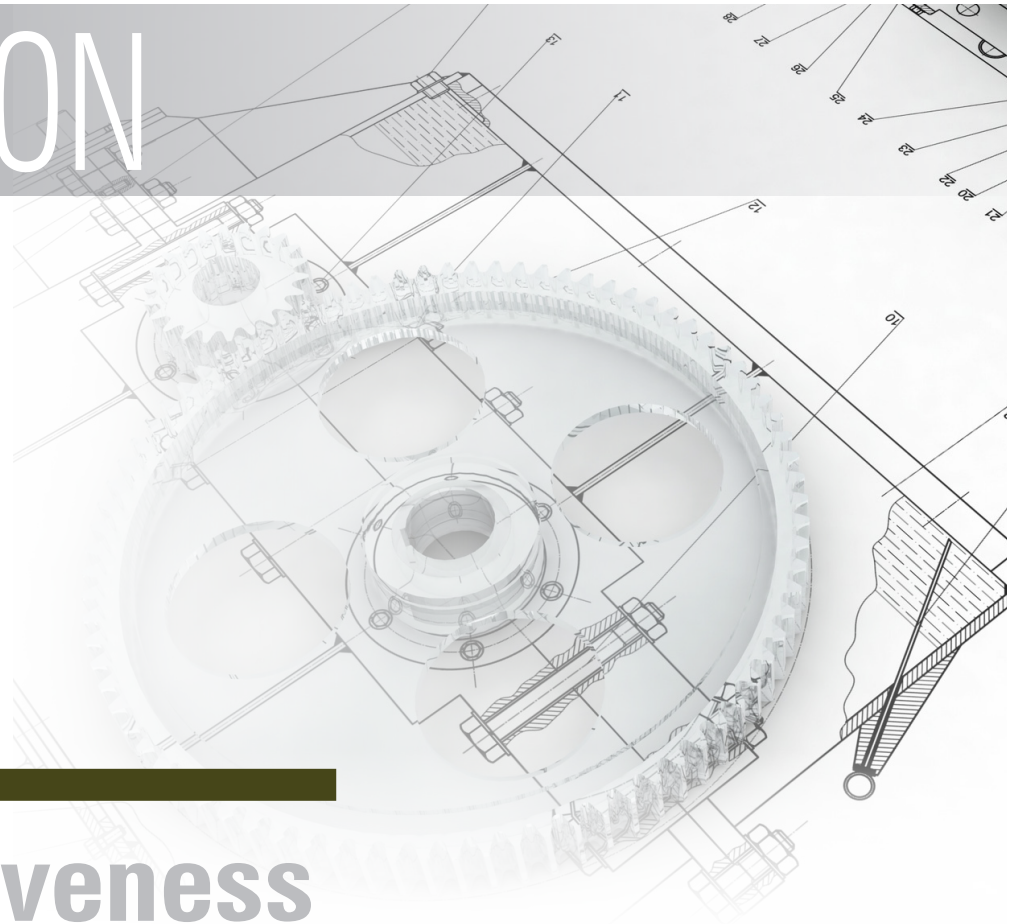


# 3 SECTION



## Competitiveness in Manufacturing

**T**hree 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.

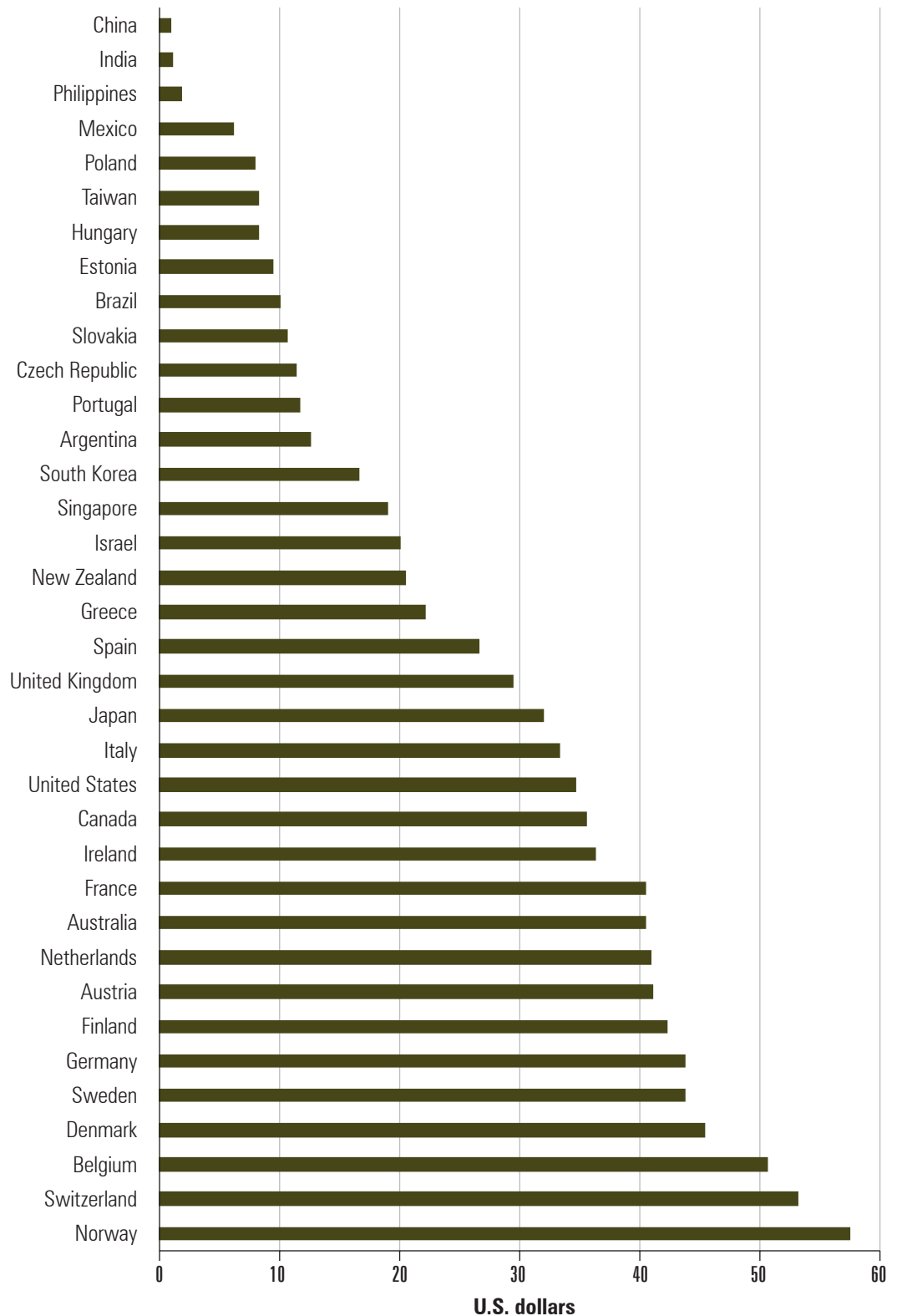
Labor productivity (output per hour worked) measures how effectively hours worked are converted into output. Unit labor costs measure the cost of labor compensation required to produce one unit of output. Increases in labor productivity indicate that a country's workforce is becoming more efficient, and declines in unit labor costs indicate that an economy is becoming more cost competitive.

# CHART 3.1

The nine countries with the highest manufacturing hourly compensation costs were all in Europe.

- Compensation costs in Norway were 1.7 times larger than compensation costs in the United States and more than 50 times larger than those in China.
- Compensation 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.

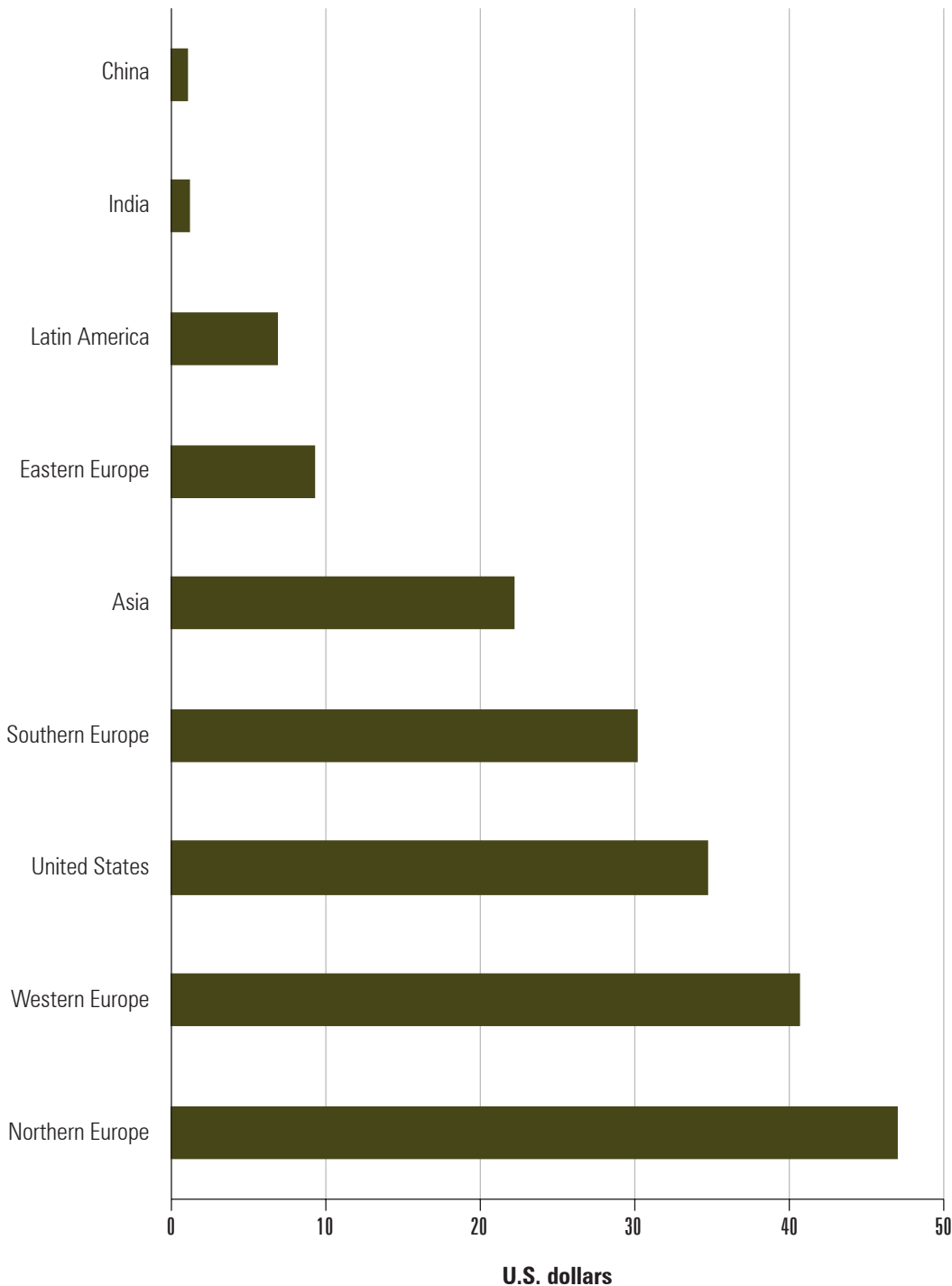
## Hourly compensation costs in manufacturing, selected countries, in U.S. dollars, 2010



**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:** U.S. Bureau of Labor Statistics.

# Hourly compensation costs in manufacturing, selected countries and regions, in U.S. dollars, 2010



**NOTE:** Data for China and India refer to 2007 and are not directly comparable with each other or with data for other countries. 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, South Korea, the Philippines, Singapore, and Taiwan. Data are trade weighted averages for the regions; see section notes.

**SOURCE:** U.S. Bureau of Labor Statistics.

## CHART 3.2

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

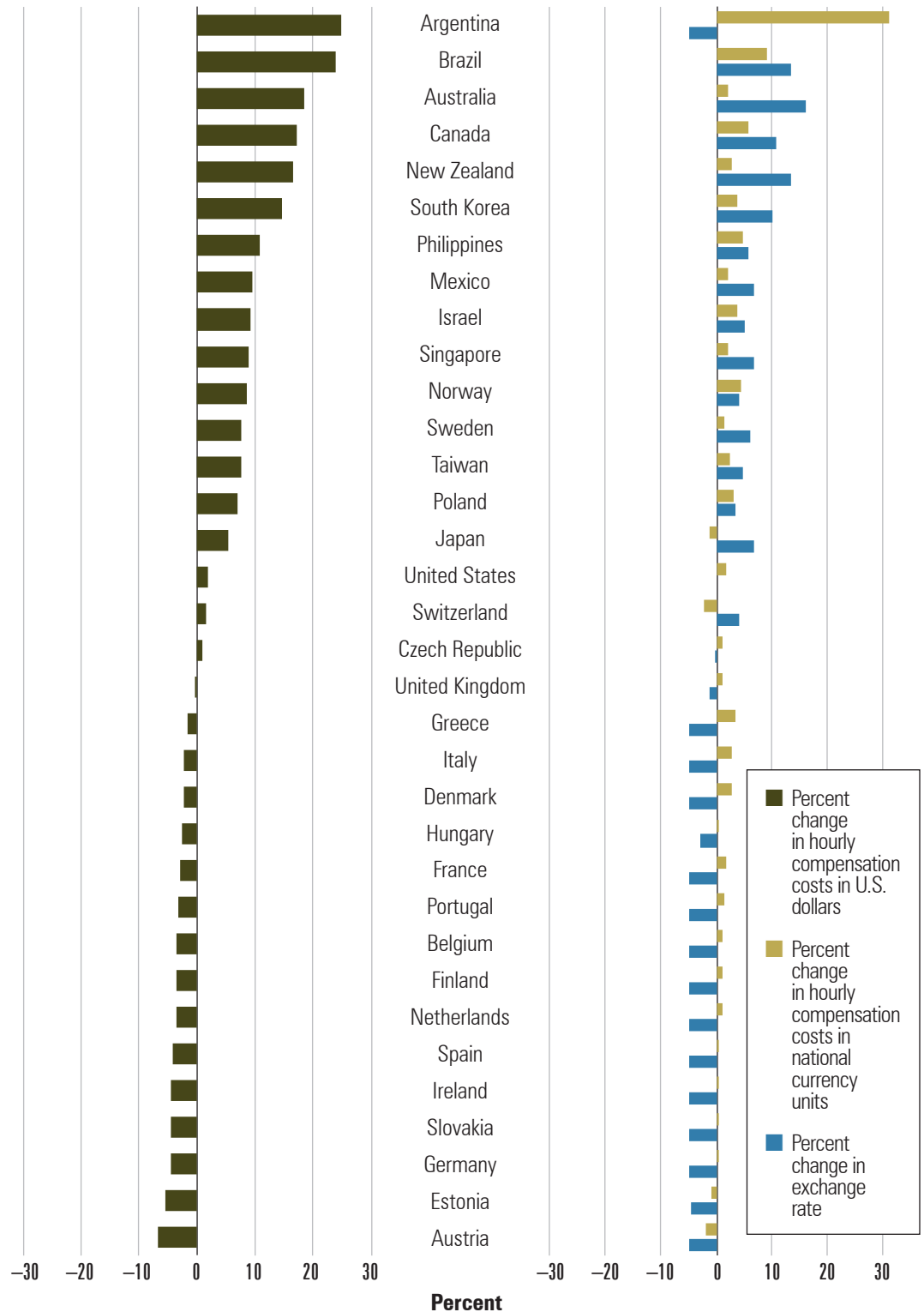
- Eastern European countries, on average, had the lowest hourly compensation costs in Europe, at \$38 below the Northern European level.
- Compensation costs in China were only 5 percent of compensation costs in other Asian countries.

# CHART 3.3

From 2009 to 2010, many European currencies lost value against the U.S. dollar, causing widespread declines in dollar-denominated compensation costs in Europe.

- Austria and Estonia experienced currency depreciation along with declining compensation costs in national currency, leading to even larger drops in U.S.-dollar costs.
- U.S.-dollar hourly compensation costs for all selected countries outside Europe increased much faster than those costs in the United States.

## Percentage change in hourly compensation costs in manufacturing and exchange rates, selected countries, 2009–2010



**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:** U.S. Bureau of Labor Statistics.

# Growth in manufacturing hourly compensation costs, selected countries, average annual rates, 2000–2007 and 2007–2010

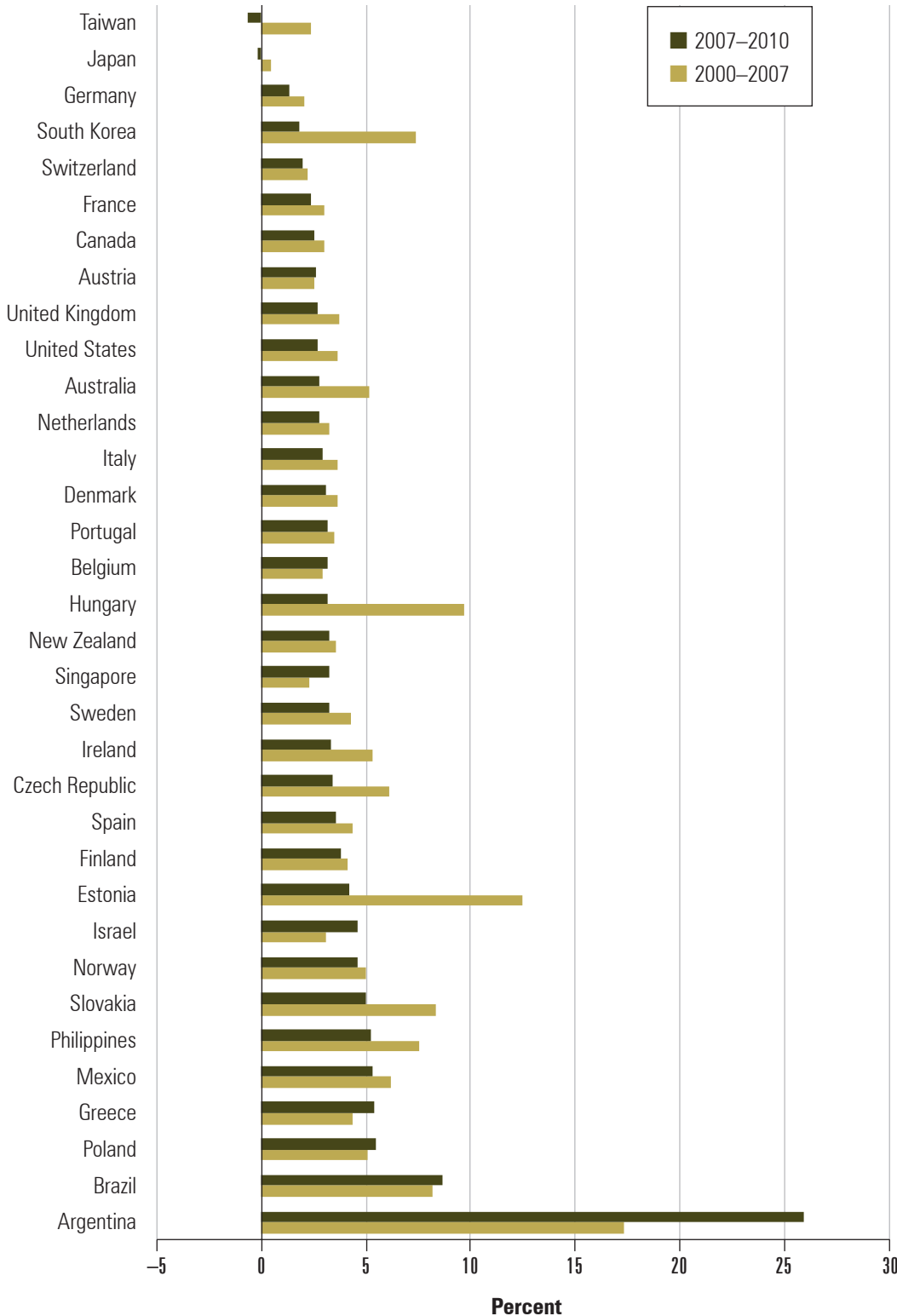


CHART **3.4**

**Most countries experienced higher growth in compensation costs, on average, over the first 7 years of the last decade than they did over the 2007–2010 period.**

- Argentina, Estonia, Hungary, and South Korea had the largest differences in compensation cost growth between the two periods 2000–2007 and 2007–2010.
- In Taiwan and Japan, compensation costs declined during the 2007–2010 period.

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

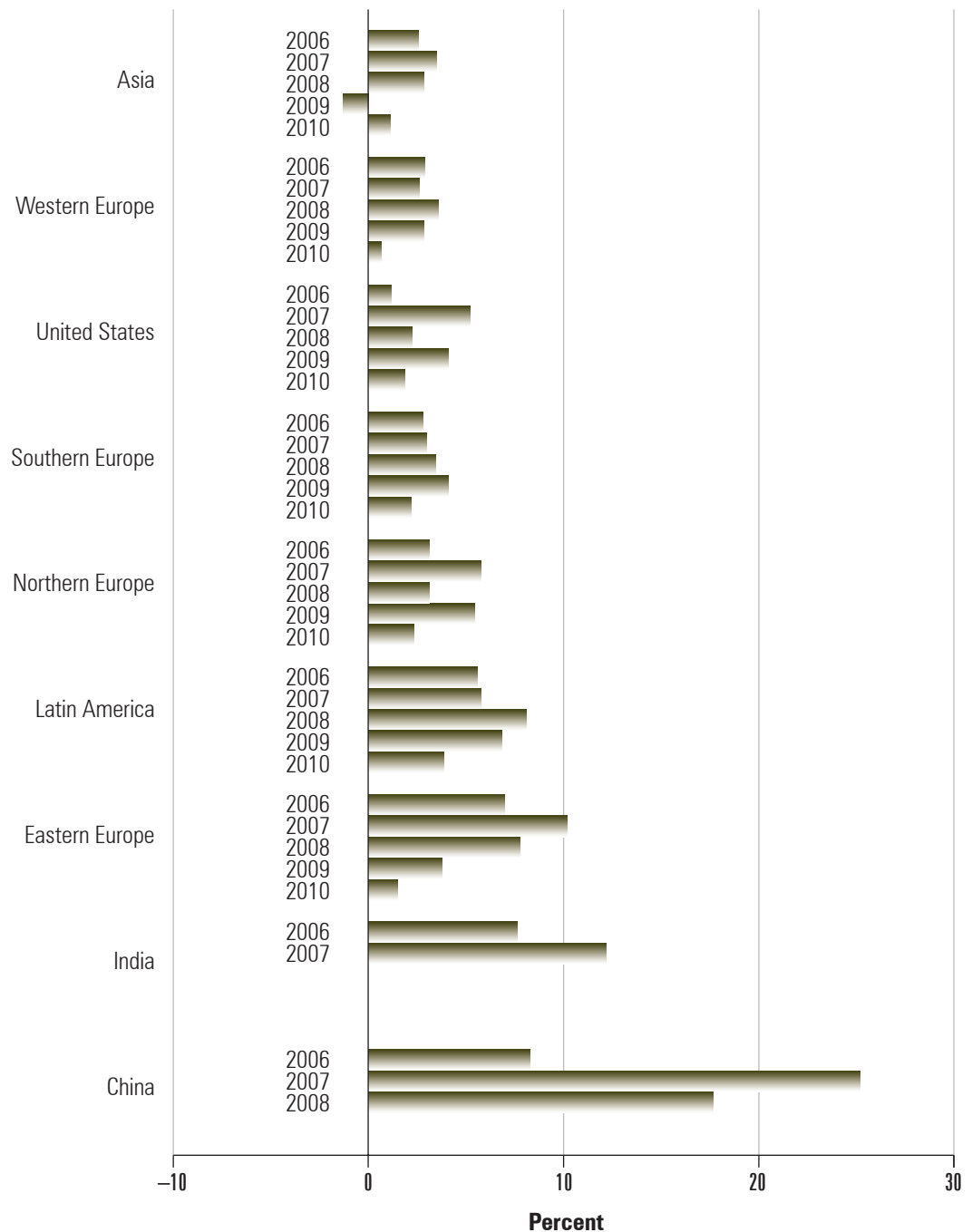
**SOURCE:** U.S. Bureau of Labor Statistics.

# CHART 3.5

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

- Eastern Europe and Latin America also experienced rapid increases in compensation, although cost growth in Eastern Europe slowed substantially from 2008 to 2010.
- In 2010, the increase in compensation costs in each region of Europe was the lowest it had been in 5 years.

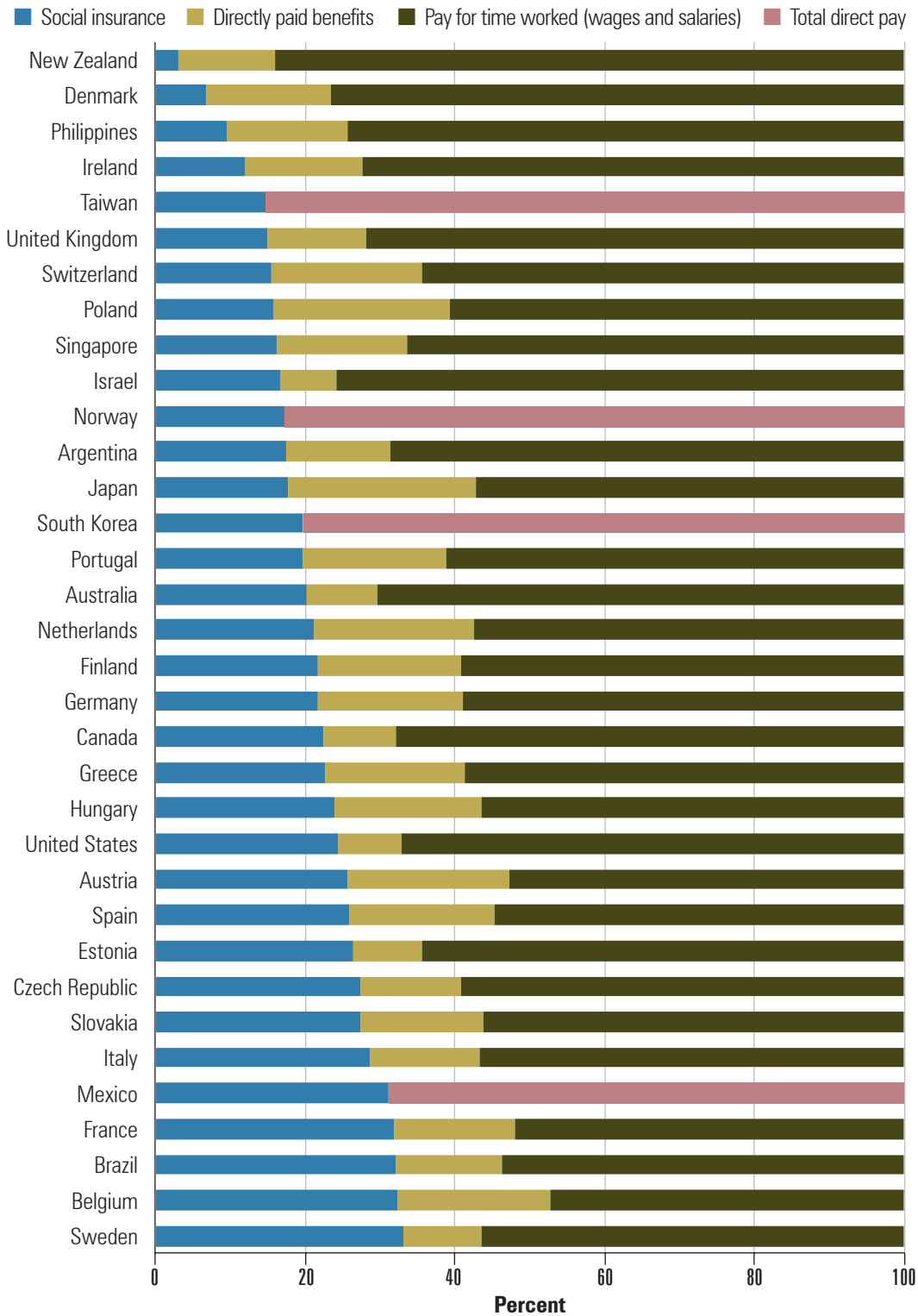
## Hourly compensation costs in manufacturing, selected countries and regions, annual percent changes, 2006–2010



**NOTE:** Annual percent change from previous year. Percent changes are based on national currency-denominated compensation costs. The latest available data for China and India refer to 2008 and 2007, respectively. 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, South Korea, the Philippines, Singapore, and Taiwan. Data are trade weighted averages for the regions; see section notes.

**SOURCE:** U.S. Bureau of Labor Statistics.

# Components of hourly compensation costs in manufacturing, selected countries, in percent, 2010



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

**SOURCE:** U.S. Bureau of Labor Statistics.

## CHART 3.6

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

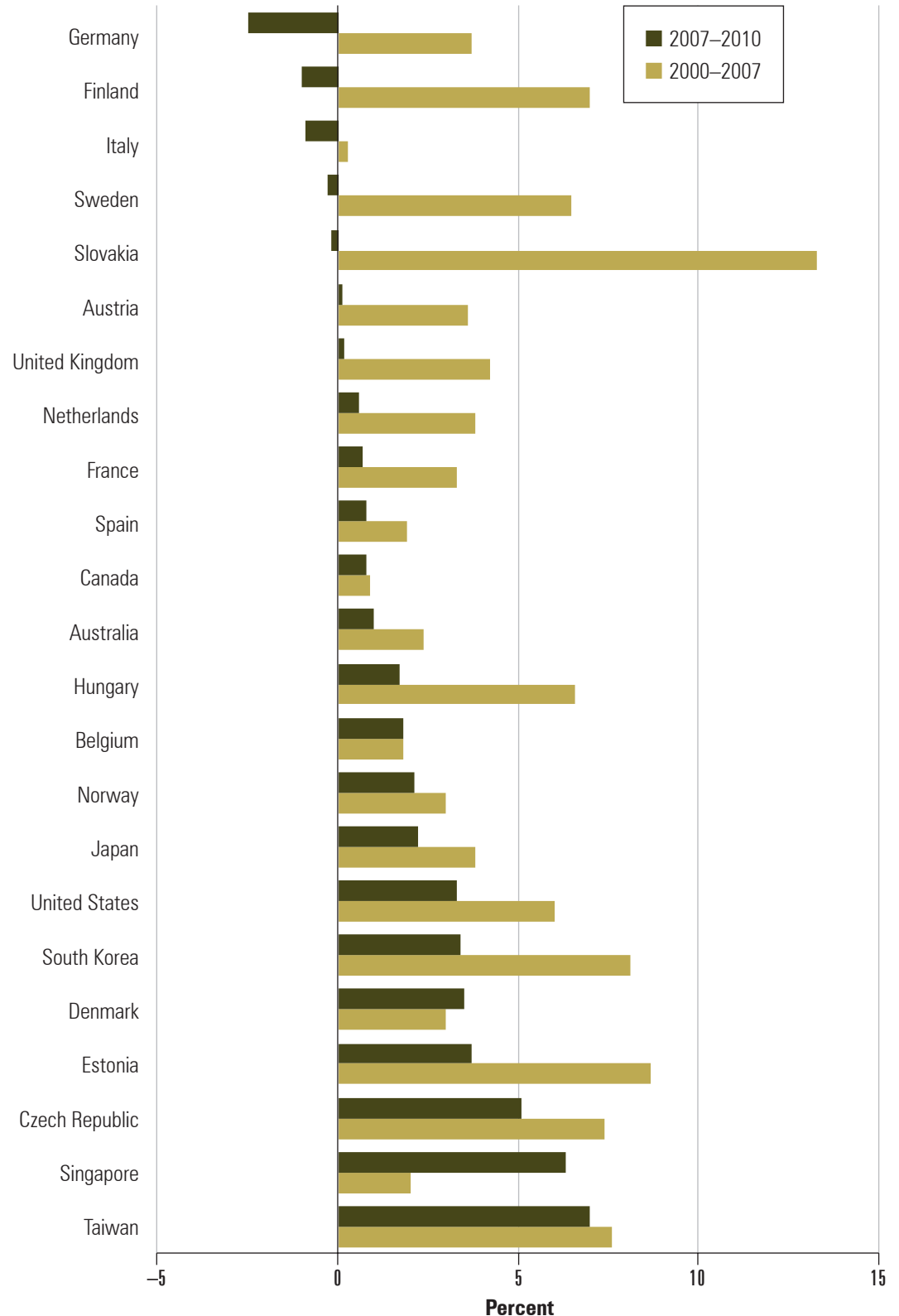
- Total benefits as a percentage of total costs were highest in Belgium, at 53 percent of costs, and lowest in New Zealand, at 16 percent.
- For manufacturers in Sweden, Belgium, Brazil, and France, social insurance costs made up approximately 33 percent of total compensation costs in 2010. Social insurance in New Zealand, however, accounted for only 3 percent of total costs.

# CHART 3.7

**Manufacturing productivity grew for most countries from 2007 to 2010, but at a much slower rate than during the 2000–2007 period.**

- Germany, Finland, Italy, Sweden, and Slovakia experienced productivity declines in manufacturing during the 2007–2010 period.
- Singapore and Denmark were the only countries that had faster productivity growth from 2007 to 2010 than from 2000 to 2007.

## Manufacturing productivity growth, selected countries, average annual rates, 2000–2007 and 2007–2010

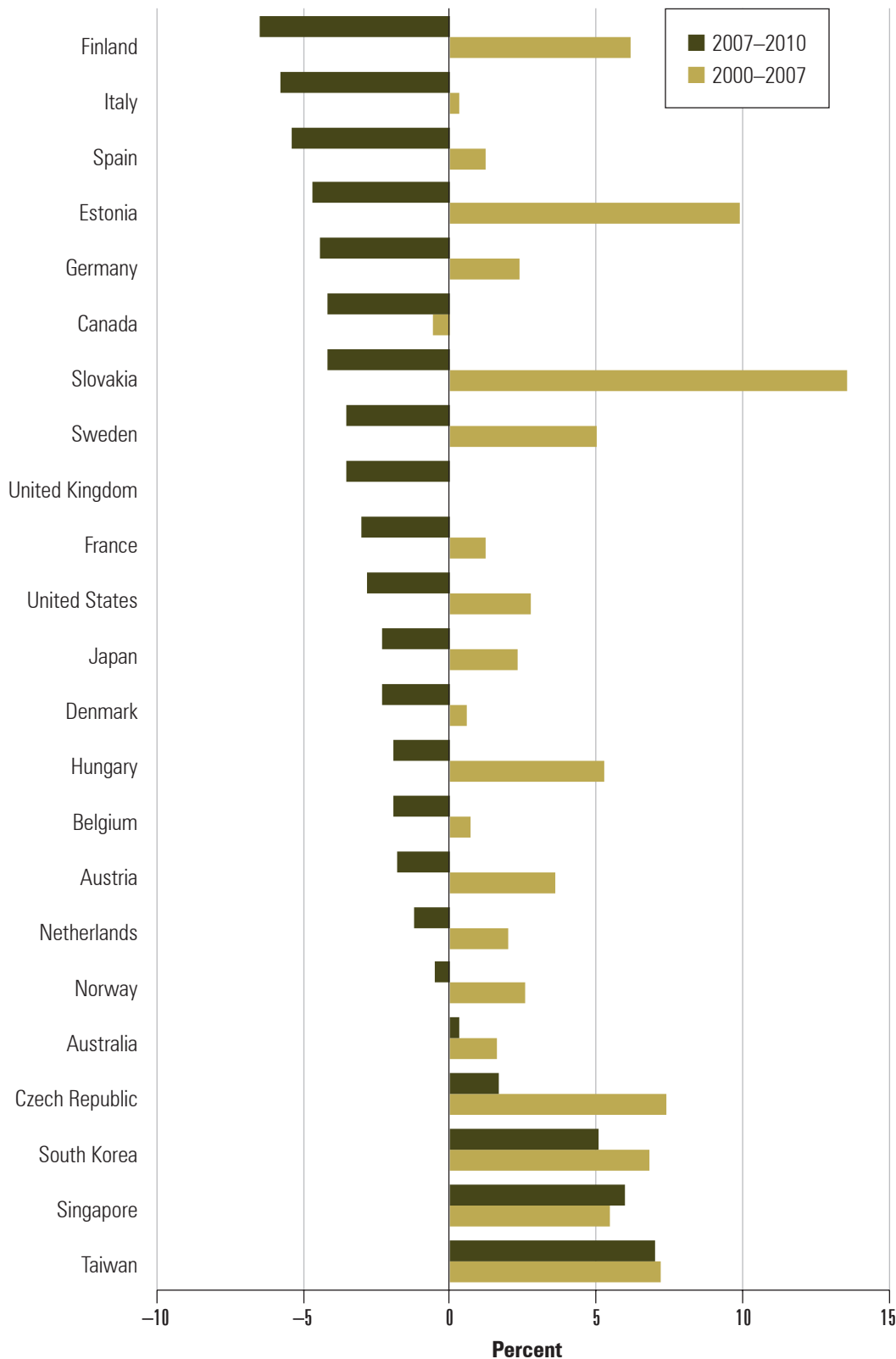


**SOURCES:** U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.



# Manufacturing output growth, selected countries, average annual rates, 2000–2007 and 2007–2010

CHART **3.8**



**When output grows faster than hours worked, productivity (output per hour) rises.**

- Manufacturing output decreased in 18 out of 23 selected countries between 2007 and 2010, causing relatively slow growth in manufacturing labor productivity for most countries during this period.
- In contrast to the 2007 to 2010 period, output increased in 21 out of 23 selected countries from 2000 to 2007.

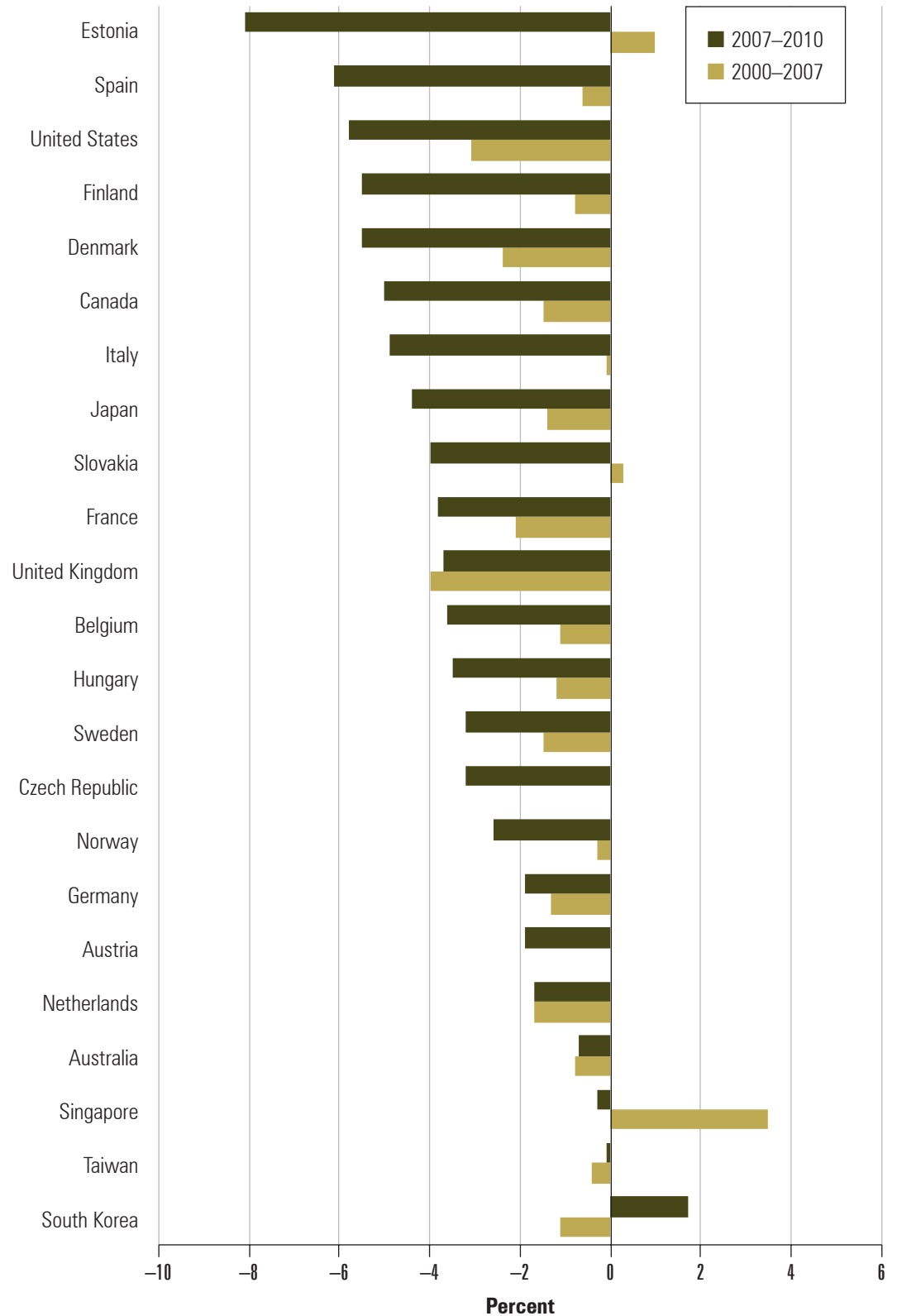
SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

# CHART 3.9

**Between 2007 and 2010, hours worked in manufacturing declined in all selected countries except South Korea. In several countries, hours fell by more than 5 percent.**

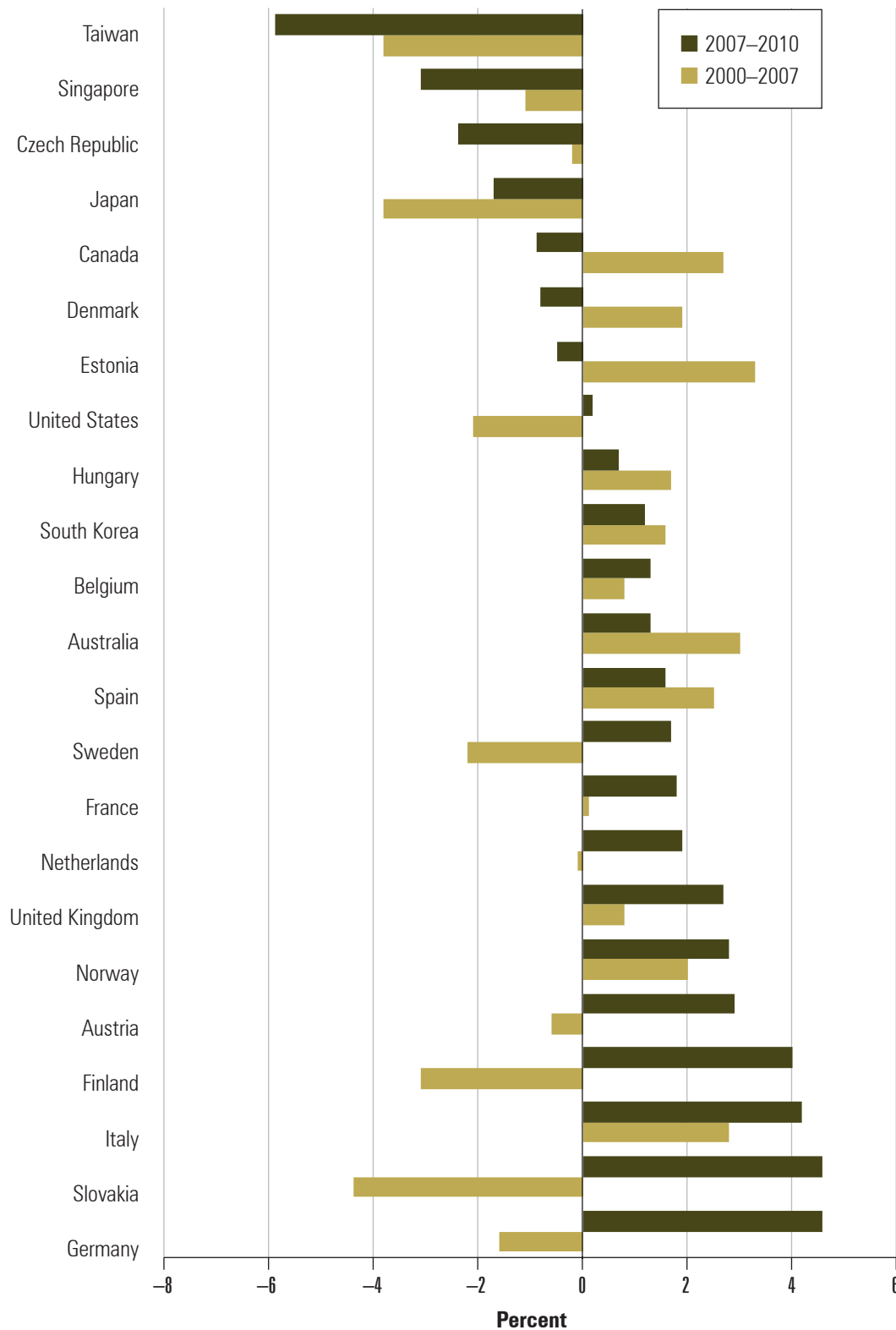
- Hours worked also decreased in almost all selected countries from 2000 to 2007, but not to the extent seen during the 2007–2010 period.

## Growth in manufacturing hours worked, selected countries, average annual rates, 2000–2007 and 2007–2010



**SOURCES:** U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

# Growth in manufacturing unit labor costs in national currency, selected countries, average annual rates, 2000–2007 and 2007–2010



**CHART**  
**3.10**

**Manufacturing unit labor costs (compensation per unit of output) in national currency grew between 2007 and 2010 in 16 out of 23 selected countries. Germany, Slovakia, Italy, and Finland experienced the largest growth.**

- Of the countries that experienced increases in unit labor costs from 2000 to 2007, only Canada, Denmark, and Estonia had declines in unit labor costs from 2007 to 2010.

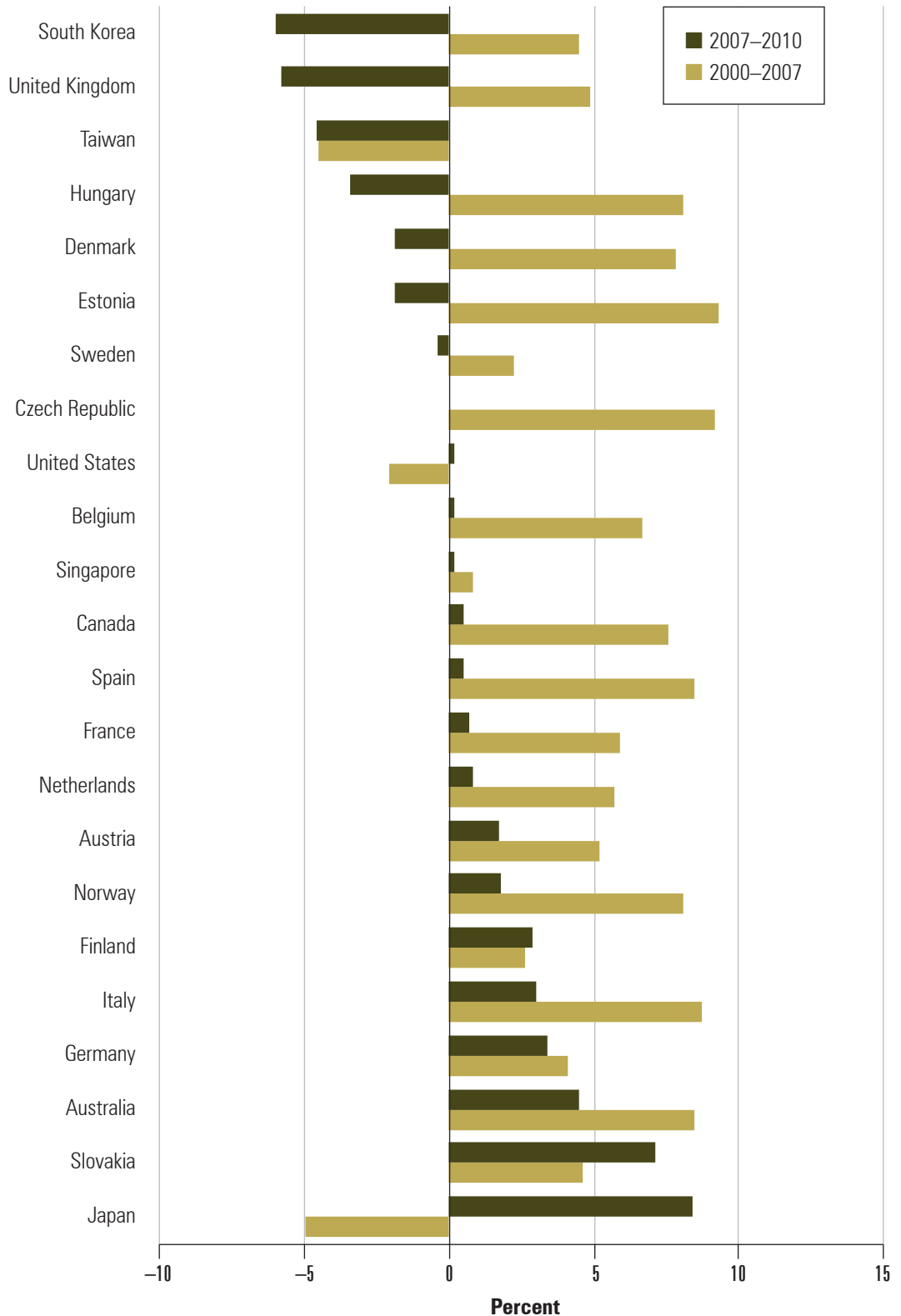
**SOURCES:** U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

# CHART 3.11

Converting unit labor costs (compensation per unit of output) to U.S. dollars enables comparisons of international competitiveness. Competitiveness increases as unit labor costs decrease.

- Growth in manufacturing unit labor costs was faster from 2000 to 2007 than the growth between 2007 and 2010 in most countries. Japan and Slovakia had the sharpest increases in unit labor costs during the latter period.

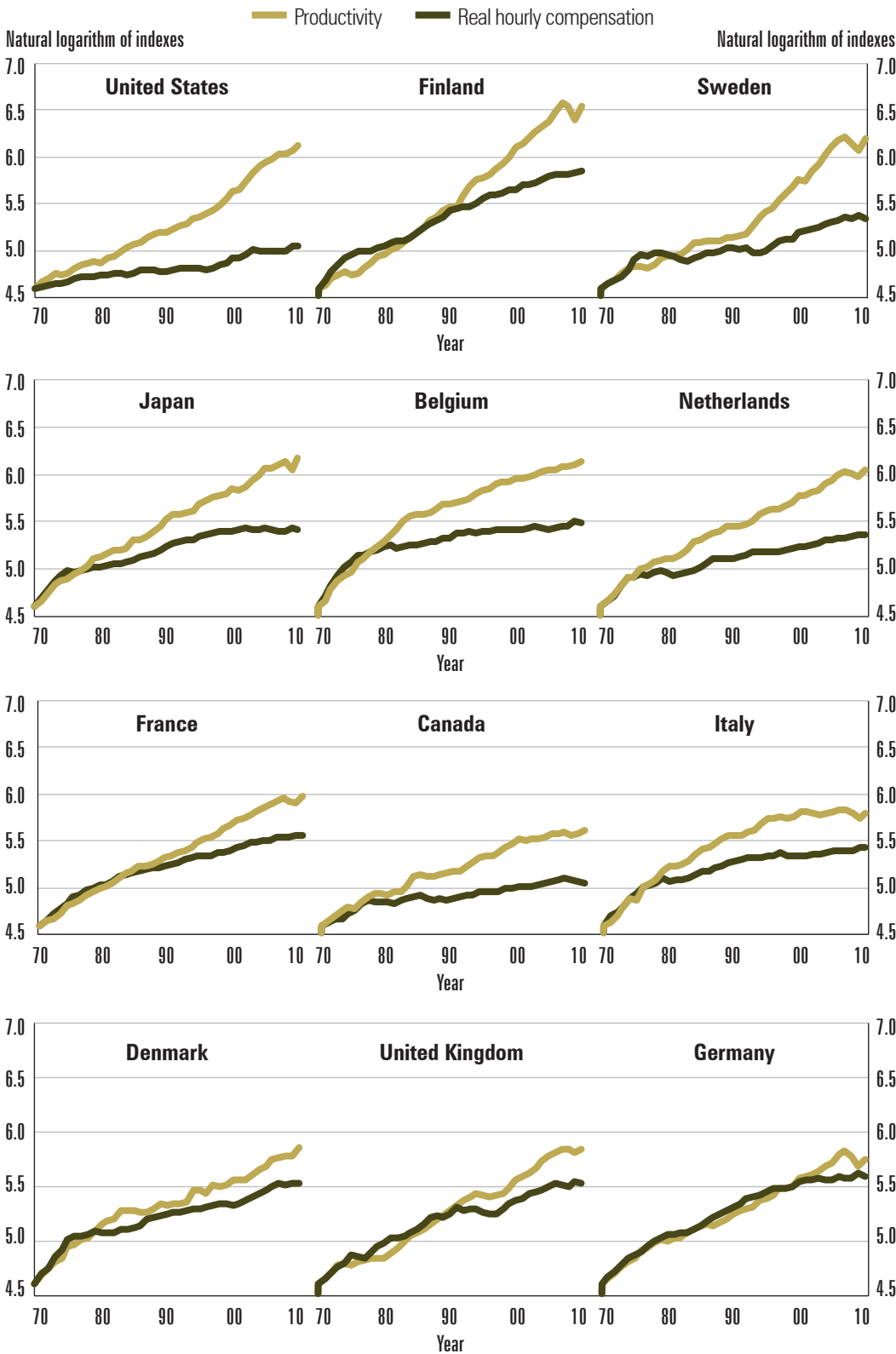
## Growth in manufacturing unit labor costs in U.S. dollars, selected countries, average annual rates, 2000–2007 and 2007–2010



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

# Gap between productivity and real hourly compensation in manufacturing, selected countries, 1970–2010

# CHART 3.12



In all selected countries, the growth of productivity outpaced the growth of real hourly compensation in manufacturing between 1970 and 2010, creating a compensation-productivity gap.

- By 2010, the gap was largest in the United States, Finland, and Sweden. The gap was smallest in Germany, the United Kingdom, and Denmark.

SOURCES: U.S. Bureau of Labor Statistics.

### Sources

Hourly compensation costs (charts 3.1–3.6) 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. (See definition that follows.) Data for all countries are based on the BLS news release *International Comparisons of Hourly Compensation Costs in Manufacturing, 2010* and the related time series tables. Also, see the technical notes and country notes associated with this release. Because of 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. For further information, see the Country at a Glance pages for China and India at [www.bls.gov/ilc/country.htm](http://www.bls.gov/ilc/country.htm).

Average compensation costs for selected regions (charts 3.2 and 3.5) 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 2010.

Data on productivity, output, hours, unit labor costs, and real hourly compensation (charts 3.7–3.12) refer to all employed persons (employees and the self-employed) in the manufacturing sector. These data

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. 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.

In charts 3.4 and 3.7–3.11, the periods 2000–2007 and 2007–2010 are selected to compare a time of global recession (2007–2010) against a prerecessionary time (2000–2007). The charts show the average annual growth rate during each period. Although 2007 is included in both, it represents two different annual changes that do not overlap: 2006–2007 in the first period and 2007–2008 in the second period.

### Definitions

**Hourly compensation** (labor cost) is the average cost to employers of using one hour of employee 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 the market value in constant dollars of goods and services produced in a country. For international comparisons, output refers to gross output minus

intermediate inputs, or 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 costs can be expressed in national currency and in U.S. dollars. **Real hourly compensation** refers to the hourly labor cost for employed persons (employees and the self-employed), adjusted for inflation. It includes all payments made in cash or in kind directly to employees and employer social insurance expenditures. It includes labor-related taxes and excludes labor-related subsidies. ■

