

# Technical Notes

## International Comparisons of Hourly Compensation Costs in Manufacturing



Division of International Labor Comparisons

This file contains the technical notes for data products associated with “International Comparisons of Hourly Compensation Costs in Manufacturing,” including the news release, detailed time series tables, and data for sub-manufacturing industries, at [www.bls.gov/ilc/#compensation](http://www.bls.gov/ilc/#compensation). This document discusses the general sources, methods, and definitions used in constructing hourly compensation costs estimates. Exceptions to these methods, as well as specific data sources used, can be found in “Country Notes and Data Sources” at [www.bls.gov/ilc/ichccsources.pdf](http://www.bls.gov/ilc/ichccsources.pdf).

The international comparisons of hourly compensation costs in manufacturing are prepared to assess differences in employer labor costs across countries. BLS compensation data permit more meaningful comparisons of employer labor costs than data based solely on average earnings. Definitions of average earnings differ considerably by country and do not include many items of labor cost that frequently make up a large portion of total cost.

### Definitions

*Compensation costs* relate to all employees in manufacturing and include (1) direct pay and (2) employer social insurance expenditures and labor-related taxes (see table 1). *Direct pay* includes all payments made directly to the worker before payroll deductions and consists of two parts: *Pay for time worked* and *directly-paid benefits*. *Social insurance expenditures* refer to the value of social contributions (legally required as well as private and contractual) incurred by employers in order to secure entitlement to social benefits for their employees; these contributions often provide delayed, future income and benefits to employees. *Labor-related taxes* refer to taxes on payrolls or employment (or reductions to reflect subsidies), even if they do not finance programs that directly benefit workers.

**Table 1. Components of Compensation Costs**

Compensation Costs		
Direct Pay		Employer Social Insurance Expenditures and Labor-related Taxes
Pay for Time Worked	Directly-Paid Benefits	
<ul style="list-style-type: none"> <li>• Basic wages</li> <li>• Piece rate</li> <li>• Overtime premiums</li> <li>• Shift, holiday, or night work premiums</li> <li>• Cost-of-living adjustments</li> <li>• Bonuses and premiums paid each pay period</li> </ul>	<ul style="list-style-type: none"> <li>• Pay for time not worked (vacations, holidays, and other leave, except sick leave)</li> <li>• Seasonal and irregular bonuses</li> <li>• Payments in kind</li> <li>• Allowances for family events, commuting, etc.</li> <li>• Payments to employees’ savings funds</li> </ul>	<ul style="list-style-type: none"> <li>• Retirement and disability pensions</li> <li>• Health insurance</li> <li>• Income guarantee insurance</li> <li>• Pay for sick leave</li> <li>• Life and accident insurance</li> <li>• Occupational injury and illness compensation</li> <li>• Unemployment insurance</li> <li>• Severance pay</li> <li>• Other social insurance expenditures</li> <li>• Taxes (minus subsidies) on payrolls or employment</li> </ul>

BLS compensation data include nearly all labor costs incurred by employers, but some costs included in the International Labor Office (ILO) definition of total labor costs—such as recruitment, vocational training, and maintenance of company-provided facilities—are not included in the BLS data. The excluded costs amount to no more than two percent of total costs in countries for which data are available.

*Employees* include all persons employed full or part time in an establishment during a specified payroll period. Temporary employees are included. Persons are considered employed if they receive pay for any part of the specified pay period. The self-employed, unpaid family workers, contract workers, and workers in private households are excluded.

## **Methods**

In general, total compensation for each country is calculated by adjusting earnings series for items of direct pay, social insurance, and labor-related taxes and subsidies not included in earnings. For countries for which earnings data are not available on a per hour worked basis, BLS makes adjustments in order to approximate compensation per hour worked. The statistics are also adjusted, where possible, to account for major differences in worker coverage and changes over time in survey coverage.

Earnings statistics are typically obtained from annual establishment surveys or from administrative data sources. The surveys used typically cover firms with a minimum of ten employees.

Average earnings are generally adjusted to total compensation using data from periodic labor cost surveys. Other sources include censuses of manufacturers, tabulations of employer social security contribution rates provided by the International Social Security Association, information on contractual and legislated changes in social insurance benefits, and statistical series on indirect labor costs from employer confederations.

The compensation measures relate to manufacturing as defined by the International Standard Industrial Classification of All Economic Activities (ISIC) Revision 4. Some countries, including the United States, use classification systems which do not correspond directly to ISIC Revision 4; in these countries, there are some differences in the definition of manufacturing and sub-manufacturing industries. The classification differences, however, are typically minor and do not materially affect the international comparisons presented in the BLS data products. More information about classification differences by country is available in “Country Notes and Data Sources” at [www.bls.gov/ilc/ichccsources.pdf](http://www.bls.gov/ilc/ichccsources.pdf).

## **Exchange Rates and Currencies**

Hourly compensation costs are converted to U.S. dollars using the average exchange rate for the reference year. The exchange rates used are prevailing commercial market exchange rates as published by either the U.S. Federal Reserve Board or the International Monetary Fund.

For Euro Area countries in this report, data are converted to U.S. dollars using the euro to dollar exchange rate only for years in which the euro was the official currency in the country. For years prior to adoption of the euro, the data in the old national currency for all years are converted to U.S. dollars

using historical U.S. dollar to national currency exchange rates or fixed national currency to euro exchange rates established at the time of the country's conversion to the euro.

### **Trade-weighted measures**

Trade-weighted averages for selected economic groups are calculated based on each country's 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 for the year 2010. The trade data are compiled by the U.S. Census Bureau. See table 2 for a list of economic groups and trade weights for each country.

### **Labor costs versus labor income**

The comparative hourly compensation data are measures of the cost of labor to an employer, not worker income, because workers only receive a part of hourly compensation directly. Other parts of employer compensation costs, such as unemployment insurance, health insurance, or payments to retirement funds, may only provide deferred or indirect benefits to workers. In these cases, the relationship between current employer payments and potential future worker benefits is too indirect to be considered income.

This report also provides measures of direct pay, which is pay for time worked plus directly-paid benefits. However, direct pay understates the total value of income derived from work because employer payments to funds may substitute for worker savings or self-insurance to cover retirement, medical costs, etc. Thus, direct pay is also not appropriate as a measure of worker income.

**Table 2. Trade Weight Shares and Economic Groups**

Country or Economic Group	2010 Trade Weight Share	OECD	Europe	Euro Area	Eastern Europe	East Asia ex. Japan
Argentina	0.4%					
Australia	1.0	•				
Austria	0.3	•	•	•		
Belgium	1.4	•	•	•		
Brazil	1.8					
Canada	15.5	•				
Czech Republic	0.1	•	•		•	
Denmark	0.3	•	•			
Estonia	0.03	•	•	•	•	
Finland	0.2	•	•	•		
France	2.2	•	•	•		
Germany	4.6	•	•	•		
Greece	0.1	•	•	•		
Hungary	0.1	•	•		•	
Ireland	1.5	•	•	•		
Israel	1.2	•				
Italy	1.5	•	•	•		
Japan	6.3	•				
Korea	3.0	•				•
Mexico	12.5	•				
Netherlands	1.7	•	•	•		
New Zealand	0.2	•				
Norway	0.3	•	•			
Philippines	0.5					•
Poland	0.2	•	•		•	
Portugal	0.1	•	•	•		
Singapore	1.6					•
Slovakia	0.05	•	•	•	•	
Spain	0.6	•	•	•		
Sweden	0.5	•	•			
Switzerland	1.2	•	•			
Taiwan	2.1					•
United Kingdom	3.2	•	•			
Economic Groups						
Foreign Countries	66.6%					
OECD	60.1	•				
Europe	20.3		•			
Euro Area	14.4			•		
Eastern Europe	0.6				•	
East Asia ex. Japan	7.3					•

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