50 times larger than that of Norway.

CHART 1.2

Share of world gross domestic product, selected economies, 1990–2009

China's share of world gross domestic product (GDP) increased steadily during the past two decades, from approximately 5 percent in 1990 to 16 percent in 2009. By 2000, China's GDP had surpassed Japan's.

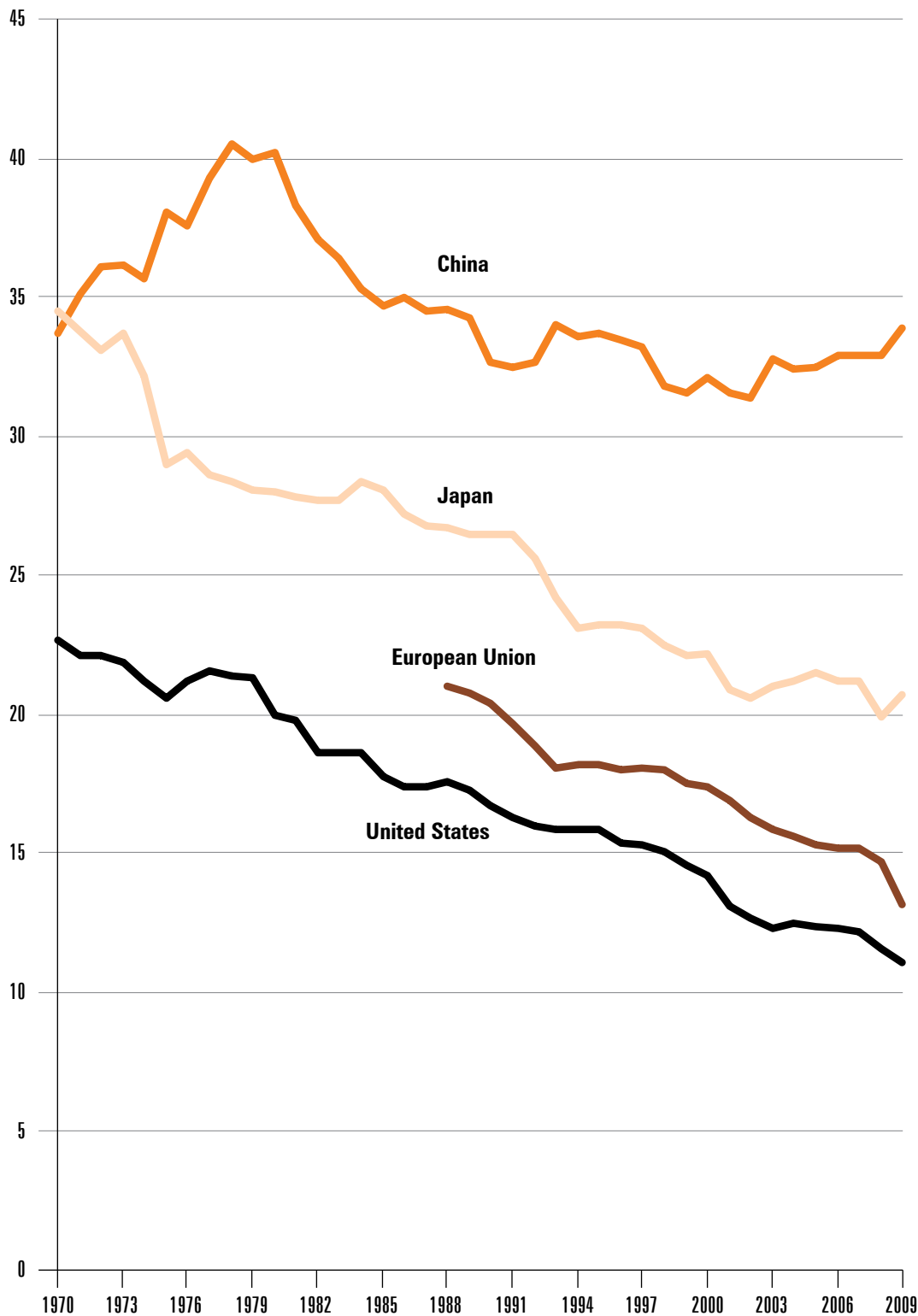
- As a percent of world GDP, the United States, Europe, and Japan each declined slightly over the last two decades, due largely to China's growth.
- The rest of the world's share of world GDP decreased during the 1990s but grew steadily from 2000 to 2009.



SOURCE: The Conference Board

Manufacturing output as a percent of gross domestic product, selected economies, 1970–2009

Percent



SOURCES: Bureau of Labor Statistics and The World Bank

CHART 1.3

Over the period, the manufacturing sector's share of gross domestic product (GDP) declined at about the same rate in Japan, the European Union, and the United States.

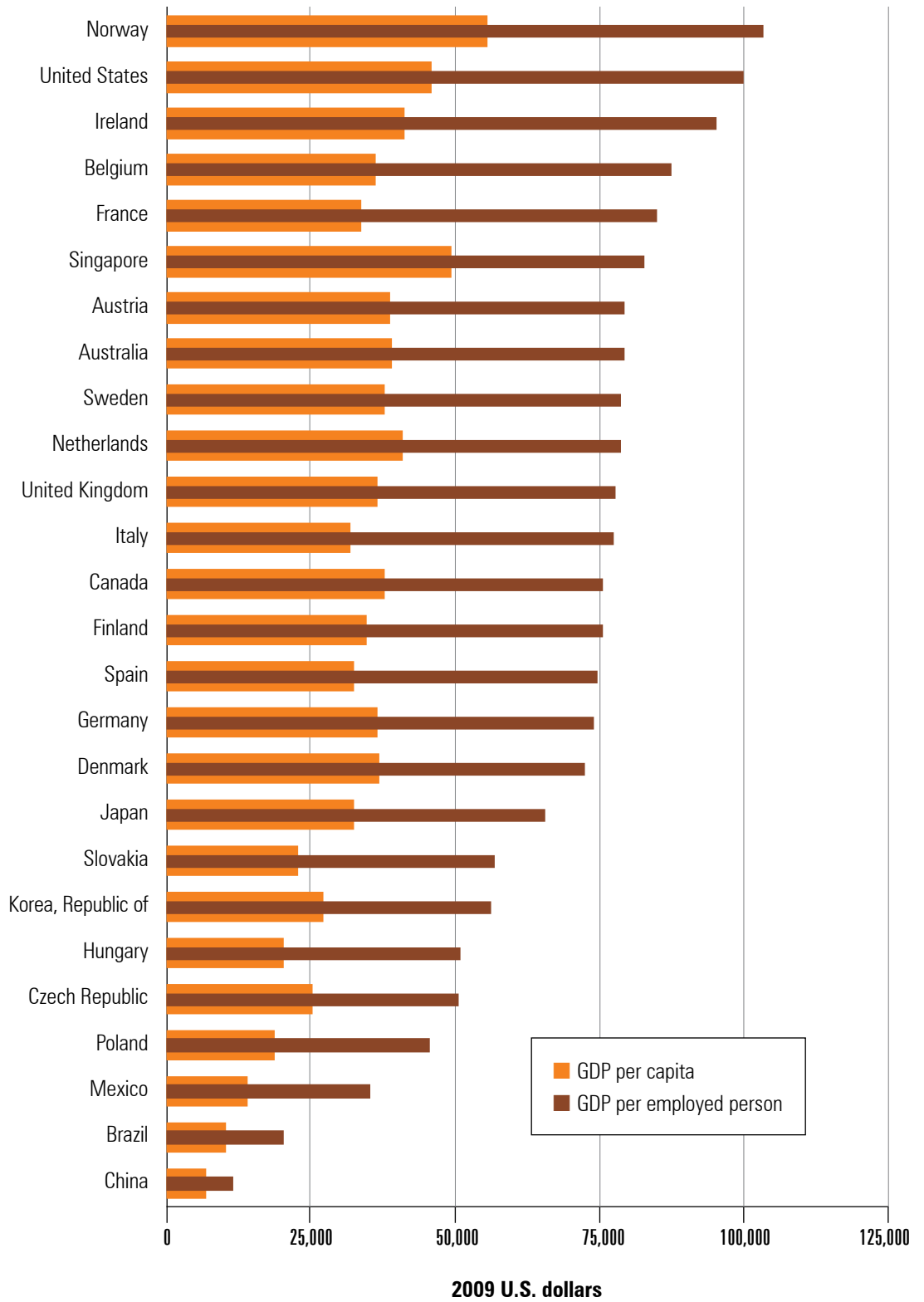
- U.S. manufacturing made up 11 percent of GDP in 2009, compared with 23 percent of GDP in 1970.
- Manufacturing output as a share of GDP was about one-third in both China and Japan in 1970. The share decreased overall in Japan but rose and fell in China before returning to 1970 levels in 2009.

CHART 1.4

Norway had the highest gross domestic product (GDP) per capita and per employed person.

- GDP per capita in the United States was approximately 7 times larger than that of China.
- Singapore had the second highest GDP per capita, but only the sixth highest GDP per employed person—indicating a high employment rate in that country.

Gross domestic product per capita and per employed person, selected countries, in U.S. dollars, 2009



SOURCES: Bureau of Labor Statistics and The World Bank

Sources

Data for most countries are based on the BLS report [International Comparisons of GDP per Capita and per Hour, 1960–2009](#). Data for the remaining countries and all purchasing power parities (PPP) are based on data in the World Bank database [World Development Indicators](#). A country or region's share of world gross domestic product (GDP) is based on data in The Conference Board [Total Economy Database](#).

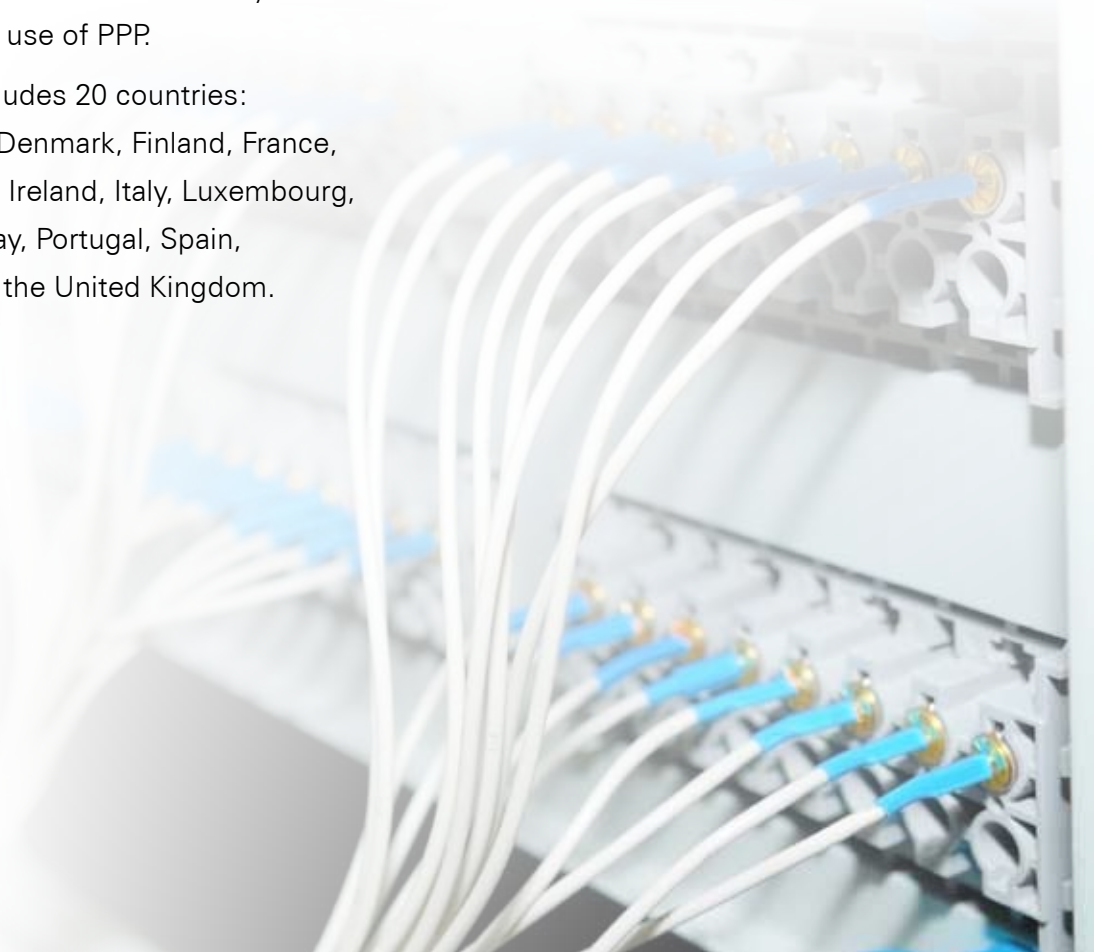
Each country prepares GDP measures in accordance with national accounts principles. To make international comparisons of levels of GDP, GDP per capita, and GDP per employed person, it is necessary to express GDP in a common currency unit. BLS converts GDP from national currency units to U.S. dollars through the use of PPP.

In this section, Europe includes 20 countries:

Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Definitions

Gross domestic product (GDP) is the market value of all goods and services produced in a country. **GDP per capita** is GDP divided by population and is a rough measure of a country's overall wealth. **GDP per employed person** is GDP divided by the number of employed persons and is a rough measure of a country's productivity. **Purchasing power parities** (PPP) are currency conversion rates that allow output in different currency units to be expressed in a common unit of value. A PPP is the ratio between the number of units of a country's currency and the number of U.S. dollars required to purchase an equivalent basket of goods and services within each respective country. ■



2 SECTION

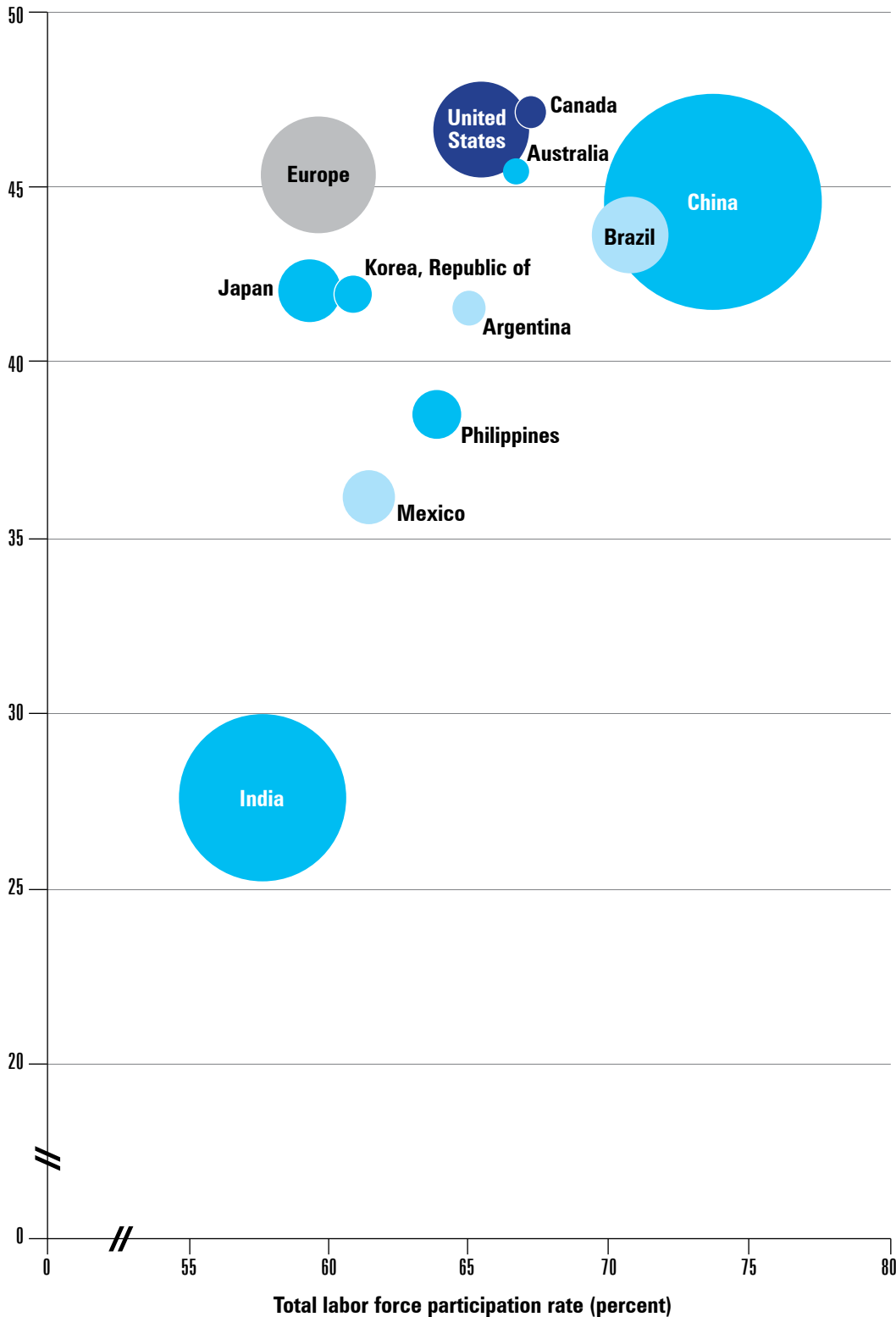
Labor Market

Labor force statistics, such as employment and unemployment, are key indicators of the functioning of labor markets both within and across countries.

Labor force levels and participation rates provide information on the supply of labor in an economy. Employment focuses on the extent to which people are engaged in productive labor market activities, while measures of labor underutilization, including unemployment, provide information on an economy's unused or underused labor supply.

Labor force size, gender composition, and participation rates, selected countries, 2009

Women's share of the labor force (percent)



NOTE: Each bubble represents the size of the labor force for that country. Europe includes 21 countries. See section notes.

SOURCES: Bureau of Labor Statistics and International Labour Office

CHART 2.1

China and India had the largest workforces, although China had the highest labor force participation rate, while India had the lowest.

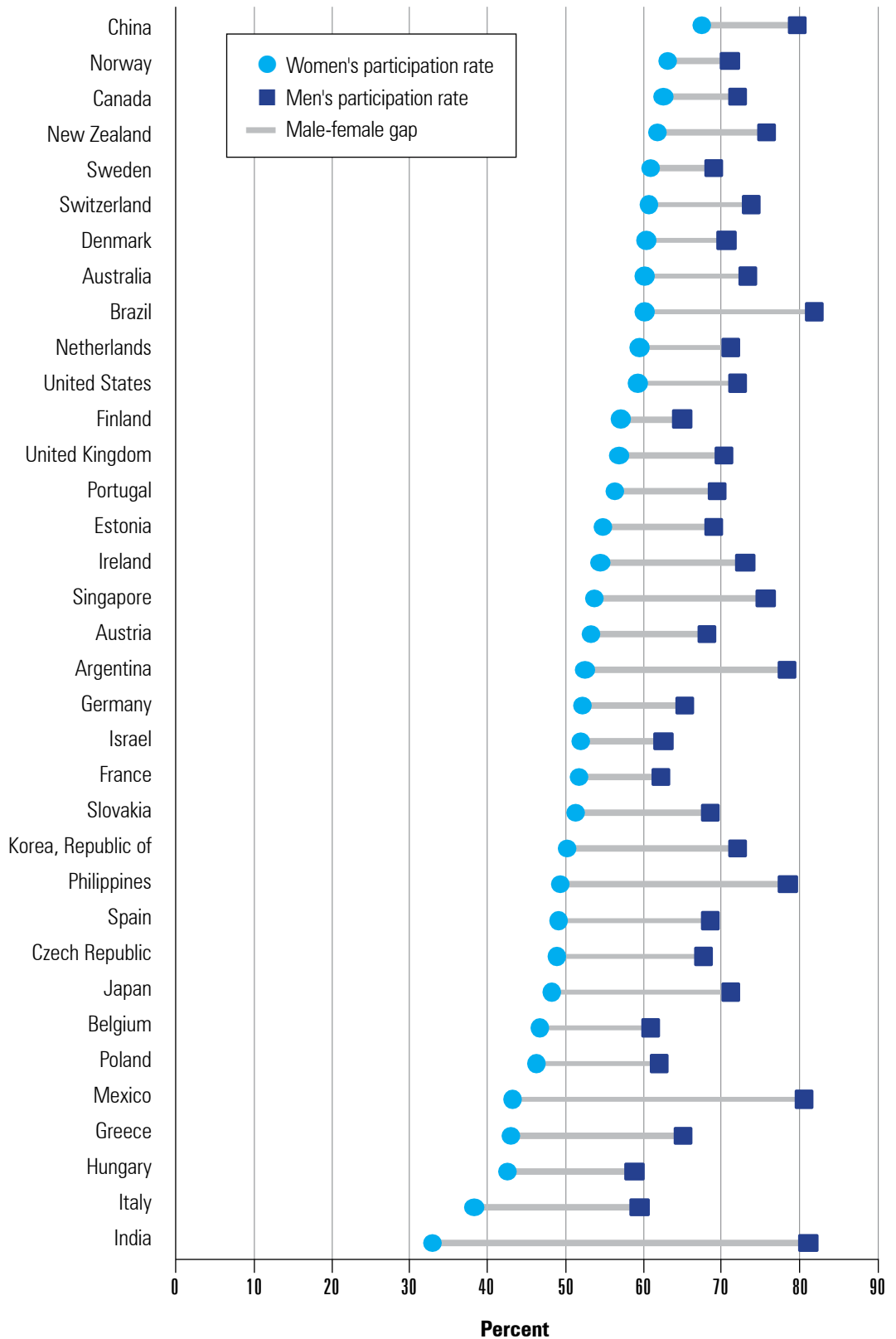
- Women made up less than half of the labor force in all countries and Europe, with India having, by far, the lowest proportion of women in the labor market.

CHART 2.2

Labor force participation rates by sex, selected countries, 2009

Women's participation rates in India and Mexico were among the lowest; these countries had the largest gender gaps.

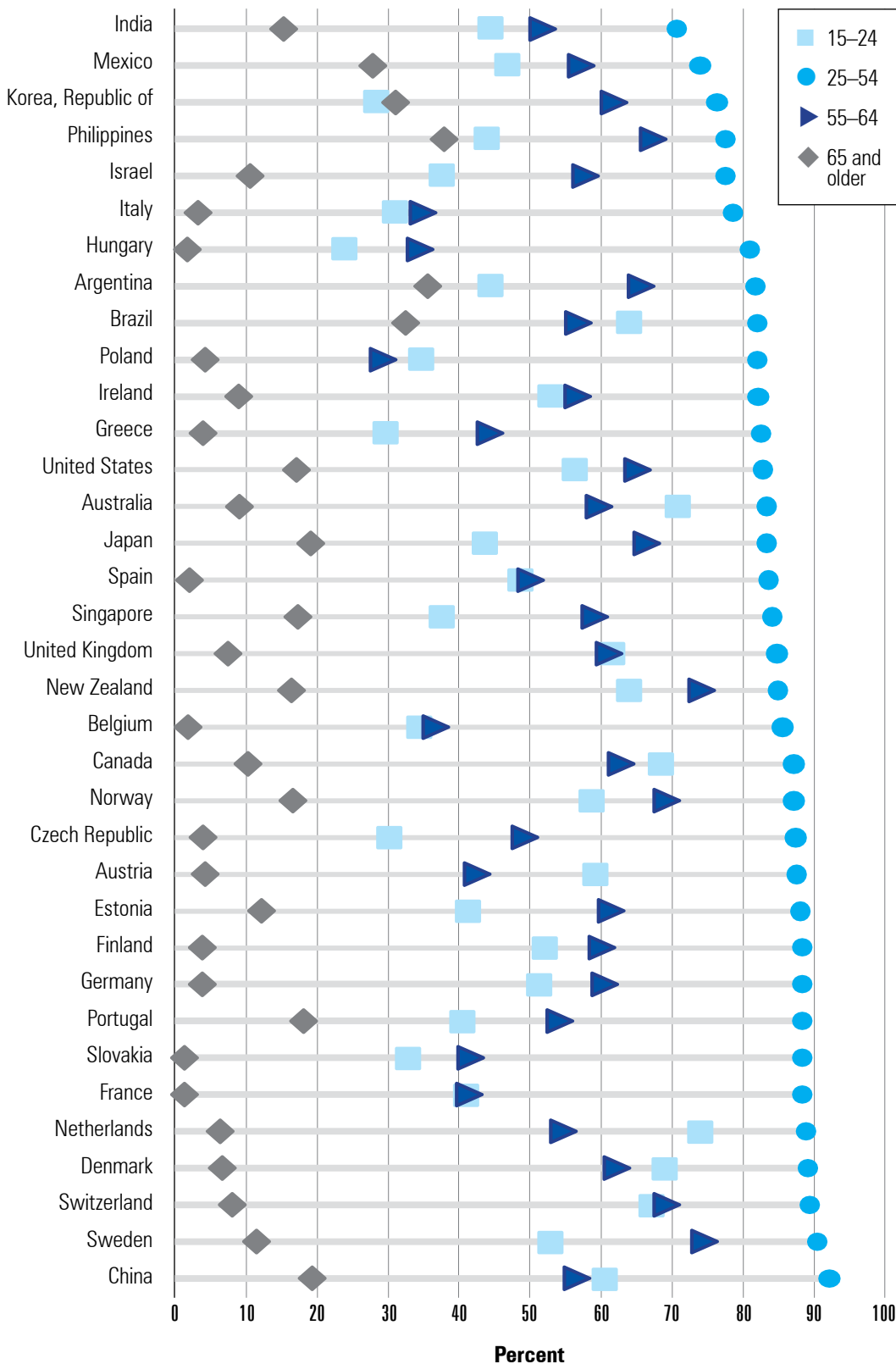
- Labor force participation rates were higher for men than women in all countries, although the size of the gender gap varied considerably. The largest gaps were in Asian and Latin American countries.
- The highest participation rates for men were in large emerging economies: Brazil, India, Mexico and China. China also had the highest participation rate for women and, thus, a relatively low gender gap.



SOURCES: Bureau of Labor Statistics and International Labour Office

Labor force participation rates by age, selected countries, 2009

CHART 2.3



Participation rates were highest for persons ages 25 to 54 in all countries and lowest for those ages 65 and older in all countries except the Republic of Korea.

- In Argentina and the Philippines, more than one-third of persons ages 65 and older were still in the labor force. In contrast, many European countries had rates below 5 percent for this age group.
- Participation rates among youth varied most across countries. The Netherlands and Australia had the highest participation rates (above 70 percent) while Hungary, the Republic of Korea, and Greece had the lowest rates (under 30 percent).

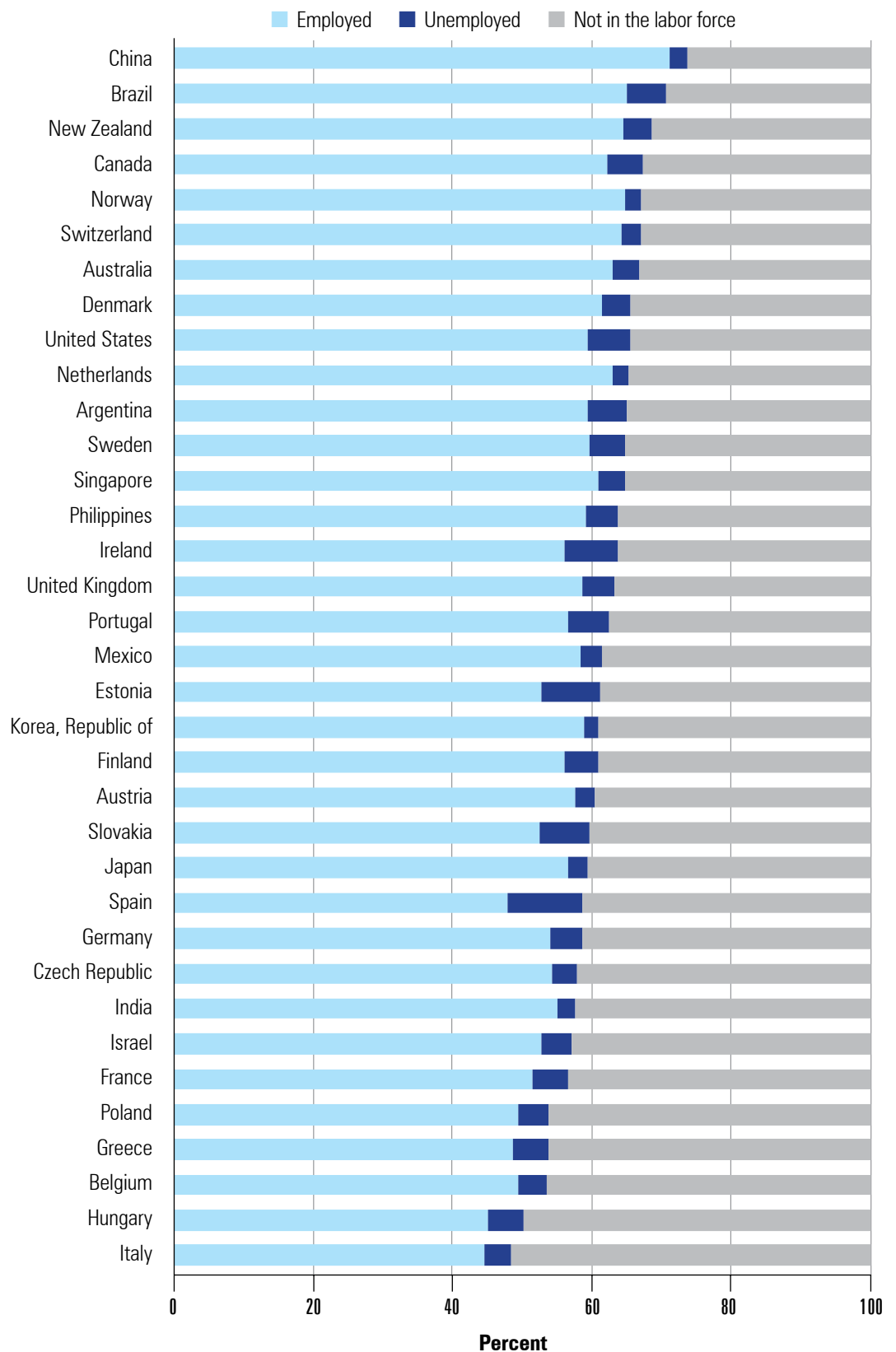
SOURCE: International Labour Office

CHART 2.4

The working-age population is composed of those in the labor force—the employed and the unemployed—and those not in the labor force.

- Italy was the only country with less than half of its working-age population engaged in the labor force.
- Although Spain had average labor force participation, this masks its relatively low employment rate and high unemployment. Estonia, Ireland, and Slovakia also had relatively low employment but high unemployment.

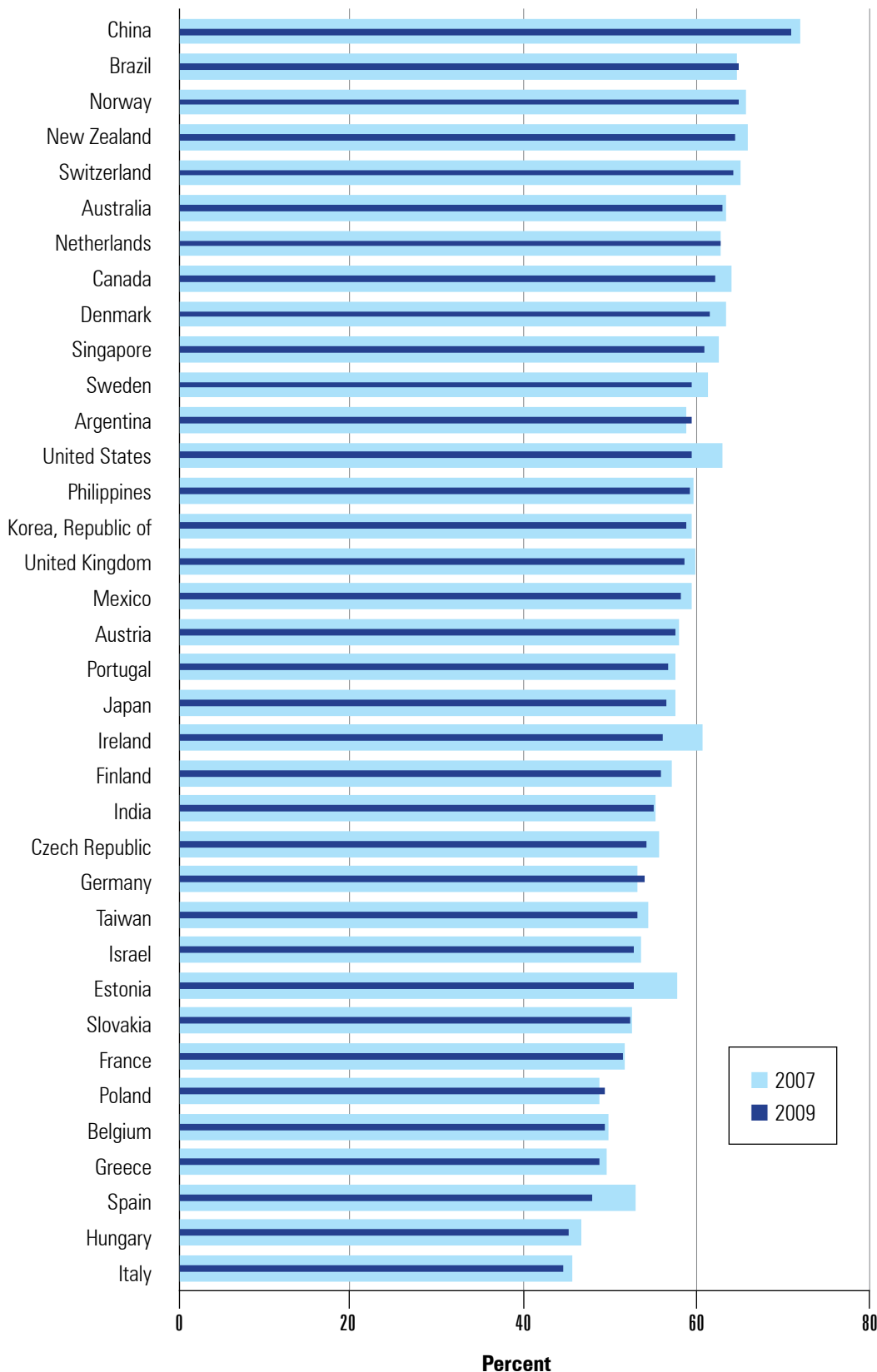
Working-age population by labor force status, selected countries, in percent, 2009



SOURCES: Bureau of Labor Statistics and International Labour Office

Employment-population ratios, selected countries, 2007 and 2009

CHART 2.5



Employment-population ratios decreased between 2007 and 2009 in 31 of the 36 countries, with the steepest declines in Estonia, Spain, Ireland, and the United States.

- In 2009, China and Brazil had the highest proportions of employed persons, while Hungary and Italy had the lowest.

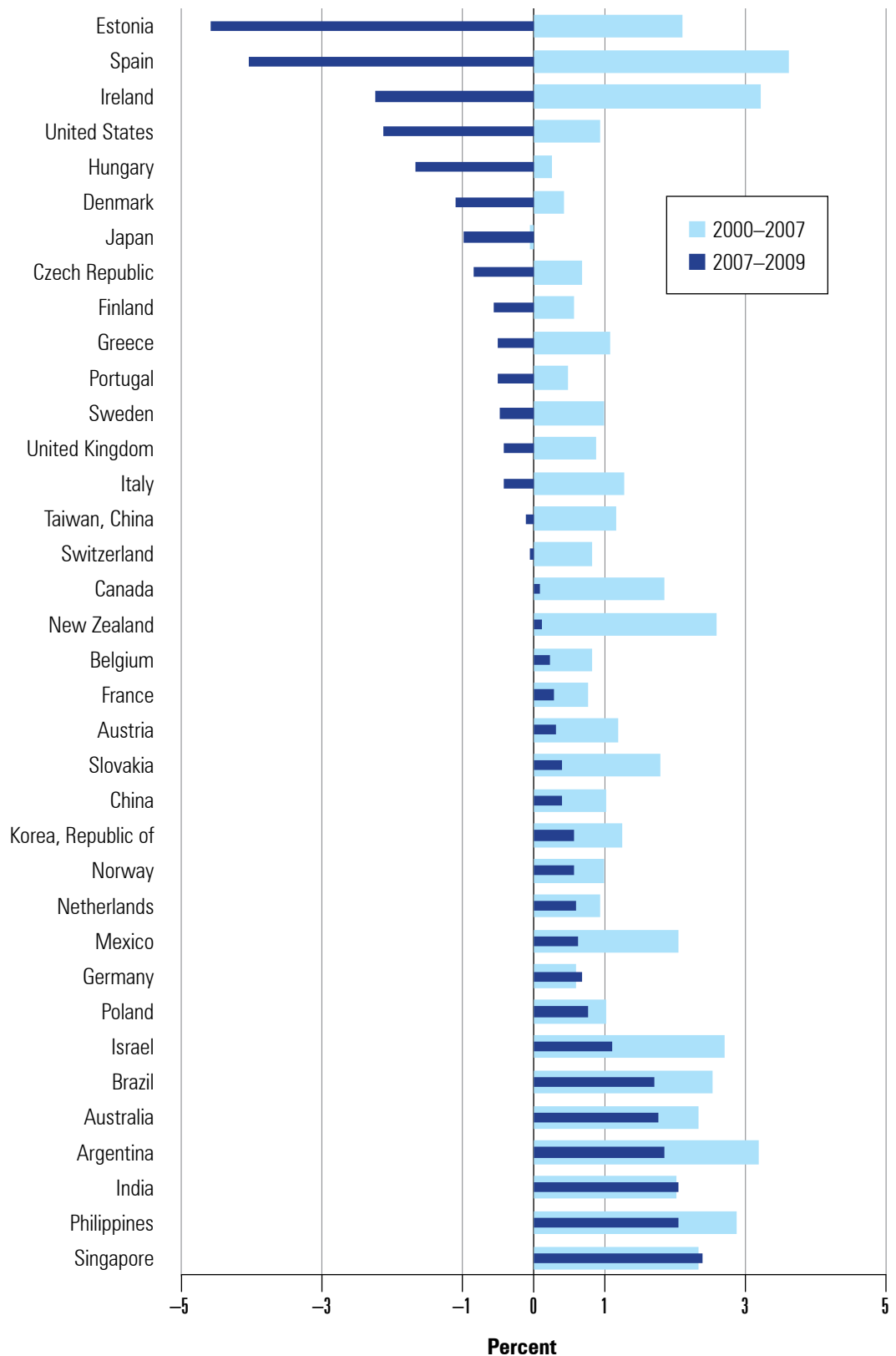
SOURCES: Bureau of Labor Statistics and International Labour Office

CHART 2.6

Employment grew from 2000 to 2007 in all countries except for Japan but decreased in almost half of the countries from 2007 to 2009.

- Between 2007 and 2009, the sharpest declines in employment were in Estonia and Spain, followed by Ireland and the United States.
- The largest gains in employment between 2007 and 2009 were in three Asian countries: Singapore, the Philippines, and India. Singapore and India were 2 of 3 countries (Germany was the third) that had more employment growth during 2007–2009 than during 2000–2007.

Employment growth, selected countries, average annual rates, 2000–2007 and 2007–2009



SOURCES: Bureau of Labor Statistics and International Labour Office

Part-time employment rates by sex, selected countries, 2009

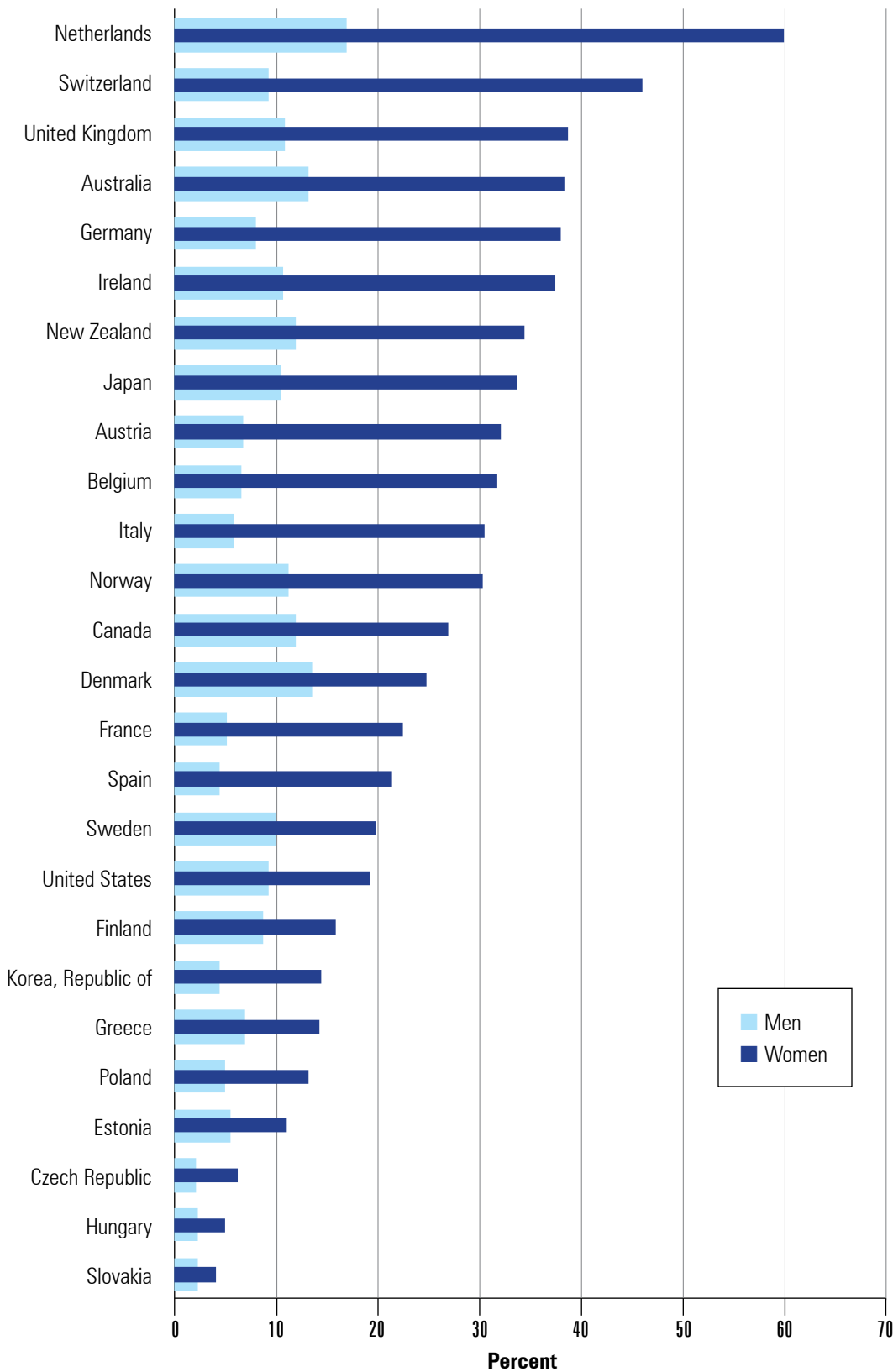


CHART 2.7

The part-time employment rate for women was roughly 2 to 5 times higher than the men's rate in most countries.

- The largest difference between men and women's part-time employment rates was in the Netherlands, although it had the highest rate for both men (17.0 percent) and women (59.9 percent).
- Part-time employment was least common for both men and women in three Eastern European countries: Slovakia, Hungary, and the Czech Republic.

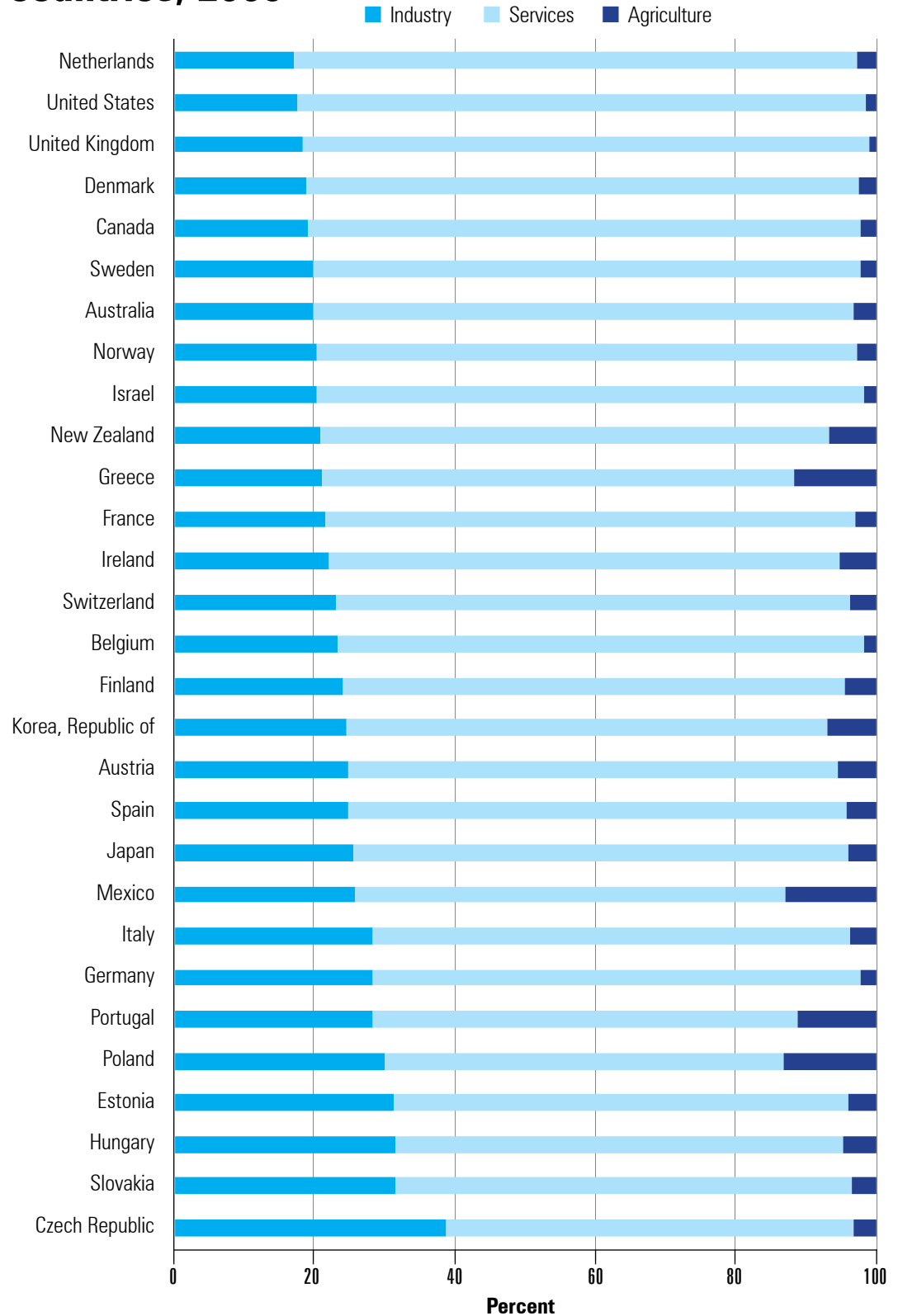
SOURCE: Organisation for Economic Co-operation and Development

CHART 2.8

More than half of employment was in the service sector in all countries.

- The Netherlands, the United States, and the United Kingdom had the largest shares of service employment (above 80 percent).
- The largest shares of industry employment (above 30 percent) were in five Eastern European countries.
- Poland, Mexico, Greece, and Portugal had the largest agricultural sectors.

Share of employment by sector, selected countries, 2009



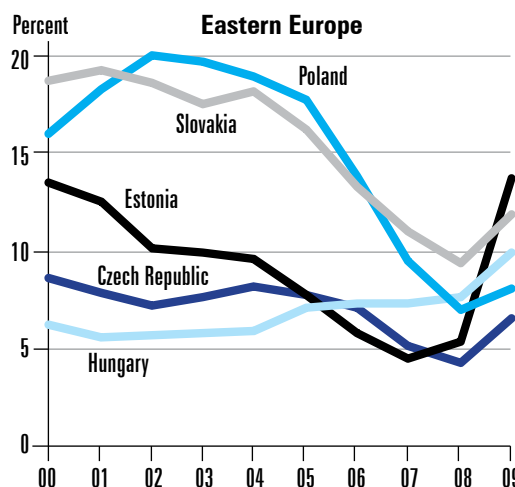
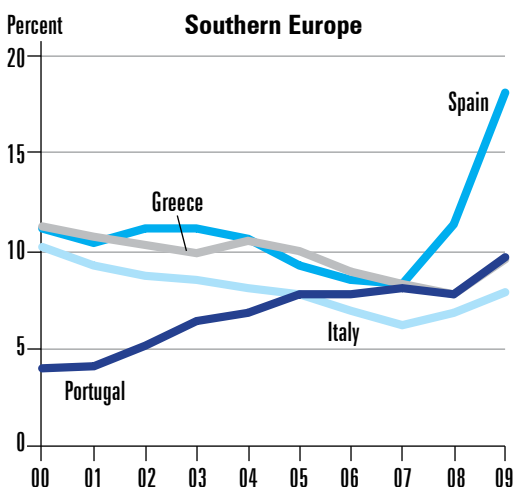
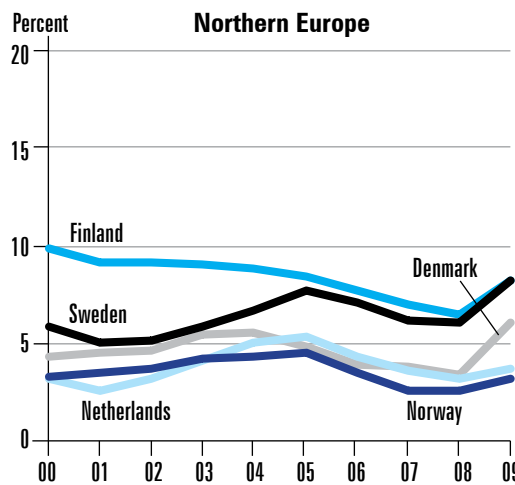
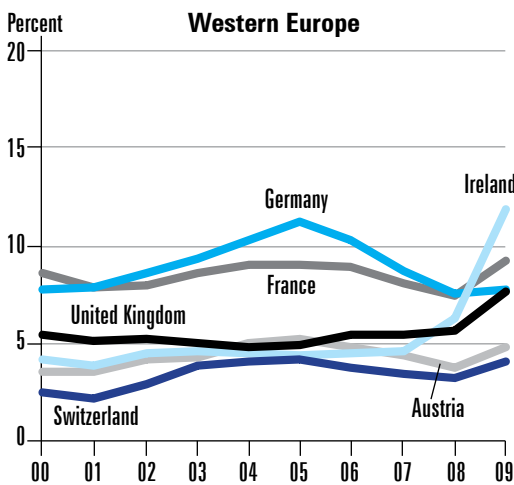
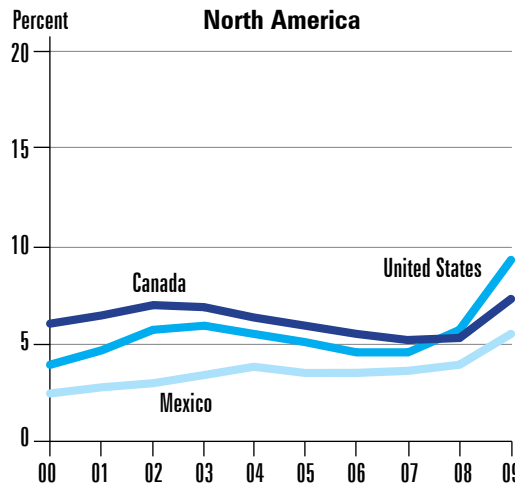
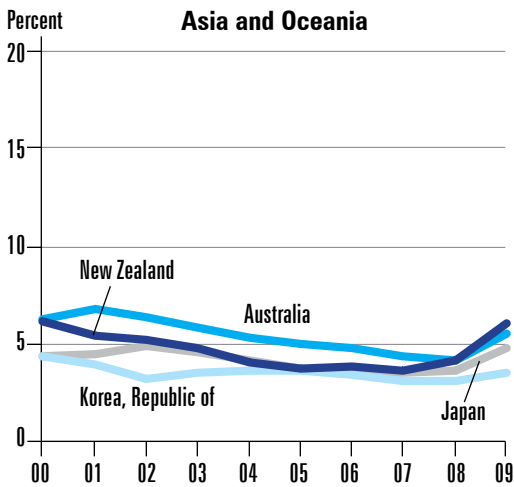
NOTE: Agriculture includes hunting, forestry, and fishing. Industry is composed of mining and quarrying, manufacturing, construction, and for some countries, public utilities (electricity, gas, and water). Public utilities represent less than 3 percent of industry in all countries.

SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

Unemployment rates, selected countries, 2000–2009

CHART 2.9

In 2009, Spain had, by far, the highest unemployment rate, and Norway had the lowest.



- Unemployment rates were higher in 2009 than 2000 in a majority of countries, due in part to the effects of the global recession at the end of the decade. Unemployment rates increased in 11 countries between 2007 and 2008, and in all countries between 2008 and 2009.

- Poland recorded the highest unemployment rate of the period (20.0 percent in 2002), and Switzerland had the lowest (2.2 percent in 2001).

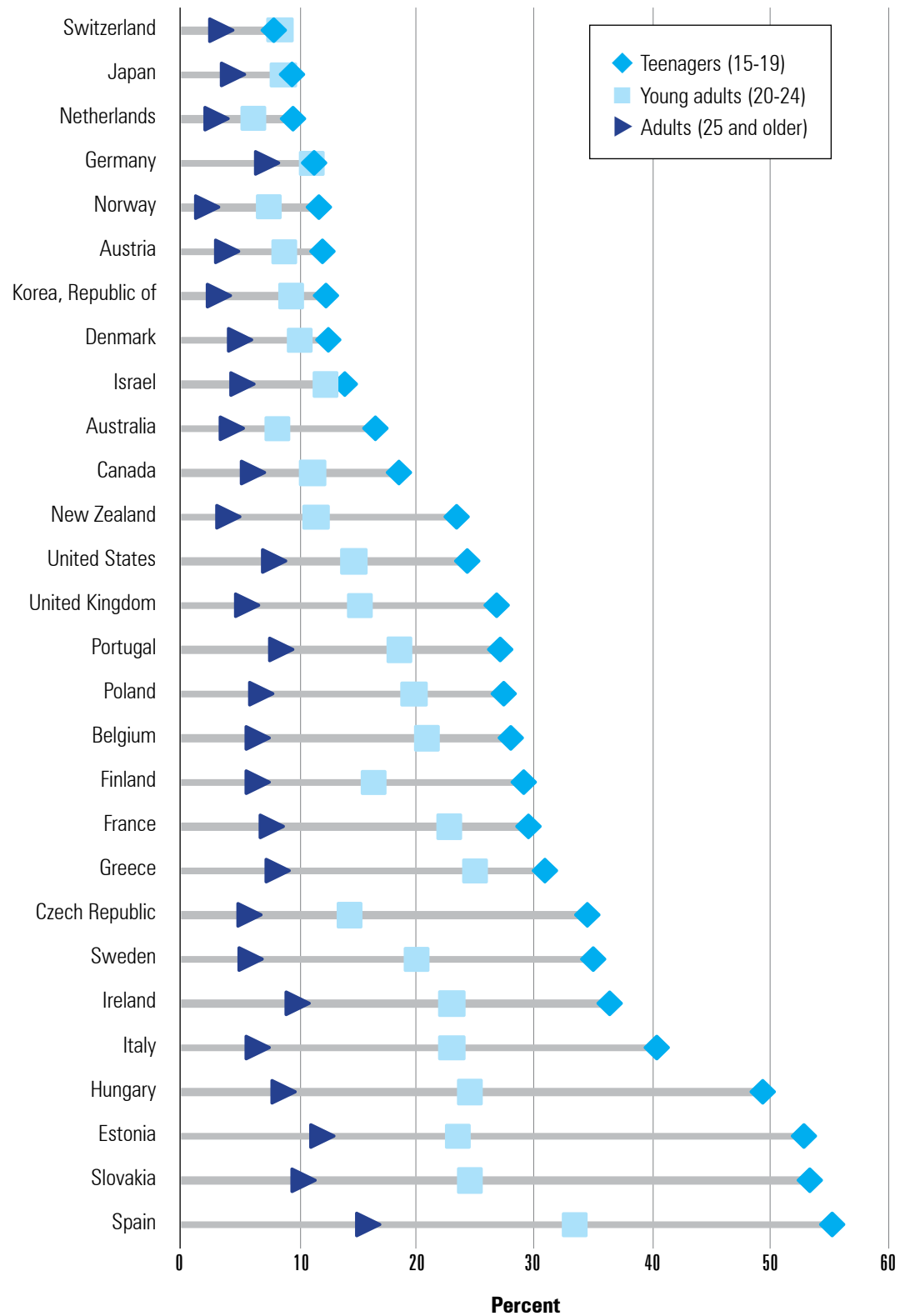
SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

CHART 2.10

Unemployment rates by age, selected countries, 2009

Unemployment rates for teenagers and young adults are generally higher than those for adults, partly due to young people's greater vulnerability to economic downturns and lack of experience.

- Slovakia had the largest difference between rates for teenagers and adults, and Germany had the smallest.
- Only Switzerland had a higher unemployment rate for young adults than for teenagers.



NOTE: 2008 for Israel. Ages 16 to 19 instead of 15 to 19 for Canada, France, Norway, Spain, Sweden, the United Kingdom, and the United States.

SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

Unemployment rates by education, selected countries, 2008

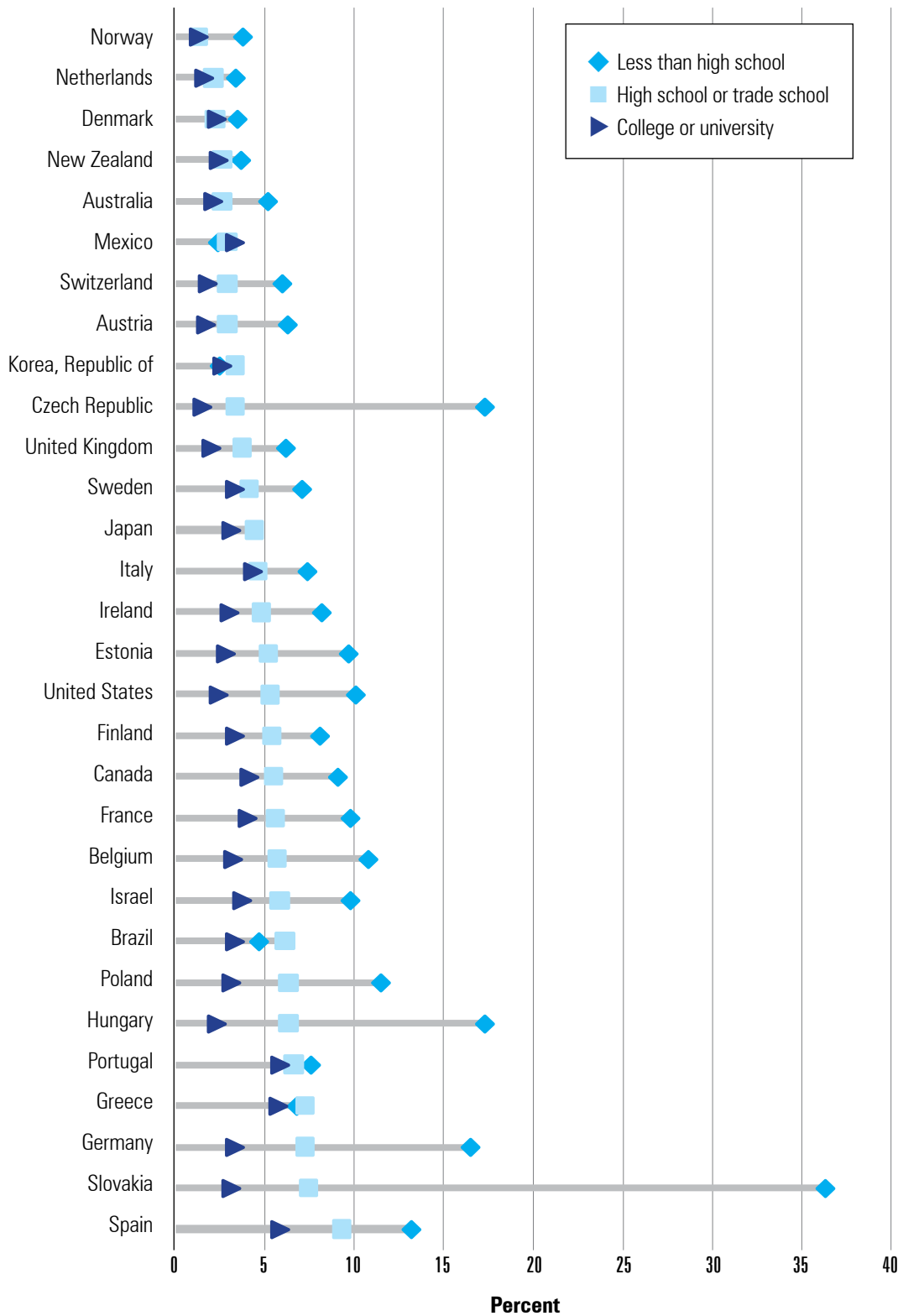


CHART 2.11

In 23 out of 30 countries, college graduates had the lowest unemployment rates, followed by high school graduates; high school dropouts had the highest rates.

- College graduates had the highest unemployment rate only in Mexico.
- The unemployment rate gap between high school dropouts and high school graduates was generally larger than the gap between college graduates and high school graduates, reflecting the value of a high school education in seeking employment.

NOTE: Data refer to persons ages 25 to 64. Data for less than high school are not available for Japan.
SOURCE: Organisation for Economic Co-operation and Development

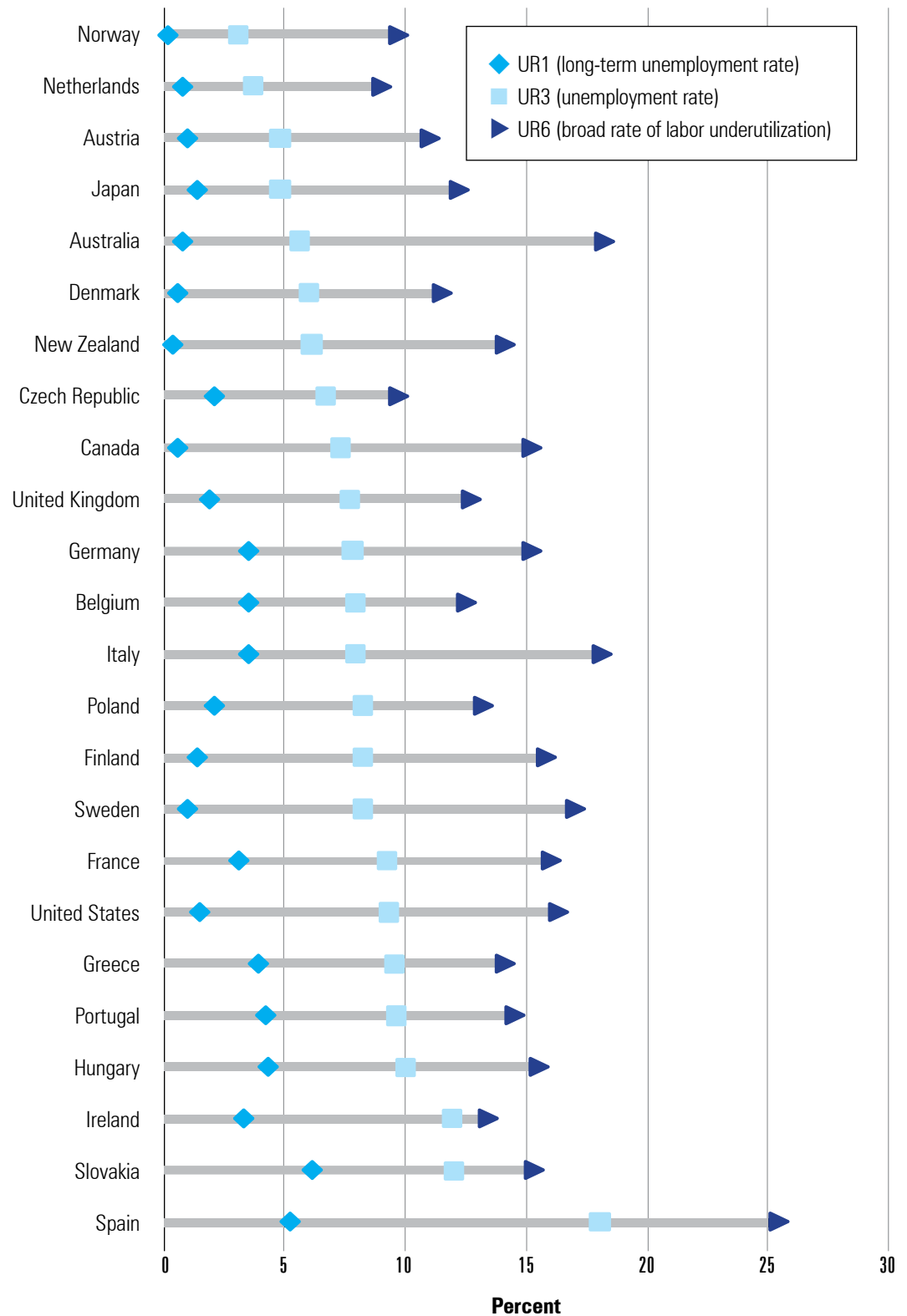
CHART 2.12

Long-term unemployment (UR1) was most prevalent in Slovakia and Spain.

- UR1 is the most restrictive rate of labor underutilization and consists only of the subset of the unemployed who were unemployed for at least 1 year. UR3 is the official unemployment rate and the most widely recognized. The broadest rate, UR6, includes the unemployed, the marginally attached, and persons who are employed but who worked fewer hours than they would like (i.e., the time-related underemployed).

- Spain had the highest UR3 and UR6. Although Australia had the second highest UR6, its UR3 was relatively low.

Various measures of labor underutilization, selected countries, 2009



NOTE: Long term is defined as 1 year or longer. UR6 includes the unemployed, the marginally attached, and the time-related underemployed. See section notes.

SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

UR6: A broad rate of labor underutilization, selected countries, 2007 and 2009



CHART 2.13

During the global recession, UR6 increased between 2007 and 2009 in all countries, except for Poland. The largest increases were in Spain, the United States, and Ireland.

- UR6 is a broader measure of labor underutilization than the unemployment rate because it includes the marginally attached and those who are employed but who worked fewer hours than they would like (i.e., time-related underemployed). This broader measure is popular during times of recession, when unemployment and other types of labor market difficulty are on the rise.

NOTE: UR6 includes the unemployed, the marginally attached, and the time-related underemployed. See section notes.

SOURCE: Organisation for Economic Co-operation and Development

Sources

Data for 10 countries for most indicators are based on the BLS report [International Comparisons of Annual Labor Force Statistics, Adjusted to U.S. Concepts, 10 Countries, 1970-2010](#). To facilitate international comparisons, foreign-country data are adjusted to U.S. concepts. Data for the remaining countries and some indicators in their entirety—labor force participation rates by age, part-time employment rates, unemployment rates by education and measures of underutilization—are based on data from the International Labour Office (ILO) or the Organisation for Economic Co-operation and Development (OECD).

Labor force participation rates, employment-population ratios, and employment growth are supplemented with data from the ILO database [Key Indicators of the Labour Market](#) (KILM). The KILM harmonizes data using econometric models to account for differences in national data and scope of coverage, collection and tabulation methodologies, and other country-specific factors, such as military service requirements. Although some differences remain between the KILM and ILC series, they do not materially affect comparisons across countries.

Part-time employment rates, employment by sector, unemployment rates, and measures of underutilization are supplemented with data from the OECD database [OECD.Stat](#). The OECD generally uses labor force surveys and captures labor force statistics according to [ILO guidelines](#), which facilitate cross-country comparisons, because these guidelines create a common conceptual framework for countries. However, except for total unemployment rates, the OECD does not adjust

data for differences that remain across countries in coverage and definitions that can affect international comparisons. See [Labor Force Statistics in OECD Countries: Sources, Coverage and Definitions](#). For total unemployment rates, the OECD series used is the “harmonized unemployment rates” (HURs), which are adjusted to conform to the ILO guidelines in countries where deviations occur. For a full discussion of comparability issues, see the BLS article, [“International unemployment rates: how comparable are they?”](#)

Using multiple sources for an indicator to extend country coverage can introduce additional comparability issues, since each organization employs different methods for harmonizing data, if adjustments are made at all. Users should use caution when making international comparisons using the actual values underlying these charts and are encouraged to review the methodological documents associated with each source.

In this section, Europe includes 21 countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom.

Definitions

Labor market data are on a civilian basis (i.e., members of the Armed Forces are not included).

The **labor force participation rate** is the labor force as a percent of the working-age population; it is an overall indicator of the level of labor market activity.

The **labor force** is the sum of the employed plus the unemployed; it provides an indication of the size of the labor supply. The **working-age population** is

the population ages 15 or 16 and older. (Lower age limits vary by country. See source documents.)

The **employed** are persons who, during the reference week, did work for at least 1 hour as paid employees, worked in their own business, profession, or on their own farm, or as unpaid workers in an enterprise operated by a family member (at least 1 hour according to the ILO guidelines but at least 15 hours according to U.S. concepts). Definitions of the employed vary by country. See source documents. The **employment-population ratio** is employment as a percent of the working-age population. **Part-time employment** refers to employed persons who usually work less than 30 hours per week in their main job; in some countries, “actual” rather than “usual” hours are used. The **part-time employment rate** is the share of employment that is part time and is also referred to as the incidence of part-time employment.

The **unemployed** are persons without work, actively seeking employment and currently available to start work. Definitions of the unemployed vary by country; see source documents. The **unemployment rate** is unemployment as a percent of the labor force; it is the most widely used measure of an economy’s unused labor supply. Persons **marginally attached to the labor force** are those who did not look for work in the past 4 weeks, but who wish to work, are available to work and, in some countries, have looked for work sometime in the past 12 months. Discouraged workers are the subset of the marginally attached who are not currently searching for a job because they believe none are available. The **time-related underemployed** are either: (1) full-time workers working less than a full week (less than

35 hours in the United States) during the survey reference week for economic reasons or (2) part-time workers who want but cannot find full-time work. For unemployment rates by education, the levels of educational attainment accord with the International Standard Classification for Education (ISCED) in its current version, known as ISCED 1997. **Less than high school** corresponds to “less than upper secondary education” and includes ISCED levels 0-3C. **High school or trade school** corresponds to “upper secondary and post-secondary education” and includes levels 3-4. **College or university** corresponds to “tertiary non-university and university” and includes levels 5-6. ■



3 SECTION



Competitiveness in Manufacturing

Three indicators of international competitiveness in the manufactured goods sector are: hourly compensation costs, labor productivity, and unit labor costs.

Hourly compensation measures employers' average hourly labor costs in the manufacturing sector.

Labor productivity (output per hour worked) measures how effectively hours worked are converted into output.

Unit labor costs measure the cost of labor compensation expended to produce one unit of output. Increases in labor productivity indicate that a country's workers are becoming more efficient, while declines in unit labor cost indicate that an economy is becoming more cost competitive.

Hourly compensation costs in manufacturing, selected countries, in U.S. dollars, 2009

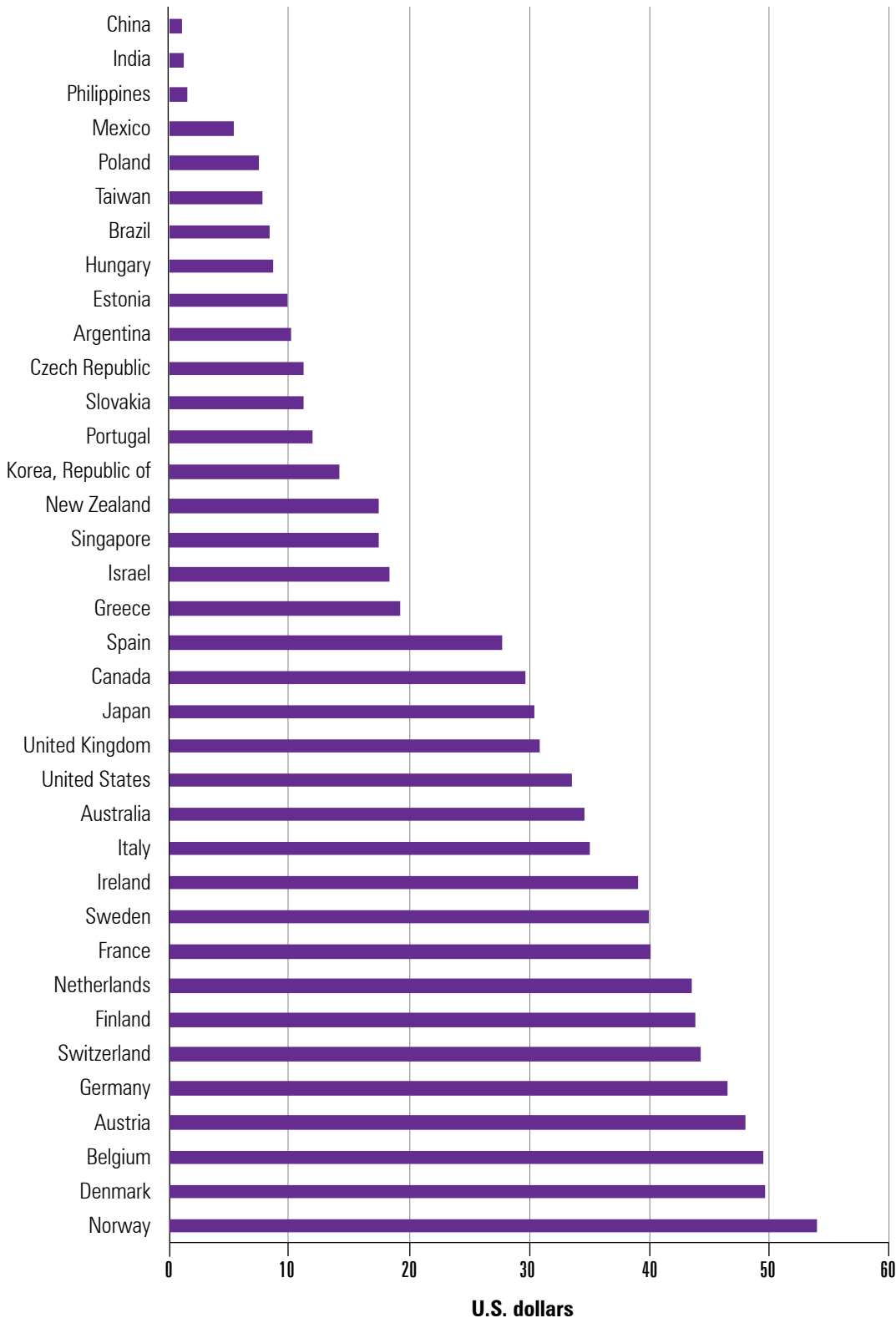


CHART **3.1**

The 12 countries with the highest manufacturing hourly compensation costs were all in Europe, followed by Australia and the United States.

- Costs in Norway were 1.6 times the U.S. level and roughly 50 times costs in China.
- Labor costs in China and India have been growing faster than those in the United States in recent years, but were still less than 4 percent of the U.S. level.

NOTE: Data for China and India refer to 2007 and are not directly comparable with each other or with data for other countries. See section notes.

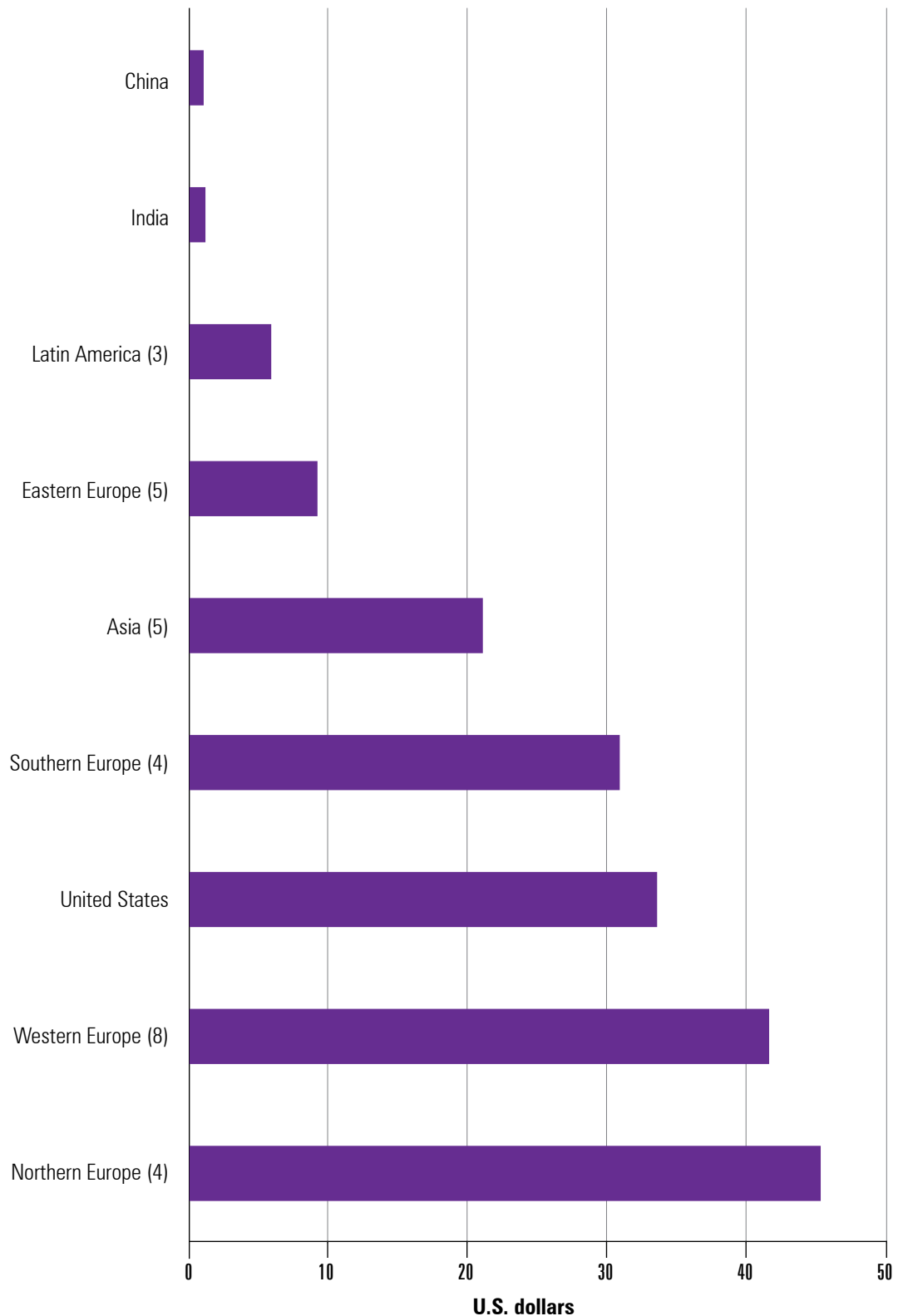
SOURCE: Bureau of Labor Statistics

CHART 3.2

Hourly compensation costs in manufacturing, selected countries and regions, in U.S. dollars, 2009

Costs in Northern Europe were, on average, \$12 higher than those in the United States, while costs in Latin America were \$28 lower than the U.S. level.

- Eastern European countries, on average, had the lowest hourly compensation costs within Europe, at \$36 below the Northern European level.
- Costs in China were only 5 percent of costs in other Asian countries.



NOTE: Number in parenthesis refers to the number of countries in the regional grouping. Data for China and India refer to 2007 and are not directly comparable with each other or with data for other countries. See section notes.

SOURCE: Bureau of Labor Statistics

Hourly compensation costs in manufacturing and exchange rates, selected countries, annual percent change, 2008–2009



CHART 3.3

From 2008 to 2009, currencies in all countries except Japan lost value against the U.S. dollar, causing widespread declines in dollar-denominated compensation costs.

- Canada, Singapore, and Taiwan experienced currency depreciation along with declining compensation costs in national currency, leading to even larger drops in U.S.-dollar costs.

NOTE: Changes in compensation costs in U.S. dollars roughly equal the change in compensation costs in national currency plus the change in the value of the currency relative to the U.S. dollar.

SOURCE: Bureau of Labor Statistics

CHART 3.4

Most countries experienced higher growth in compensation costs, on average, over the first 7 years of the last decade than they did over the last 2 years.

- The Republic of Korea, Argentina, Estonia, Hungary, and Taiwan had the largest differences in compensation cost growth across the two periods.
- In Canada and Taiwan, compensation costs declined in the latter period, a trend that is rarely seen.

Growth in manufacturing hourly compensation costs, selected countries, average annual rates, 2000–2007 and 2007–2009



NOTE: Growth rates are based on national currency-denominated compensation costs.

SOURCE: Bureau of Labor Statistics

Hourly compensation costs in manufacturing, selected countries and regions, annual percent changes, 2004–2009



CHART **3.5**

Manufacturing compensation costs in China grew the fastest, while costs in the rest of Asia and Western Europe grew at the slowest pace.

- Eastern Europe and Latin America also saw rapid increases in compensation, although cost growth in Eastern Europe slowed substantially from 2008 to 2009.
- Asia experienced a slight decline in compensation costs between 2008 and 2009, a trend not shared with other regions of the world.

NOTE: Percent changes are based on national currency-denominated compensation costs. Number in parenthesis refers to the number of countries in the regional grouping. See section notes. The latest available data for China and India refer to 2007–2008 and 2006–2007, respectively.

SOURCE: Bureau of Labor Statistics

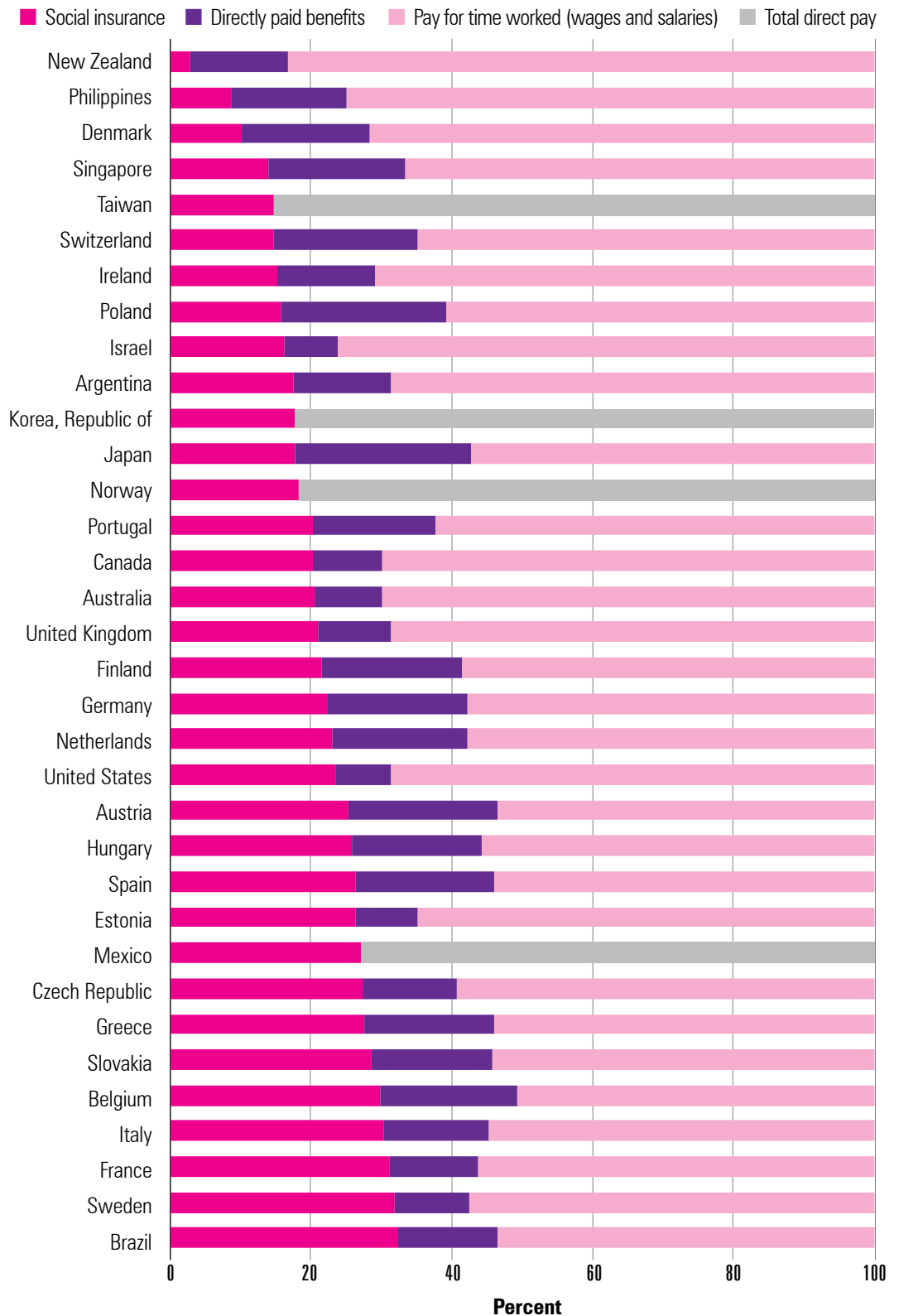
CHART 3.6

Total benefits (social insurance and directly paid benefits) surpassed 40 percent of compensation costs in 15 of 34 countries.

- Total benefits as a percentage of total costs were highest in Belgium, at 49 percent of costs, and lowest in New Zealand, at 17 percent. The ratio of benefits to total costs in the United States was 31 percent.

- For manufacturers in Brazil, Sweden, and France, social insurance costs made up approximately 33 percent of total compensation costs in 2009. Insurance in New Zealand, however, accounted for only 3 percent of total costs.

Components of hourly compensation costs in manufacturing, selected countries, in percent, 2009



NOTE: For Mexico, Norway, the Republic of Korea and Taiwan, pay for time worked and directly paid benefits are combined into total direct pay. See section notes.

SOURCE: Bureau of Labor Statistics

Manufacturing productivity growth, selected countries, average annual rates, 2000–2007 and 2007–2009



CHART **3.7**

Although manufacturing productivity (output per hour) grew for all countries from 2000 to 2007, productivity fell sharply in many countries from 2007 to 2009.

- Japan, Sweden, Germany, and Singapore experienced the largest productivity declines between 2007 and 2009.
- Israel was the only country that had faster productivity growth during 2007 to 2009 than during 2000 to 2007.

SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

CHART 3.8

When output is growing faster than hours worked, productivity (output per hour) rises.

- Output declined between 2007 and 2009 in all countries except the Republic of Korea and Israel, driving declines in manufacturing labor productivity for most countries during the period.
- In contrast to the 2007 to 2009 period, output increased in most countries from 2000 to 2007.

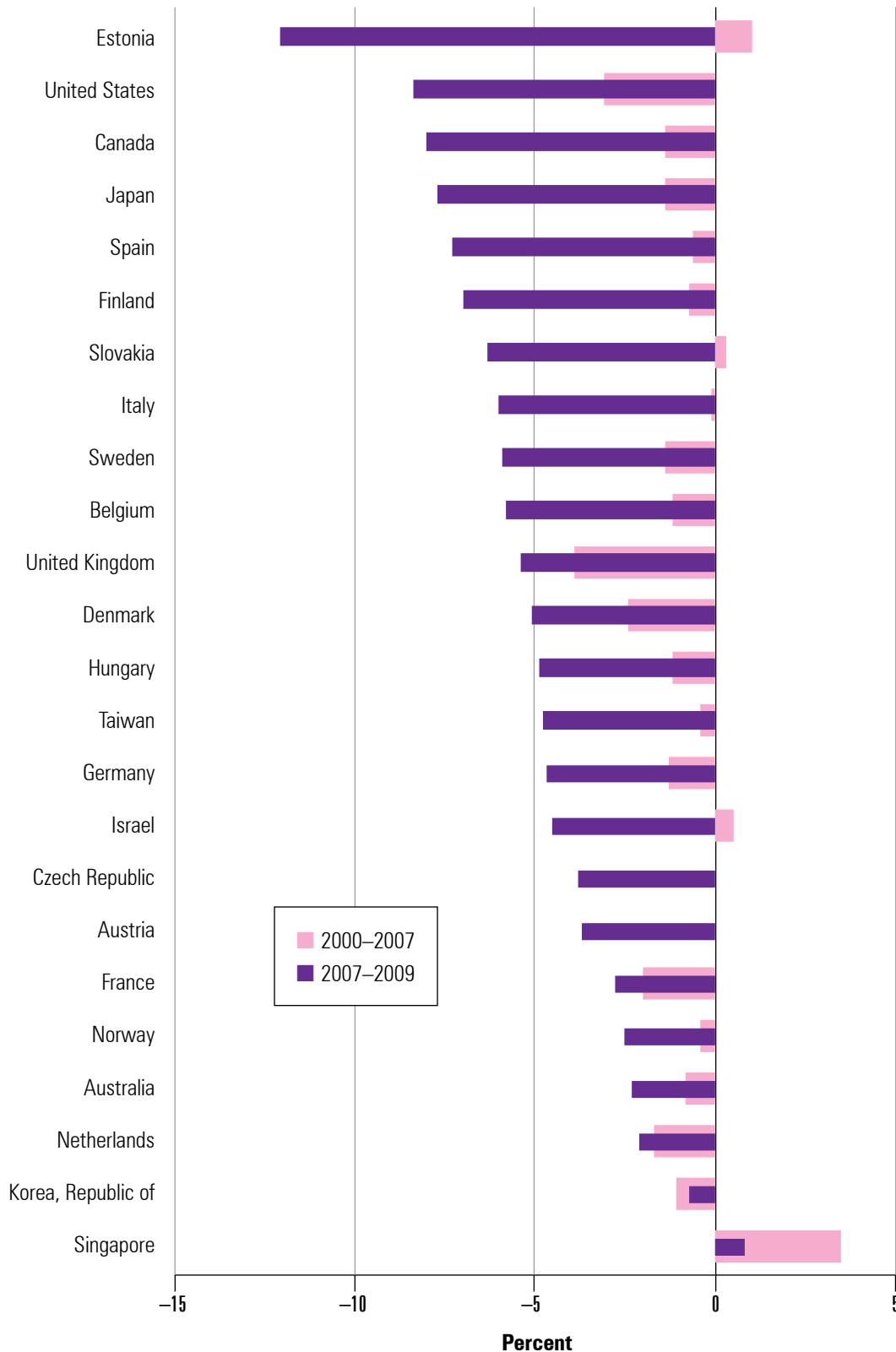
Manufacturing output growth, selected countries, average annual rates, 2000–2007 and 2007–2009



SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

Growth in manufacturing hours worked, selected countries, average annual rates, 2000–2007 and 2007–2009

CHART **3.9**



Hours worked in manufacturing declined between 2007 and 2009 in all countries except Singapore. In many countries, hours fell by more than 5 percent.

• Hours worked also decreased in almost all countries from 2000 to 2007, but not to the extent seen during 2007 to 2009.

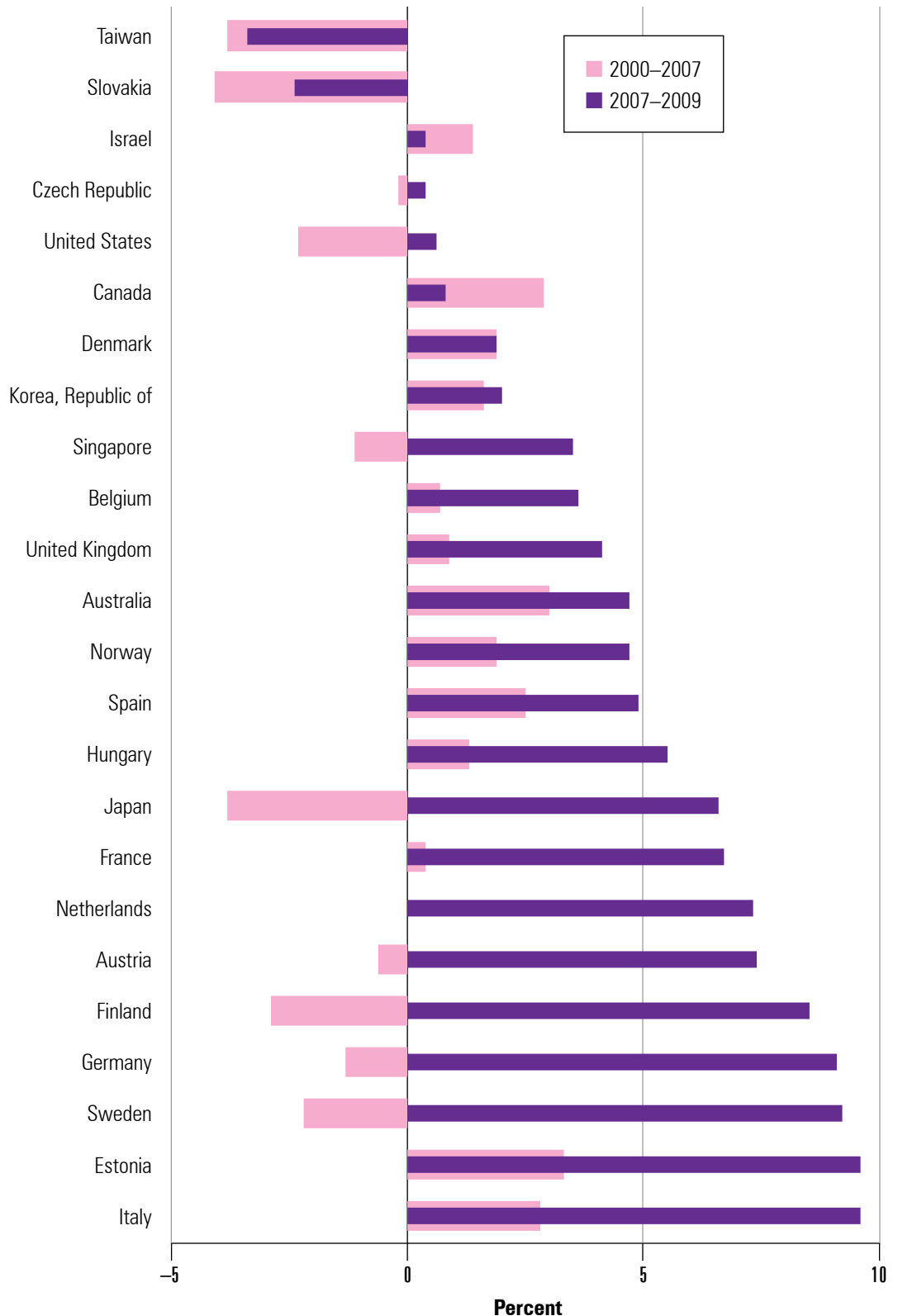
SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

CHART 3.10

Manufacturing unit labor costs (compensation per unit of output) in national currency grew between 2007 and 2009 in all countries except Taiwan and Slovakia. Italy, Estonia, and Sweden experienced the largest growth.

- Only Canada and Israel had faster unit labor cost growth during 2000 to 2007 than during 2007 to 2009.

Growth in manufacturing unit labor costs in national currency, selected countries, average annual rates, 2000–2007 and 2007–2009



SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

Growth in manufacturing unit labor costs in U.S. dollars, selected countries, average annual rates, 2000–2007 and 2007–2009

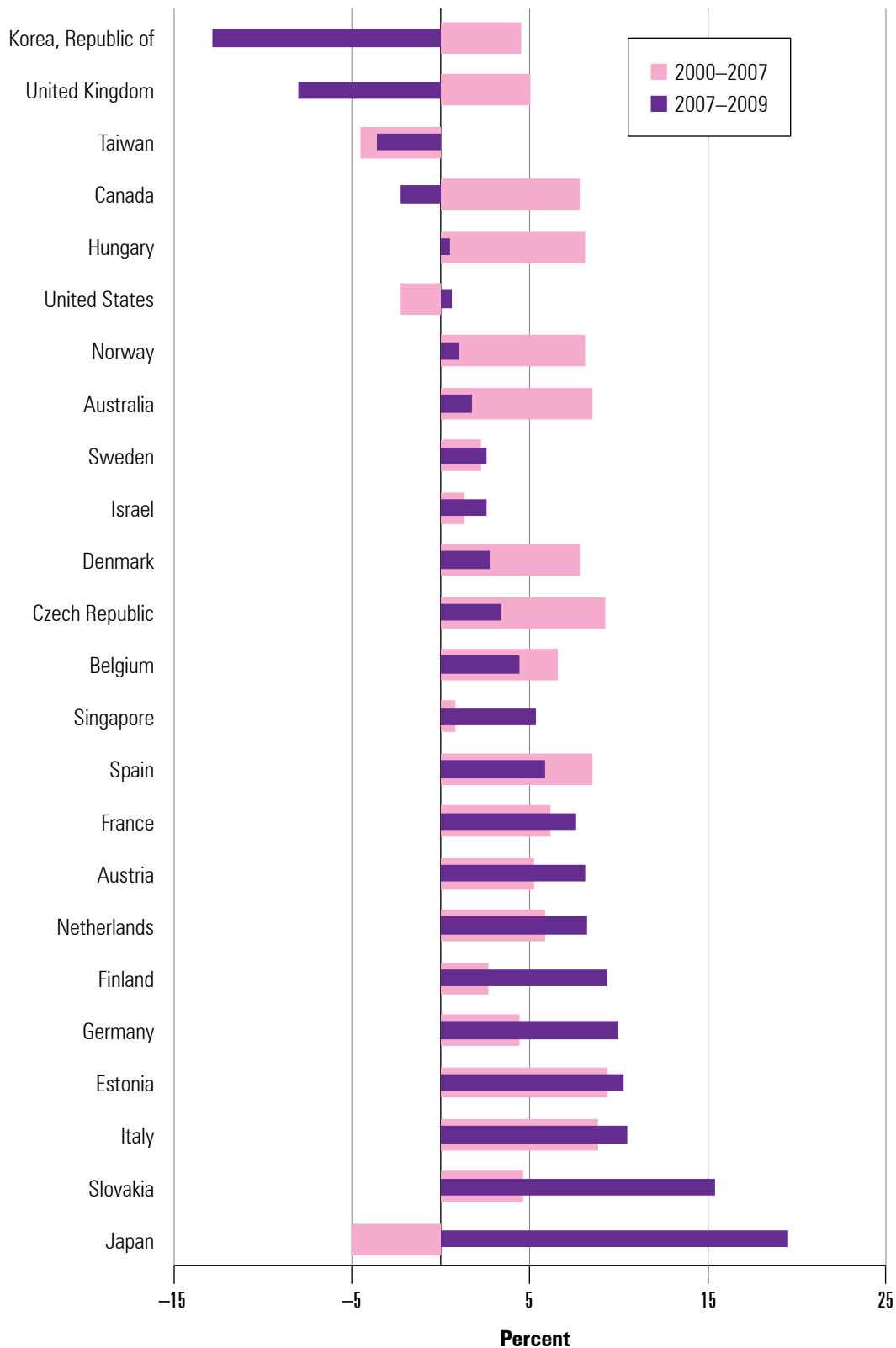


CHART 3.11

To gauge international competitiveness, unit labor costs (compensation per unit of output) can be converted to U.S. dollars. Competitiveness increases as unit labor costs decrease.

- Growth in manufacturing unit labor costs converted to U.S. dollars was faster from 2007 to 2009 than the growth between 2000 and 2007 in most countries. Japan and Slovakia had the sharpest increases in unit labor costs.

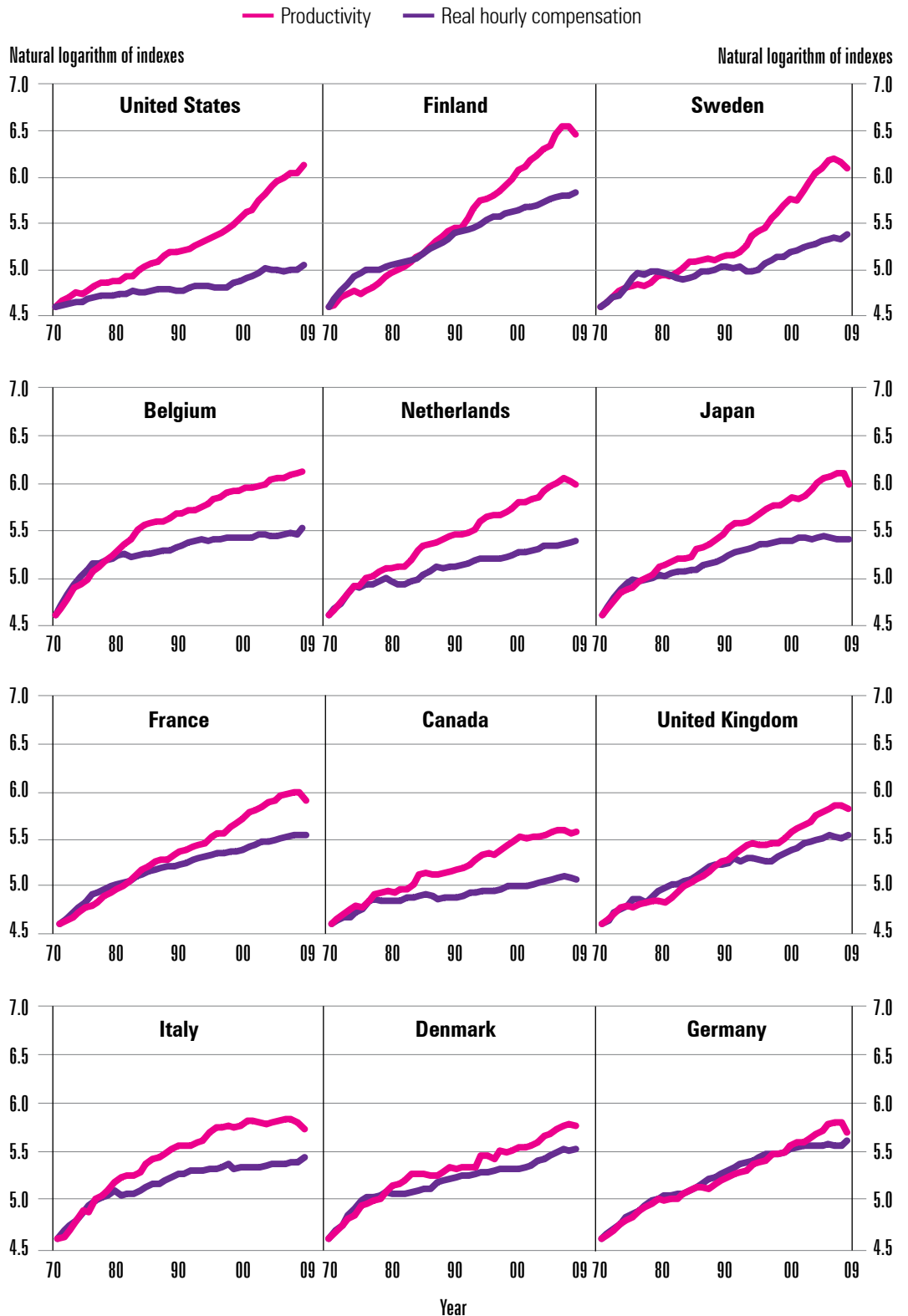
SOURCES: Bureau of Labor Statistics and Organisation for Economic Co-operation and Development

CHART 3.12

Gap between productivity and real hourly compensation in manufacturing, selected countries, 1970–2009

In most countries, the growth of productivity outpaced the growth of real hourly compensation in manufacturing throughout much of the period from 1970 to 2009, creating a compensation-productivity gap.

- By 2009, the gap was largest in the United States, Finland, and Sweden. The gap was smallest in Germany, Denmark, and Italy.



SOURCE: Bureau of Labor Statistics

Sources

Hourly compensation costs measure employers' average hourly labor costs in the manufacturing sector. Average costs refer to all employees, are based on national establishment surveys, and are prepared for level comparisons. To permit meaningful level comparisons of employer labor costs across countries, earnings data from national surveys are adjusted to the BLS concept of hourly compensation. Data for all countries are based on the BLS news release [International Comparisons of Hourly Compensation Costs in Manufacturing, 2009](#) and the related [time series tables](#). Also, see the [technical notes](#) and [country notes](#) associated with this release.

Due to various data gaps and methodological issues, compensation costs for [China](#) and [India](#) are not directly comparable with each other or with data for other countries.

Average compensation costs for selected regions are calculated by weighting each country's compensation cost value by its relative importance to U.S. trade. The weights are calculated using the dollar value of U.S. trade (exports plus imports) in manufactured commodities with each country in 2007. Latin America refers to Argentina, Brazil, and Mexico; Western Europe to Austria, Belgium, France, Germany, Ireland, the Netherlands, Switzerland, and the United Kingdom; Northern Europe to Denmark, Finland, Norway, and Sweden; Southern Europe to Greece, Italy, Portugal, and Spain; Eastern Europe to the Czech Republic, Estonia, Hungary, Poland, and Slovakia; and Asia to Japan, the Republic of Korea, the Philippines, Singapore, and Taiwan.

Data on productivity, output, hours, and unit labor costs refer to all employed persons in the manufacturing sector, are based on national accounts,

and are prepared for trend (rather than level) comparisons. Data for most countries are based on the BLS news release [International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends](#) and the related [time series tables](#). Also, see the [technical notes](#) associated with the news release.

Data for the remaining countries are based on data from the Organisation for Economic Co-operation and Development (OECD) database [OECD.Stat](#).

Definitions

Hourly compensation (labor cost) is the average cost to employers of using one hour of labor in the manufacturing sector. Compensation includes (1) pay for time worked, (2) directly paid benefits, and (3) employer social insurance expenditures and labor-related taxes. **Pay for time worked** refers to wages and salaries for time actually worked, including basic wages, overtime pay, shift and holiday premiums, and regular bonuses. **Directly paid benefits** primarily include pay for vacations and other leave, irregular bonuses, and pay in kind. **Social insurance expenditures** are employer contributions to social benefit funds on behalf of workers, such as for unemployment insurance, workers' compensation, health insurance, and pension funds. **Labor-related taxes** are taxes on payrolls or employment, net of subsidies. **Total hourly direct pay** includes all payments made directly to the worker consisting of pay for time worked and directly paid benefits.

Productivity is real output per hour worked. **Output** is defined as real value added. **Hours** refer to the hours worked by all persons engaged in the manufacturing process. **Unit labor costs** are nominal compensation costs divided by real value-added output. Unit labor cost can be expressed in national currency and in U.S. dollars. ■

4 SECTION

Consumer Prices

Consumer price indexes (CPI) and harmonized indexes of consumer prices (HICP) measure the change over time in the prices paid by consumers for a fixed selection, or market basket, of goods and services. Price indexes are used primarily to adjust income payments for changes in the cost of living and to compute inflation-adjusted measures of other economic series.

Measures of consumer price inflation, selected countries, average annual percent changes, 2007–2009

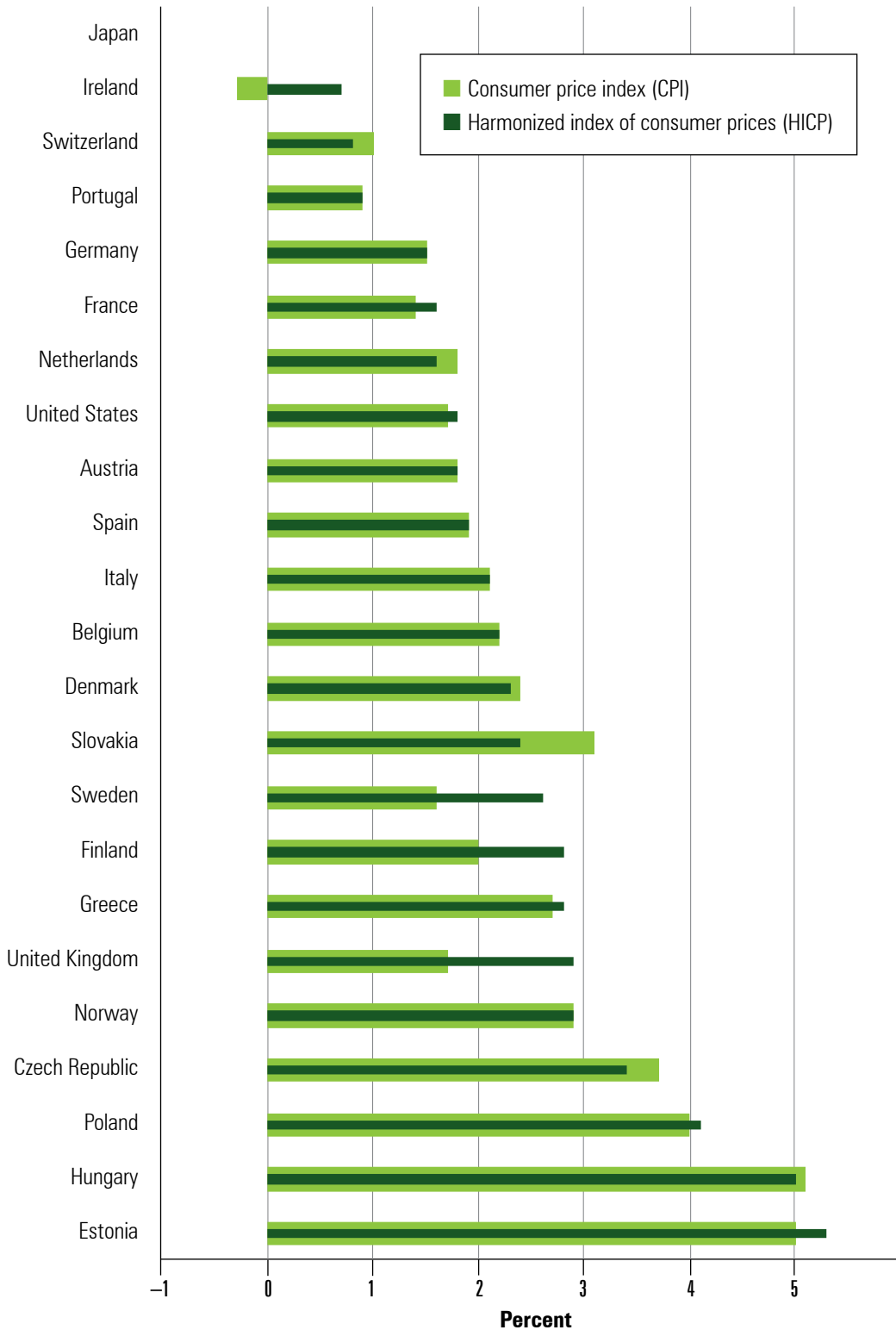


CHART 4.1

The two inflation rates were identical in 8 countries, and the difference between the two rates was greater than half a percentage point in just 5 of the 23 countries.

- Ireland was the only country showing opposite trends between the two inflation rates, and the largest difference between the two rates was in the United Kingdom. The differing trends reflect differences in the market basket that is covered by the HICP and CPI for these countries.

NOTE: HICP and CPI are two measures of consumer price changes. HICP are adjusted for comparability across countries, whereas CPI are not adjusted. Values for Japan are zero, indicating no change.

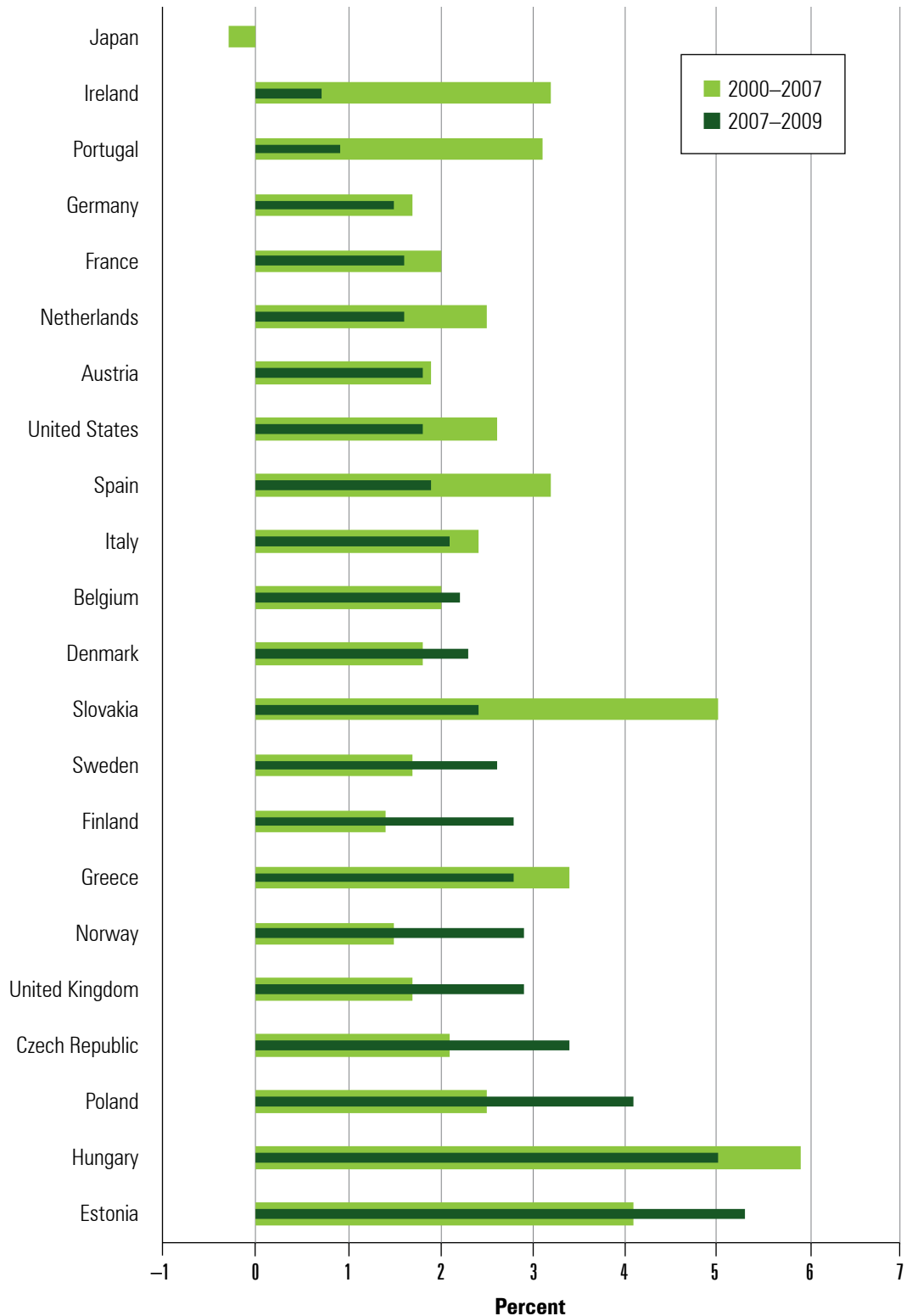
SOURCES: Bureau of Labor Statistics, Eurostat, and Organisation for Economic Co-operation and Development

CHART 4.2

Harmonized indexes of consumer prices (HICP) are an internationally comparable measure of consumer price inflation.

- For a majority of countries—particularly Slovakia, Ireland, and Portugal—inflation was slower during the 2007 to 2009 period, when economies worldwide experienced recessionary pressures.
- Eastern European countries generally had the highest rates of inflation during both periods, while prices changed the least in Japan.

Harmonized indexes of consumer prices, selected countries, average annual percent changes, 2000–2007 and 2007–2009

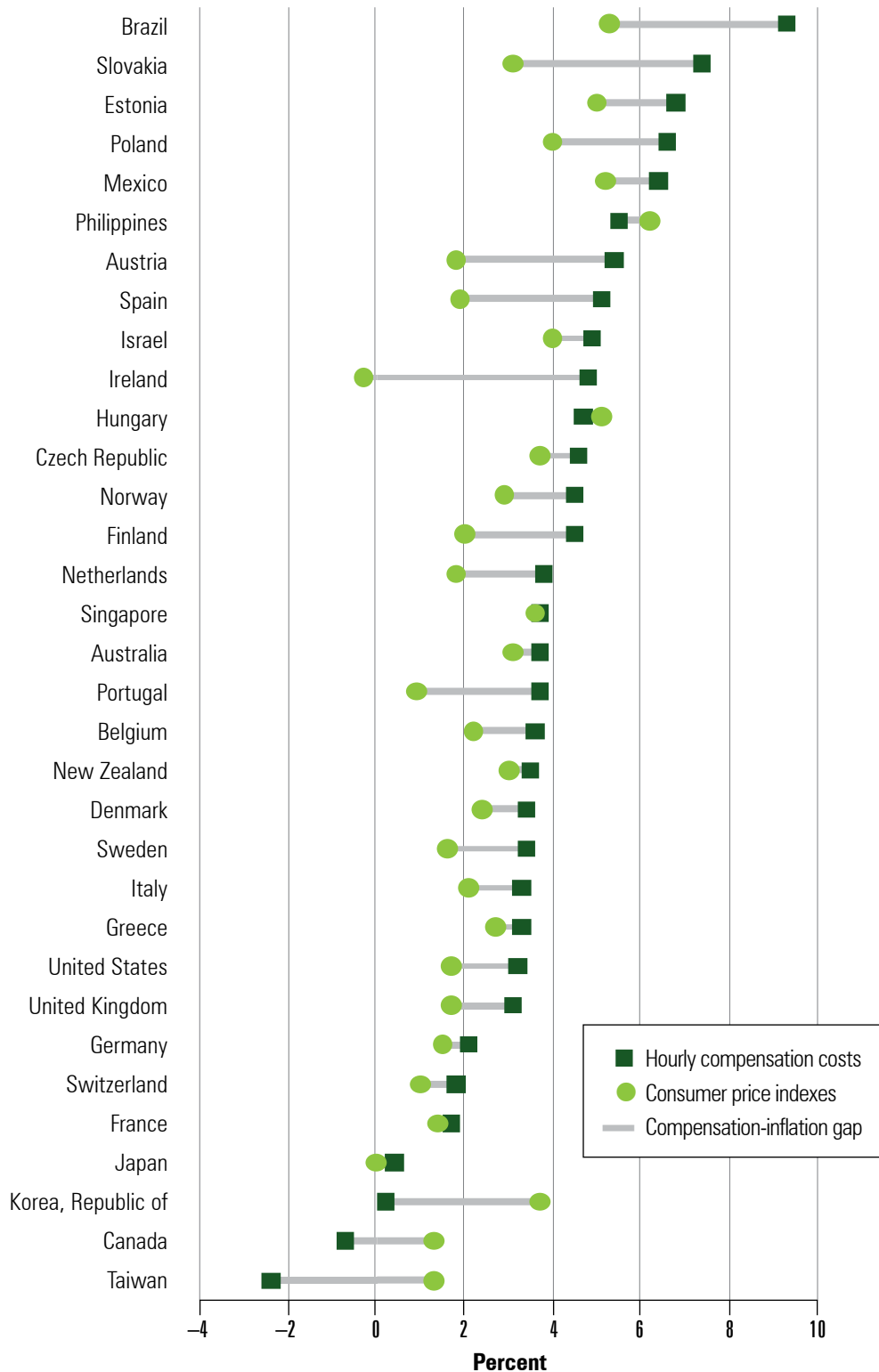


NOTE: 2007–2009 value for Japan is zero, indicating no change.

SOURCES: Bureau of Labor Statistics and Eurostat

Manufacturing compensation and consumer price indexes, selected countries, average annual growth rates, 2007–2009

CHART 4.3



The gap between the growth rates for hourly compensation costs and the consumer price indexes (CPI) indicates the degree to which manufacturing worker compensation has kept up with inflation.

- Compensation growth outpaced inflation in most countries between 2007 and 2009. The compensation-inflation gap was largest in Ireland, Slovakia, and Brazil.
- Compensation growth rates lagged inflation in Taiwan, the Republic of Korea, Canada, the Philippines, and Hungary.

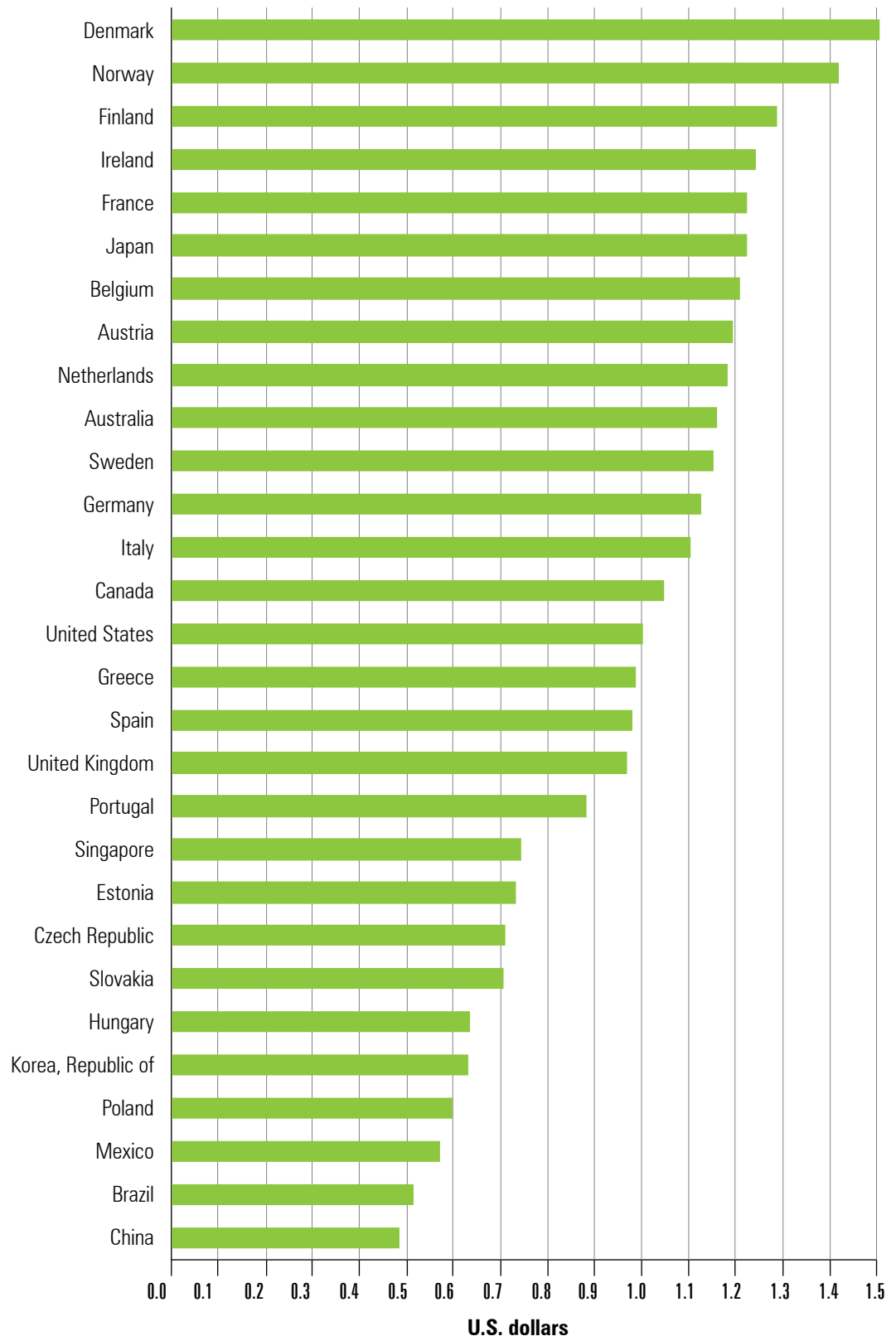
NOTE: Hourly compensation growth rates are based on national currency-denominated costs.

SOURCES: Bureau of Labor Statistics, Organisation for Economic Co-operation and Development, and the national statistical offices of the Philippines, Singapore, and Taiwan

Low prices relative to the United States were found in Southern and Eastern Europe, Latin America, and East Asia. The cheapest basket of goods was in China.

- The price of foreign goods and services compared with their price in the United States is known as the relative price. A value higher (lower) than 1 indicates that prices in a particular country are higher (lower) than prices in the United States.
- Countries with high relative prices included countries in Northern and Western Europe, as well as Japan, Canada, and Australia.

Price of a basket of goods that costs one dollar in the United States, selected countries, 2009



SOURCES: Bureau of Labor Statistics, International Monetary Fund, U.S. Federal Reserve, Organisation for Economic Co-operation and Development, and The World Bank

Sources

Consumer price indexes (CPI) and harmonized indexes of consumer prices (HICP) for most countries are from the BLS report [International Indexes of Consumer Prices 18 countries and areas, 1996-2009](#). Data for the remaining countries are based on data from the Organisation for Economic Co-operation and Development (OECD) database [OECD.Stat](#), the European Commission database [Eurostat](#), and national statistical offices (for the Philippines, Singapore, and Taiwan).

Each country produces its own consumer price index using unique methods and concepts. For this reason, CPI data are not fully comparable across countries. Differences exist mainly in population coverage, frequency of market basket weight changes, and treatment of homeowner costs.

The HICP is an internationally comparable measure of consumer price inflation. The HICP is the standard price index that European Union member states must produce for comparisons across countries. HICP data for the United States are an experimental BLS series. Although the HICP series for the United States broadly follows the European Union definitions, some differences remain in the frequency of market basket weight changes, aggregation methods, and quality adjustments.

Relative prices for most countries are from the BLS report [International Comparisons of GDP per Capita and per Hour, 1960–2009](#). Data for the remaining countries are based on PPP from [OECD.Stat](#) and the World Bank database [World Development Indicators](#), and on market exchange rates from the U.S. Federal Reserve, the International Monetary Fund's *International Financial Statistics* publication, and [OECD.Stat](#).

The relationship between purchasing power parities (PPP) and market exchange rates can be used to estimate comparative, or relative, prices of goods and services in different countries. Relative prices are calculated by dividing PPP by market exchange rates. The resulting values indicate the domestic price, expressed in U.S. dollars, of a basket of goods that would cost exactly one dollar in the United States. Consequently, values less than 1 indicate that prices in that country are relatively low, compared with the United States. Values greater than 1 indicate that prices in a particular country are relatively high, compared with the United States.

Definitions

Compensation costs refer to average hourly compensation costs for all employees in manufacturing. (See section 3 Notes.) **Consumer price indexes** (CPI) are a measure of the average change over time in the prices paid by consumers for a market basket of consumer goods and services. CPI and annual percent changes are based on national CPI as published by each country. They have not been adjusted for comparability. **Harmonized indexes of consumer prices** (HICP) are an internationally comparable measure of consumer price inflation based on European Union definitions. The index represents urban and rural households in each country and excludes the component for owner-occupied housing costs. **Purchasing power parities** (PPP) are currency conversion rates that allow output in different currency units to be expressed in a common unit of value. A PPP is the ratio between the number of units of a country's currency and the number of U.S. dollars required to purchase an equivalent market basket of goods and services within each respective country. ■



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