

This document gives a brief overview of the sources and methods used; for more details please click [here](#).

The **Total Economy Database™**, (TED) is a comprehensive database with annual data covering GDP, population, employment, hours, labor quality, capital services, labor productivity, and total factor productivity for 123 countries in the world. For China, two sets of estimates are provided – the first is based on official data and the second is based on alternative estimates prepared by The Conference Board based on [Wu \(2014\)](#), updated and revised in May, 2017.

Beginning with the November 2016 interim release, TED is released in two versions. The original version uses official price deflators to deflate nominal GDP and (whenever available) ICT investment, while the adjusted version uses alternative ICT investment goods deflators developed by Byrne and Corrado ([2016a](#), [2016b](#)) to deflate ICT investment. In the adjusted version, GDP deflators in three countries – United States, China and Japan – with a high share of ICT production and exports, are modified with this new ICT deflator. As a consequence, real GDP growth rates are adjusted for these countries and will not match the official data.

In principle, both versions of TED use official national accounts data whenever available, but adjustments are made in some cases to ensure comparability across countries and time. For countries which report their national accounts data on a fiscal year basis (e.g. Australia, Bangladesh, Egypt, Ethiopia, India, Iran, New Zealand, and Pakistan), the data are converted to the calendar year basis.

VARIABLES - OUTPUT, LABOR, AND LABOR PRODUCTIVITY	
1. GDP	The GDP EKS series are expressed in 2016 PPPs, which are obtained by extrapolating 2011 benchmark PPPs from the World Bank/ICP using the change in the national GDP deflator relative to the United States GDP deflator. Real GDP growth rates for the pre-1990 period are mostly based on Angus Maddison's historical statistics, and for later years they are taken from official data sources.
2. Employment	Employment data cover all persons engaged in some productive activity that fall within the production boundary of the system of national accounts (employees, self-employed, unpaid family workers and the military). The production boundary follows the same domestic concept as the GDP, which includes all workers employed domestically, but does not include any nationals working abroad. Data are mostly sourced from national accounts--if not available, Labor Force Survey data or modeled estimates from the ILO are used.
3. Average Hours Worked	Average hours worked represent the aggregate number of hours actually worked by an employee or a self-employed person during the accounting period and when their output is within the production boundary. Data are mostly sourced from national accounts and are only available for 68 countries.
4. Population	Population is the annual average number of people present. Up to 1990, the population series are mostly derived from Angus Maddison's historical statistics. Data for 1990 onwards are based on various sources, including Eurostat, the U.S. Census Bureau International Data Base, International Monetary Fund World Economic Outlook and the UN Population Prospects.
VARIABLES - GROWTH ACCOUNTING AND TOTAL FACTOR PRODUCTIVITY	
5. Labor Input - Quantity	Quantity of employment, either obtained from total hours worked (whenever available) or total persons engaged, per the sources mentioned above.
6. Labor Input - Quality	Measure of the changes in the composition of the workforce. This indicator is based on underlying data on employment and wages by educational attainment, which are estimated econometrically in some cases.
7. Capital Input - Total	Growth in total capital services refers to the change in the flow of productive services provided by capital assets, such as buildings, transport equipment, and machines. The underlying capital stock series for six different asset types are calculated from national accounts investment data using the perpetual inventory method. The aggregation of the growth in capital services over the different asset types is calculated using the user cost approach.
8. Capital Input - ICT	Same as 7 above, composed of ICT capital assets, which include computer hardware and equipment, telecommunication equipment and computer software and services. For most OECD economies, investment data on ICT assets is available through the national accounts, while for other countries it is estimated using data on total ICT expenditure from the World Information and Technology Services Alliances Digital Reports or proxied using trade data according to the commodity flow approach. Data on this indicator is available for a smaller set of countries due to the limited availability of data on ICT assets.
9. Capital Input - Non ICT	Same as 7 above, composed of non-ICT capital assets.
10. Total Factor Productivity	Total factor productivity (TFP) growth accounts for the changes in output not caused directly by changes in labor and capital inputs. It represents the effect of technological change, efficiency improvements, innovation, and our inability to measure the contribution of all other inputs. It is estimated as the residual by subtracting the sum of two-period average labor share weighted input growth rates from the output growth rate.
11. Labor Share	The labor share measures in the proportion of labor income relative to total income. It is calculated by using compensation of employees and mixed income data from the national accounts. Whenever these data are not available, estimates from the Penn World Tables or the Asian Productivity Organization are used.