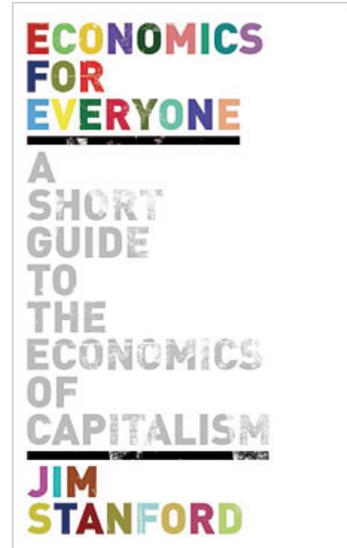


A “HOW-TO” GUIDE: FINDING AND INTERPRETING GDP STATISTICS

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This guide provides basic information and instructions for obtaining and analyzing macroeconomic statistics.

Definitions:

Gross Domestic Product (GDP): GDP equals the value of all the goods and services produced for money in an economy, evaluated at their market prices. GDP excludes the value of unpaid work (such as caring reproductive labour performed in the home). GDP is calculated by adding up the value-added at each stage of production (deducting the cost of produced inputs and materials purchased from an industry’s suppliers).

Nominal GDP: This is the simplest, most direct measure of GDP, expressed in dollar terms.

Real GDP: This is the value of GDP, adjusted for changes in the overall level of prices in an economy. Real GDP must be expressed in terms of a “base year.” The average level of prices is measured starting at that base year (example: U.S. statistics on real GDP are currently expressed in 2000 dollar terms – that is, in reference to the average level of prices that prevailed in the U.S. economy in 2000). Then, subsequent growth in GDP is adjusted to remove the impact of inflation in average prices since the base year. That adjusted measure of changes in real GDP is intended to be an accurate indicator of changes in the true quantity of total output. The base year for real GDP data is usually updated every few years. And modern GDP accounts use a “chain price” methodology in which the underlying price index is adjusted slightly each year to account for technological changes in the nature and quality of production.

Gross Domestic Product, Deflator: A price index which reflects the average increase in the prices of all domestic output. The GDP deflator equals the ratio of nominal GDP to

real GDP. The GDP deflator is an alternative measure of inflation (although changes in the consumer price index are considered a more accurate indicator of “true” inflation than changes in the GDP deflator). GDP deflators can be calculated for each category of expenditure in total GDP (including consumption, investment, exports, and imports).

Gross Domestic Product, Per Capita: This is the level of GDP divided by the population of a country or region. Changes in real GDP per capita over time are often interpreted as a measure of changes in the average standard of living of a country, although this is misleading (because it doesn’t account for differences in the distribution of income across factors of production and individuals, and it doesn’t consider the value of unpaid labour or leisure time).

Obtaining GDP Statistics

GDP statistics are among the most important and closely-watched economic indicators. GDP data is published as part of a broader set of statistical data, usually called the “national accounts.” These are usually produced on a quarterly basis (that is, every three months) – although in some cases more specific industry-level data is produced monthly. GDP statistics are prepared and published by national statistical agencies in each country. In most cases, electronic versions of the data can be downloaded without charge. Here are the links to GDP data in the major Anglo-Saxon economies:

U.S.: GDP data is produced by the Bureau of Economic Analysis, www.bea.gov. Follow the links through the “National” menu category to “Gross Domestic Product.” That section presents several options for accessing the most recent GDP data release, historical data, and background detail.

U.K.: GDP data is produced by the U.K. Statistics Authority, www.statistics.gov.uk. Follow the links through “Key statistics” to “GDP.” Then several options are presented for obtaining summary, detailed, and time series data.

Canada: GDP data is produced by Statistics Canada, at www.statscan.ca. Follow the links to statistics “By subject,” then choose “Economic accounts.” Choices are available there to directly attain summary data, or else to download detailed quarterly reports. Historical time series data is available for a fee (or can usually be attained for free through a public or university library).

Australia: GDP data is produced by the Australian Bureau of Statistics, at www.abs.gov.au. Under “National Statistics,” choose “National Accounts.” There links direct the user to specific publications (including the main quarterly Australian National Accounts publication) and more detailed data.

GDP Accounting: Basic Concepts

Chapter 10 of *Economics for Everyone* explains how the basic cycle of investment, production, distribution, and consumption that typifies capitalism can be measured, in

two distinct ways. The total output of the economy can be added up in terms of the different categories of *income* that are paid out (in that case, wages and profits). Or it can be added up in terms of the different categories of *expenditure* that subsequently arise from that income (in Chapter 10, this consists solely of investment and consumption – including both workers’ consumption and capitalists’ luxury consumption; see Table 10.1 on p. 125).

These two approaches to measuring the total output of the economy are reflected in the two main approaches to GDP statistics. In most countries, estimates of GDP are attained broken down according to both income and expenditure. By definition, the GDP accountants always ensure that total output equals income equals expenditure – that is, everything that is produced in the economy has to be “bought” by someone, and hence the revenue resulting from production must to be “paid” to someone.

In Chapter 23 of *Economics for Everyone*, we made the story a little more realistic (and complicated) by adding the government and foreign sectors of the economy. Now there are two additional forms of spending: spending on government production (that is, goods and services produced directly by public agencies), and spending on net exports (that is, the value of exports bought by foreigners, less the value of imports purchased by residents of our home economy¹). We also explained how government attains its revenue (by imposing taxes on both workers and capitalists). However, since those taxes show up as revenue for the government sector, but are deducted from the income of workers and capitalists, they don’t affect the total level of GDP – which remains equal to the sum of the “primary” incomes accruing to the two major factors of production in our simplified economy (workers and capitalists). This is explained in Table 23.1, on page 285.

To sum up, there are two ways to add up the total value of GDP:

By *Income* (the different forms of income received by primary factors of production):

GDP = wages plus profits

GDP = W + Π

By *Expenditure* (the different ways that our output is “bought”):

GDP = consumption + investment + government production + net exports

GDP = C + I + G + (X – M)

GDP Statistics in the Real World

The real-world economy is more complicated than the one described in *Economics for Everyone* – even the more complete “circle” described in Chapter 23. Here is a

¹ We include only *net* exports – that is, total exports less the value of imports – for the following reason. Some of what consumers spend on C, companies spend on I, and governments spend on G is allocated to imported goods and services; so it doesn’t actually add to domestic GDP. This “drain” resulting from imports, is counterposed to the incremental spending on domestically-made goods and services which arises from foreign purchases of our exports. Trade therefore adds to GDP if exports are larger than imports; it reduces GDP if imports are greater than exports.

breakdown and short description of the major income and expenditure categories that are typically included in actual GDP reports:

GDP by Expenditure:

Personal Consumption: This is the largest single category of expenditure, accounting for over half of GDP in most countries. Consumption spending may be broken down into *goods* (including both *durable* goods, like cars and appliances, and *non-durable* goods like food and clothing) and *services*.

Business Investment: This is a smaller but very important component of GDP, since it is the motive force that initiates production and employment in a capitalist economy. Usually investment data is broken down into several categories. First, the data distinguishes between fixed investment and inventories. *Fixed investment* represents spending on tangible, long-lasting capital assets. The accumulation of *inventories* (including unsold products, raw materials, supplies, and partly finished goods) is also considered an “investment” by the businesses which own those inventories.² It is less important to longer-run economic progress, however, than fixed investment. Within fixed investment, there are several main categories. Residential investment represents the cost of constructing new homes; these are considered a “capital” asset because they last a long time. Non-residential fixed investment represents capital spending on actual business operations. It, in turn, is divided between *non-residential structures* (factories, offices, shops, mines, etc.) and *machinery and equipment*. Machinery and equipment investment (including computers, factory machinery, transportation equipment, and other high-tech assets) is considered to be especially important to technological change and productivity growth.

Government Consumption: Government transfer payments do not show up in the GDP accounts, because they merely represent the redistribution of income from one group of residents (taxpayers) to another group (recipients of transfer payments). Similarly, government interest payments are also a transfer of income, not an expenditure on specific output. The direct government provision of goods and services, however, does enter the GDP accounts as an important form of expenditure. GDP accounts call this “government consumption,” making an analogy with personal consumption: government consumption represents the use of current production for some end goal (education, health care, military, etc.).³

² For GDP accounting purposes, a business is considered to have “bought” an item in its inventory, even if it is there because it couldn’t sell the product to a customer. This is one of the ways that GDP accountants ensure that income always equal expenditure. When unsold output piles up (because of weaker-than-expected sales), this is captured in an increase in inventories. This is often an early sign of coming economic weakness or recession.

³ Note that in Chapter 20 of *Economics for Everyone*, we described the real production of goods and services in the public or non-profit sphere of the economy as “government production.” This differs subtly from the measurement of “government consumption” in GDP accounting. Government production represents actual production services in order to directly deliver some good or service (usually a service) to residents. Government consumption (for GDP purposes) is a somewhat larger category: it will include

Government Investment: Not all government spending on programs, however, counts as “consumption.” When governments spend money on long-lasting assets that will have a productive life (including schools, hospitals, other public buildings, and infrastructure like highways and sewer systems), this constitutes an investment and is usually measured separately in the GDP accounts. Total investment in an economy therefore equals residential investment, non-residential business investment, and government investment.

Exports: Some domestic output is purchased by final customers located in other countries. This includes both *goods* (such as resources or manufactured products) and *services* (eg. tourism, financial services, or transportation). This expenditure by foreigners represents an increment to domestic output.

Imports: By the same token, some of the purchases made by customers in our own economy are directed to goods and services that are produced elsewhere. This also includes both goods and services. Imports are deducted from domestic GDP (since they represent an expenditure by domestic residents on something other than domestically produced output).

GDP by Income:

Labour Income: The compensation received by all paid employees (including wages, salaries, and the current cost of employment benefits such as health benefits, insurance, and pensions) is lumped into the catch-all category of labour income. In developed capitalist countries, labour income accounts for about half of all GDP. Note that any income resulting from an employment relationship shows up in this category – including the salaries received by top executives and professionals.⁴ Unfortunately, therefore, the labour income category of total GDP does not provide a truly accurate picture of the income received by *workers* – nor can this aggregate data provide any insight into how labour income is *distributed* across different groups of workers. Nevertheless, monitoring labour’s share of total GDP is a handy, composite indicator of workers’ general structural power in a society. Under neoliberalism, the labour share of GDP has fallen notably in most developed capitalist economies.

Corporate Profits: Like other categories of factor income, corporate profits are measured *before* income taxes. This represents the bottom-line income received by larger, incorporated businesses. In some countries, the income of government-owned corporations is reported separately from the income of private corporations.

Small Business and Farm Profits: Many smaller businesses (including many farms) are not incorporated as separate legal entities. The income of these operations is received directly by their proprietors, and hence is reported separately in the GDP accounts. As

goods and services purchased (or procured) from private firms as part of governments’ broader service delivery mandate.

⁴ Stock options and other equity-based income attained by top executives do not show up in this category, however, since they technically represent forms of investment income, not employment compensation.

discussed on pp. 67-69 of *Economics for Everyone*, most of this income of small proprietors reflects their own work effort (and often the labour of family members, as well), rather than a return to the “capital” which these proprietors have invested in their businesses.

Investment Income: As a result of today’s sophisticated financial system, much business wealth is not owned directly, but rather is held via one of many different forms of financial asset (stocks, bonds, derivatives, and other types of asset). The function and effects of these different forms of financial wealth are discussed in detail in Chapter 18 of *Economics for Everyone*. The income generated by these assets to their individual owners is recorded in the GDP accounts as investment income. Because of the startling concentration of financial wealth in the hands of the richest minority of society (see pp. 90-94 of *Economics for Everyone*), the bulk of this income is received by very high-wealth individuals and households.

Depreciation: GDP by income accounts make an allowance for the wear and tear of the economy’s existing stock of capital. In essence, we are assuming that we have to “pay” a certain portion of our output to the existing stock of capital, in order to recognize its limited lifespan. Depreciation is sometimes called a “capital consumption allowance.” This “payment” is then recorded in the GDP accounts alongside the payments made to other groups in society (workers, investors, capitalists, etc.). In reality, however, the income represented by depreciation is actually received by the *owners* of that existing capital: it is deducted from their revenue prior to the calculation of corporate profit.

Indirect Taxes and Subsidies: We noted above that the incomes received by all the different groups in society are recorded in the GDP accounts *before* deducting the income taxes that they pay to government. There is one exception, however, reflecting tax income that governments seem to “earn” from the direct process of production. Recall that GDP equals the market or money value of all the output in the economy. One component of that money value is the net cost of taxes and subsidies which government may impose on specific industries or products. Most important among these are sales or value-added taxes levied on many goods and services. But this entry also includes taxes (net of subsidies) imposed on factors of production (such as business subsidies).

Statistical Discrepancy: Try as they will, the GDP accountants never manage to make the GDP by expenditure tally coincide perfectly with GDP by income, and hence they include a small balancing item in one or both accounts to ensure equality between the two accounts.

Analyzing GDP Data

GDP statistics can be useful for many different applications. Keep in mind the various drawbacks of GDP that we identified on pages 25-29 of *Economics for Everyone*: GDP does not consider the value of *non-monetary* work and output, including caring labour in the home; it doesn’t put a value on the natural environment, leisure time, or the quality of life; and aggregate GDP statistics say nothing about how the output of the economy is

distributed across different groups in society. Nevertheless, GDP data provides an important and informative snapshot into the behaviour and performance of the overall economy. Here are a few applications:

Measuring or Comparing Growth: The rate of expansion of real GDP is usually interpreted as the most important measure of economic growth. A recession occurs when real GDP shrinks (usually, for at least two quarters in a row). A recovery is said to begin when real GDP starts growing again.

Measuring or Comparing Prosperity: The level of GDP per capita is often interpreted as an indicator of overall average “prosperity” (either over time, or across countries). This application must be conducted with particular care, taking note of the weaknesses of the GDP concept noted above. (For example, an economy which values leisure time more than material consumption will be seen, in this approach, to be “less prosperous” – but that is only because leisure time is not considered in aggregate GDP statistics).

Measuring or Comparing Distribution: Changes in the relative shares of different groups in total income in an economy over time, can provide a useful indicator of changes in their relative political and economic power. These comparisons can also be made across countries (although differences in the methodology utilized by various statistical agencies make cross-national comparisons of factor shares a bit tricky).

The Composition of Output: An economy that spends more on investment and less on consumption will generally be interpreted as engaging in a more dynamic, aggressive form of economic development. An economy with a larger government sector is usually one in which citizens enjoy a greater degree of social security and equality. Many countries produce GDP data disaggregated into industrial or sectoral sub-categories; this can also provide valuable insight into the changing composition of an economy (for example, the changing balances between agriculture, manufacturing, and services).

Concepts Related to GDP:

GDP is the most important aggregate variable attained from national accounts data, but there are other important concepts that can also be measured and analyzed. Here are a few:

Gross National Product (GNP): GDP measures the total value of output produced for money within a given economy. It is the best measure of the level of activity in any particular economy. GNP is a slightly different, but closely related, concept: it measures the total value of output that is “owned” by the residents of a particular nation. To go from GDP to GNP, we must first deduct from GDP a proportional value reflecting the ownership over a certain share of domestic output by non-residents of our home economy. The most important adjustment here is to deduct the share of corporate profits and investment income that accrues to people who don’t live here. Then, by the same token, we have to add in the proportional value of goods and services that are produced in other countries, but owned by residents of our home country. The most important

adjustment here is the profits and investment income accruing to residents of our country from their foreign investments (both foreign direct investment, and financial investments) in other countries. For a country which is a net *creditor* in foreign investment (that is, its residents own more investments abroad, than the value of incoming foreign investments in the home country), GNP is slightly greater than GDP. The opposite is true for countries which are net *debtors* in foreign investment.

Net Domestic Product: Recall that one component of GDP by income is an allowance for the depreciation of existing capital assets. In one sense, that value can be interpreted as a “cost of production.” If the goal of production is the output of final goods and services, then it might make sense to deduct the amount of output which has to be set aside merely to replace the wear and tear of existing capital (ie “tools”). Net domestic product, therefore, equals GDP minus the cost of depreciation. It’s important to remember, however, that the money “set aside” for depreciation actually establishes a fund not to replace that specific equipment – but to buy newer, more advanced machinery, which always embodies qualitative improvements. In that regard, I believe that it is gross investment (and hence gross domestic product, not net domestic product) which provides the more relevant indicator of total investment and the total value of output.

Personal Income: Most individuals receive most of their income from their employment effort (wages, salaries, and employee benefits). However, other forms of income are also received by households. Government transfer payments provide an important supplement to income for many. Some households receive investment income (although for the vast majority of households, this income is small relative to other income sources). The income from unincorporated businesses and farms also enters household spending accounts. Total personal income represents the sum of all these forms of household income; it indicates the total spending power available to households in the economy. Personal *disposable* income then represents the income left over after personal income taxes are paid to government.

Total Return to Capital: The overall income earned by workers in an economy is approximated by the total value of labour income (although remember that “labour” income also includes the salaries received by top executives). It’s harder to measure the total income earned by the owners of capital. Some of that income, obviously, is represented by the level of corporate profits. But there are other ways in which the owners of capital also receive a share of the pie produced each year in the economy. Depreciation is a payment to capital, as well: it is received by the owners of capital (mostly companies), but deducted from corporate revenues in the calculation of profits (since it represents the wear and tear on existing capital assets). Investment income represents a payment to capital, as well, in which the individuals who own financial assets capture a share of total profits. Finally, some of the income received by unincorporated small businesses and farms also represents a payment to their invested capital (although most of that income reflects their own, hard work).