

## CHAPTER 3: PRINCIPAL SOURCE DATA

(Updated: May 2019)

- Source data as determinants of initial release and revision schedules
- Source data for the current quarterly estimates
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Source data are the information BEA uses to prepare the NIPA estimates, and estimating methods are the steps BEA takes to transform the source data into these estimates. The interaction of source data and estimating methods determines the accuracy, reliability, and relevancy of the accounts.

The data that BEA uses are collected from a variety of sources and are usually collected for purposes other than for incorporation into BEA's estimates. Data collected by federal government agencies provide the backbone of the estimates; these data are supplemented by data from trade associations, businesses, international organizations, and other sources. The Government data are from a number of agencies, including the Commerce Department's Census Bureau, the Labor Department's Bureau of Labor Statistics (BLS), the Treasury Department, the Office of Management and Budget, and the Agriculture Department. "Administrative" data are data that are tabulated by federal government and by state and local government agencies as a byproduct of administering their programs—such as processing corporate tax returns, regulating public utilities, and issuing building permits. Examples of important administrative sources of data for the NIPAs include the Internal Revenue Service's Statistics of Income program, which provides data for a number of NIPA income estimates, the *Budget of the United States Government* from the Executive Office of the President, which is the major source of data for the NIPA estimates of federal government consumption expenditures and gross investment, the social insurance programs of the Center for Medicare and Medicaid Services and the Social Security Administration, which provide data on health insurance and social security incomes, and the military payroll systems of the U.S. Department of Defense. "Statistical" data are data collected by the federal statistical agencies, such as the Census Bureau and BLS. These data consist of periodic economic and population censuses and a wide range of sample surveys, such as those that collect data on manufacturing and trade, employment, and prices. The relatively few surveys that BEA conducts cover international trade in services and international direct investment, both by foreign companies in the United States and by U.S. companies in foreign countries.

The source data available to BEA are not always ideal for the preparation of the NIPAs. BEA must develop methods that transform the best available data into estimates that are consistent with the NIPA concepts and framework and that fill gaps in the coverage of the source data. (See "Chapter 4: Estimating Methods.")

### Source data as determinants of initial release and revision schedules

The availability of the source data is an important consideration in determining the schedules for the initial release and the subsequent revisions of the NIPA estimates. One factor affecting availability is the speed with which the source data are collected, compiled, and released. Another factor is whether the source data are part of a statistical program that, over time, provides more complete or otherwise better coverage—for example, if the sample is larger or if more detailed information is collected for an annual survey than for the monthly surveys.

In general, the most comprehensive source data for the expenditure components of gross domestic product (GDP) are available at the 5-year intervals associated with the economic census of establishments conducted by the Census Bureau. The economic census is the primary data source for BEA’s input-output accounts, which are used to “benchmark” the NIPA estimates for the quinquennial census years. Related annual surveys are drawn from samples of the establishments covered in the economic census; these surveys generally collect less detailed data than those collected in the economic census. Many of the annual surveys are supplemented by monthly surveys that involve smaller samples and that collect less detailed data than the annual surveys.<sup>1</sup> In addition, responding to the censuses and annual surveys is generally mandatory, while responding to most of the quarterly and monthly surveys is voluntary.

The data from the monthly surveys are available first, and they provide much of the information that is used to prepare the initial, or “current,” quarterly (and for a few components, monthly) NIPA estimates. These estimates are subsequently revised as additional reports become available from the monthly surveys. Annual updates, which are timed to incorporate newly available annual source data, are usually carried out each summer. Comprehensive updates, which incorporate the most complete source data as well as other improvements to the accounts, are carried out at about 5-year intervals.<sup>2</sup>

Thus, revisions do not reflect errors. On the contrary, revisions are mainly driven by the incorporation of more complete and revised source data, and the release of the revised estimates is determined by the availability of these data. The source data used to prepare

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<sup>1</sup> Many of the annual and monthly surveys are based on “probability sampling” (sometimes known as “scientific sampling”). In this process, establishments are first placed into various “strata” on the basis of their size. Depending on the distribution of establishments, an establishment in the largest strata could have a 100-percent probability of selection and thus have a sampling weight of 1—that is, the establishment would represent only itself. An establishment in a smaller stratum would have a smaller probability of selection, say 1 percent, but in that case the establishment would have a sampling weight of 100—that is, the sampled establishment would represent 100 establishments.

<sup>2</sup> Unless noted otherwise, annual data are presented on a calendar-year basis (i.e., covering January through December). Quarter data are also presented on a calendar basis (i.e., the first quarter (Q1) covers January, February, and March; Q2 covers April, May, and June; Q3 covers July, August, and September; and Q4 covers October, November, and December).

the estimates of GDP and gross domestic income (GDI) can be grouped into five general categories based on their quality, availability, and use.<sup>3</sup>

- *Comprehensive data* provide comprehensive or nearly comprehensive coverage of the relevant population. They are either consistent with the concepts, coverage, or timing underlying the national accounts, or they can be made consistent with only minor adjustments.
- *Adjusted comprehensive data* provide comprehensive or nearly comprehensive coverage of the relevant population; however, these data require substantial adjustments in order to conform to the concepts underlying the national accounts.
- *Direct indicator data* are used to indicate the movements of a series rather than the levels of a series; they are closely related to the comprehensive data that are ultimately incorporated into the estimates, but they are less detailed or do not provide comprehensive coverage of the relevant population.
- *Indirect indicator data* are used to prepare indicator series when more suitable data are not available. They include volume or activity indicators and other NIPA estimates.
- *Trend-based data* are used when no data are available; they are typically based on previous estimates, using moving averages, regressions, growth factors, or judgment.

The following sections describe the most important federal government source data that are used for the current quarterly estimates and for the annual and comprehensive updates of the NIPAs. In the preparation of the estimates, these sources are augmented by a wealth of information from other public sources and from private sources, such as trade associations.

### Source data for the current quarterly estimates

Data from Census Bureau monthly surveys are among the primary sources for the current quarterly estimates (table 3.1). For the most part, the samples for these voluntary surveys are drawn from the economic census, from the corresponding annual surveys, and from the Business Register; the samples are updated periodically to account for new businesses (“births”) and for businesses that discontinue operations (“deaths”).<sup>4</sup>

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<sup>3</sup> For more information, see Alyssa E. Holdren, “[Gross Domestic Product and Gross Domestic Income: Revisions and Source Data](#),” *Survey of Current Business* 94 (June 2014): 1–11.

<sup>4</sup> The Business Register is a comprehensive database of U.S. business establishments and companies that is maintained by the Census Bureau for statistical program use. A “business” is defined as legal or administrative entity that is assigned an employer identification number (EIN) by the Internal Revenue Service.

Table 3.1—Principal Sources for the Current Quarterly Estimates

Source	Agency
Monthly Survey of Manufacturers' Shipments, Inventories, and Orders	Census Bureau
Monthly Wholesale Trade Survey	Census Bureau
Monthly Retail Trade and Food Services Survey	Census Bureau
Quarterly Services Survey	Census Bureau
Monthly construction spending (value put in place)	Census Bureau
Monthly U.S. international trade in goods and services	Census Bureau and Bureau of Economic Analysis
U.S. International Transactions Accounts	Bureau of Economic Analysis
Annual projections and quarterly farm data	Agriculture Department
Monthly Current Employment Statistics	Bureau of Labor Statistics
Quarterly Financial Report	Census Bureau
Monthly Treasury Statement	Treasury Department
Consumer Price Index	Bureau of Labor Statistics
Producer Price Index	Bureau of Labor Statistics
International Price Indexes	Bureau of Labor Statistics

*Monthly Survey of Manufacturers' Shipments, Inventories, and Orders* (M3) is a Census Bureau survey of manufacturing companies. Although the survey is by company rather than by establishment, most large, diversified companies file separate reports for "divisions" with significant activity in different industrial areas. Data are collected on the value of shipments, on total inventories and inventories by stage of fabrication, and on new orders received and unfilled orders. These source data are primarily used in estimating investment in private equipment, change in private inventories, and nonfarm proprietors' income. An advance report on durable-goods manufacturers' shipments and orders is released about 3½–4 weeks after the close of the "reference" month.<sup>5</sup> The composite M3 data are released about 5 weeks after the close of the reference month.

*Monthly Wholesale Trade Survey* (MWTS) is a Census Bureau sample survey of companies that are primarily engaged in merchant wholesale trade (merchant wholesalers that take title to the goods they sell—such as jobbers, industrial distributors, exporters, and importers). Data are collected on the dollar values of wholesale sales and end-of-month inventories. The MWTS data are primarily used in estimating change in private inventories and nonfarm proprietors' income. The MWTS reports are released about 6 weeks after the close of the reference month and are incorporated into BEA's 2<sup>nd</sup> and 3<sup>rd</sup> estimates of GDP; the Census Bureau makes an advanced report on wholesale trade available to BEA in time to incorporate the data into its advance GDP estimates.

*Monthly Retail Trade and Food Services Survey* is a Census Bureau sample survey of companies that sell merchandise and related services to final consumers. Data are collected on the dollar value of retail sales and end-of-month inventories. These source data are primarily used in estimating personal consumption expenditures (PCE)

<sup>5</sup> The "reference" period (in this case month) is the period for which the data are collected.

and change in private inventories. An advance report on monthly sales for retail and food services (MARTS) is released about 1½–2 weeks after the close of the reference month. The composite retail sales and inventories data are released about 6 weeks after the close of the reference month and are incorporated into BEA’s 2<sup>nd</sup> and 3<sup>rd</sup> estimates of GDP; the Census Bureau makes an advanced report on retail inventories available to BEA in time to incorporate the data into its advance GDP estimates.

*Quarterly Services Survey (QSS)* is a Census Bureau sample survey that was initiated in 2003–2004 in order to improve the coverage of the service industries in the U.S. economy. The coverage of the QSS has since been expanded several times so that it now covers most of the categories of health care, transportation services, recreation services, communication services, and professional and other services.<sup>6</sup> The QSS data are primarily used in estimating PCE and private investment in intellectual property products. The QSS data are released about 2½ months after the close of the reference quarter.

The Census Bureau also makes advance QSS data available to BEA approximately 50 days following the end of each reference quarter, in time for the data to be incorporated into several PCE services estimates and estimates of private fixed investment in software as part of the second GDP release for each quarter.

*Monthly construction spending (value put-in-place)* is a Census Bureau measure of the value of construction installed or erected during a given period. The data for private nonresidential buildings, for government structures, and for multifamily residential buildings are derived from data collected by sampling the owners of construction projects.<sup>7</sup> The data for single-family residential buildings are derived indirectly using information collected in a series of sample surveys that track the number of housing-unit permits, starts, sales, and completions. The data for “other construction” are derived from a variety of sources covering farm, utility, communication, and railroad structures. These source data are primarily used in estimating private and government investment in structures. The data for construction put-in-place are released about 1 month after the close of the reference month.

*Monthly U.S. international trade in goods and services* consist of Census Bureau estimates of trade in goods and BEA estimates of trade in services. The Census Bureau tabulations of exported and imported goods are from documents filed with Customs and Border Protection, U.S. Department of Homeland Security; they cover all shipments above a certain size and a sample of the remaining shipments. The reports are incorporated into BEA’s 2<sup>nd</sup> and 3<sup>rd</sup> estimates of GDP; the Census Bureau makes an advanced report on trade in goods available to BEA in time to incorporate the data into its

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<sup>6</sup> For a discussion of the QSS data beginning with 2011, see Eugene P. Seskin and Alyssa E. Holdren, “[Annual revision of the National Income and Product Accounts](#),” *Survey of Current Business* 92 (August 2012): 24.

<sup>7</sup> In contrast, the census of construction, which is part of the economic census, measures construction on the basis of reports by establishments primarily engaged in construction. Thus, value put-in-place captures some important parts of construction activity that are not included in the census—such as nonemployer construction, architectural and engineering costs, own-account construction, homeowner construction, and construction done as a secondary source of revenue by nonconstruction establishments.

advance GDP estimates. The BEA estimates of trade in services are primarily based on 11 mandatory BEA surveys of selected services receipts, payments, and other data. These data are supplemented by a combination of monthly indicator source data, partial data from U.S. government agencies and from foreign central statistical offices and banks, and other secondary source data. These source data are primarily used in estimating private investment in equipment and in software and in estimating exports and imports. The U.S. international trade statistics are jointly released by the two agencies about 5 weeks after the close of the reference month.

*International Transactions Accounts (ITAs)*, prepared by BEA, summarize the quarterly transactions between the United States and the rest of the world. In the ITAs, the current account records exports and imports of goods and services, receipts and payments of income on assets, and unilateral transfers (net gifts to other countries). In the capital and financial account, the capital account records capital transfers (such as debt forgiveness) and the financial account records transactions involving exchanges of financial assets for other financial assets or for tangible resources and gifts or grants of financial assets. These source data are primarily used in estimating corporate profits. The ITAs are released about 2½ months after the close of the reference quarter.

*Annual projections and quarterly farm data*, from the U.S. Department of Agriculture, consist of annual projections of crop output, quarterly projections of cash receipts and of inventories for livestock, and annual projections of government subsidy payments and production expenses for both crops and livestock. These data are primarily used in estimating change in private inventories and farm proprietors' income.

*Monthly Current Employment Statistics (CES) survey* is a sample survey of business establishments that is conducted by state employment security agencies in cooperation with BLS. The CES (also known as BLS-790) covers payroll employment in private nonagricultural industries during the pay period that includes the 12<sup>th</sup> of the month. The data collected include series for total employment, number of production or nonsupervisory workers, average hourly earnings, average weekly hours, average weekly earnings, and average weekly overtime hours in manufacturing industries. (BLS has developed experimental series that extend coverage to all employees and that include irregular payments, such as bonuses.) These source data are primarily used in estimating PCE, wages and salaries, and nonfarm proprietors' income. The CES data are usually released on the first Friday following the close of the reference month.

*Quarterly Financial Report (QFR)*, prepared by the Census Bureau, provides aggregate statistics on the financial position of U.S. corporations. Based on a sample survey of firms above specified asset sizes, the QFR presents estimated statements of income and retained earnings, balance sheets, and related financial and operating ratios for manufacturing, mining, trade, and selected service corporations by industry and by asset size. These source data are primarily used in estimating corporate profits. The QFR statistics are released about 75 days after the end of the first, second, and third calendar quarters, and approximately 90 days after the end of the fourth calendar quarter..

*Monthly Treasury Statement* (MTS), prepared by the Financial Management Service of the U.S. Department of the Treasury, summarizes the financial activities of the federal government and off-budget federal entities in accordance with the Budget of the U.S. Government. The MTS presents a summary of receipts and outlays, surplus or deficit, and means of financing. The data are provided by federal entities, disbursing officers, and Federal Reserve banks. These source data are primarily used in estimating federal government receipts and expenditures and federal government consumption expenditures and gross investment. The MTS is usually released about 8 days after the close of the reference month.

*Consumer Price Index* (CPI), prepared by BLS, is a family of indexes that measure the average monthly change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI covers “out-of-pocket” expenditures, including user fees (such as water and sewer service) and sales and excise taxes paid by the consumer but excluding income taxes and investment items (such as stocks, bonds, and life insurance). The CPI is estimated from a statistical set of samples of urban areas, of consumers within those areas, of retailers and other outlets, and of specific, unique items purchased. CPIs are primarily used in deflating PCE, change in private inventories, and state and local government purchases. The CPI is released 2–3 weeks after the close of the reference month.

*Producer Price Index* (PPI), prepared by BLS, is a family of indexes that measure the average monthly change in prices received by domestic producers of goods and services. In 2014, BLS significantly expanded its current coverage of the United States economy to over 75 percent of in-scope domestic production. The expansion featured a transition from stage-of-processing to final demand-intermediate demand aggregation by incorporating PPIs for services, construction, government purchases, and exports.<sup>8</sup> The PPI is estimated from data collected from a sample of establishments that participate in the Unemployment Insurance System, a joint federal and state program that covers about 97 percent of wage and salary workers. PPIs are primarily used in deflating private investment in structures and equipment, change in private inventories, government purchases, and exports and imports. The PPI is released about 2 weeks after the close of the reference month.

*International Price Indexes*, prepared by BLS, measure monthly changes in the prices of goods and services that are sold by U.S. producers to foreign buyers (exports) and that are purchased from abroad by U.S. buyers (imports). The price indexes for exports of goods to Canada are based primarily on sampling information obtained from the Canadian Customs Service, and the indexes for exports of goods to other countries are based on sampling information obtained from the U.S. Census Bureau. The price indexes for imports of goods are based on sampling information obtained from Customs and Border Protection, U.S. Department of Homeland Security. The price indexes for exports and imports of services are based on sampling information that is developed separately for each service category. These price indexes are primarily used in deflating

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<sup>8</sup> See “Producer Price Index Transitions from Stage-of-Processing to the Final Demand-Intermediate Demand Aggregation System,” at <https://www.bls.gov/>.

private investment in equipment, change in private inventories, and exports and imports. The International Price Indexes are released about 2 weeks after the close of the reference month.

### Estimating schedule

For GDP and most other NIPA series, the estimates for each quarter are prepared on a schedule that calls for three successive "current" estimates—"advance," "second," and "third."<sup>9</sup> The specific release date for each month is primarily determined by the availability of the monthly reports on retail sales, manufacturing shipments, and international trade in goods from the Census Bureau (along with the time it takes BEA to process them).

- The advance quarterly estimate of GDP is released near the end of the month that follows the close of the reference quarter. For most of the product-side components, the estimate is based on source data for either 2 or 3 months of the quarter. In most cases, however, the source data for the second and third months of the quarter are subject to revision by the issuing agencies. Where source data are not available, the estimate is based primarily on BEA projections.<sup>10</sup>
- One month later, the advance estimate is replaced by the second estimate, which is typically based on source data for all 3 months of the quarter. However, in some instances, the source data used for the second estimate, particularly the data for the third month of the quarter, are subject to further revision.
- One month later, the second estimate is replaced by the third estimate, which incorporates revisions to source data for the third month of the quarter and newly available quarterly source data for some components.

For certain "income-side" series—gross national product, gross domestic income, national income, and corporate profits—"advance" estimates are not prepared, because of a lag in the availability of source data. For the first, second, and third quarters of the year, the release of the second GDP estimate presents the initial estimates for these income-side series, and the third GDP release presents revised estimates. For the fourth quarter, the estimates for these series are presented only in the third GDP release.

In addition, when the second estimate of GDP for the current quarter is released, the preceding quarter's estimates of private wages and salaries and affected income-side aggregates are revised to incorporate newly available preliminary tabulations from the

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<sup>9</sup> In the 2009 comprehensive update of the NIPAs, BEA introduced new names for the second two vintages of the current quarterly estimates. Formerly, the "second" estimate was known as the "preliminary" estimate, and the "third" estimate was known as the "final" estimate. The initial estimate continues to be named the "advance" estimate. (See Eugene P. Seskin and Shelly Smith, "[Preview of the 2009 Comprehensive Revision of the NIPAs: Changes in Definitions and Presentations](#)," *Survey* 89 (March 2009): 19–20.)

<sup>10</sup> A comprehensive table that presents the "Key Source Data and Assumptions" that are used to prepare each vintage of the estimate of GDP for the current quarter is available on BEA's website at [www.bea.gov](http://www.bea.gov).



BLS quarterly census of employment and wages (QCEW).<sup>11</sup> (For a description of the QCEW, see the section on source data for annual updates.)

#### Source data for successive vintages

As of 2014, indirect indicator data account for 34 percent of the source data used to calculate the advance GDP estimates.<sup>12</sup> Comprehensive data account for over 25 percent. Trend-based data account for 28 percent, and direct indicator data account for the remainder. (See chart 3.1 on the next page).

For the advance GDP estimates, indirect indicator and trend-based data together account for almost two-thirds of the source data used to calculate the estimates; for the third estimate, the two together account for only one-third-. Conversely, the share for the more-accurate comprehensive and direct indicator data, combined, increases from just over one-third to about two-thirds from the advance to the third estimate.

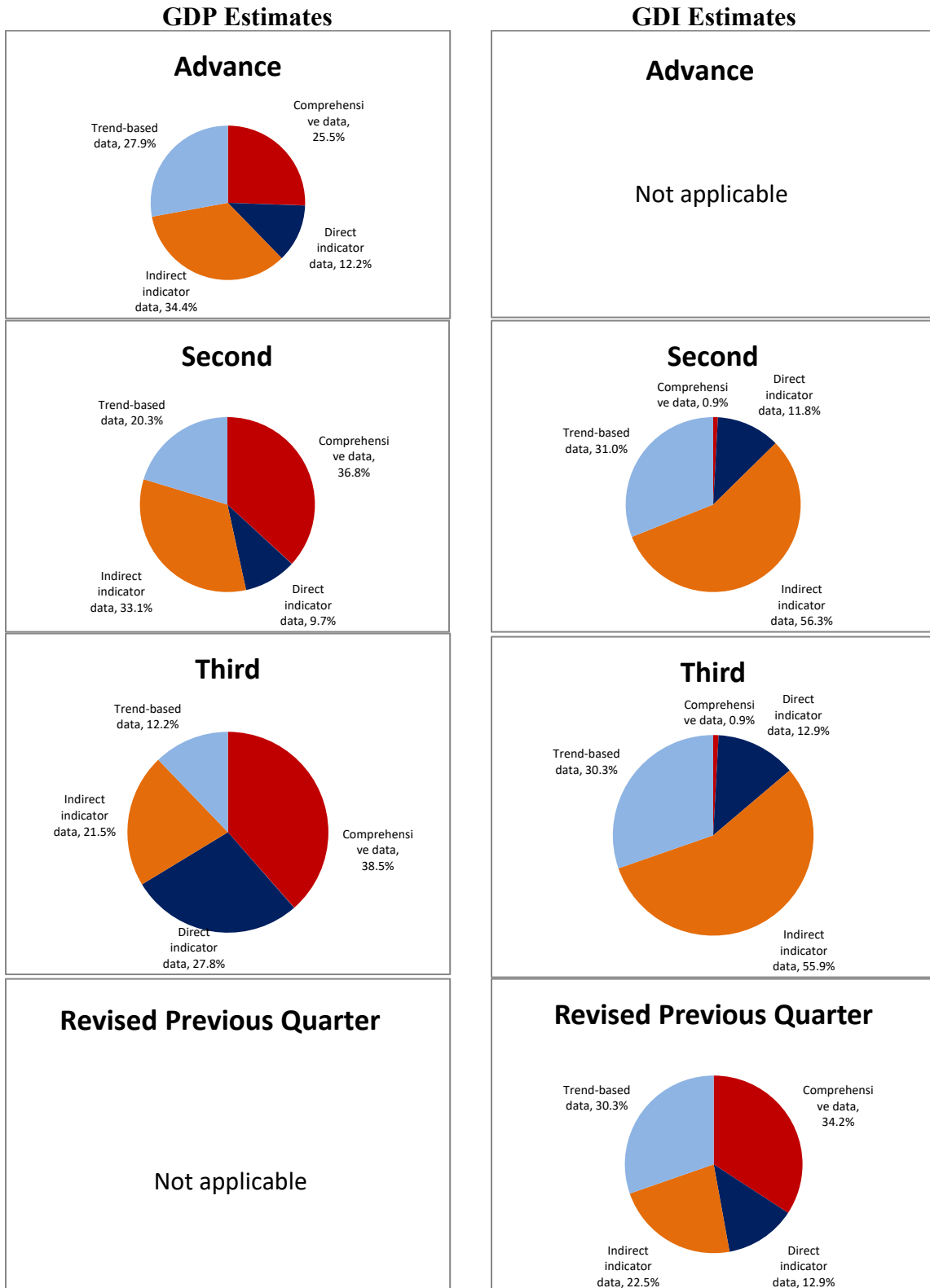
For estimates of GDI, there is a slower progression from less-comprehensive to more-comprehensive source data. Indirect indicator data account for 56 percent of the source data used to calculate the estimates for both the second and third estimates (as noted above, there is no advanced estimate for GDI). Trend-based data account for 31 percent of the source data in the second estimate, and 30 percent in the third. Direct indicator data make up only 12 and 13 percent of the second and third estimates respectively, and comprehensive data accounts for less than 1 percent in both estimates. However, the revision of the previous-quarter estimates at the time of the second release of GDP brings the use of comprehensive data up to 34 percent, and the use of indirect indicator and trend-based data down to 23 and 30 percent, respectively.

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<sup>11</sup> Affected aggregates include gross domestic income, the statistical discrepancy, gross national income, national income, personal income, disposable personal income, personal saving, gross (national) saving, compensation, and gross product of corporate business. Other components that are closely linked to wages and salaries, such as personal current taxes and employer contributions for government social insurance, are also revised. Product-side series, including GDP, are not affected.

<sup>12</sup> See Alyssa E. Holdren, "[Gross Domestic Product and Gross Domestic Income: Revisions and Source Data](#)," *Survey* 94 (June 2014).

**Chart 3.1— Shares of Source Data for the Quarterly GDP and GDI Estimates**



### Source data for the annual updates

Annual updates of the NIPAs are usually released in July and cover the months and quarters of the most recent calendar year and of the 4 preceding years.<sup>13</sup> The NIPA estimates for the most recent calendar year are revised to incorporate revisions that result from annual benchmarking of some of the principal monthly or quarterly source data. The NIPA estimates for all 3 years are revised to incorporate a broad range of newly available and revised annual source data (table 3.2). For the expenditures components, the newly available source data include annual surveys conducted by the Census Bureau. For the income components, the newly available source data include IRS tabulations of income tax returns and BLS tabulations of employment and wage information.

Table 3.2—Principal Newly Available Sources for NIPA Annual updates

Source	Agency
Annual Survey of Manufactures	Census Bureau
Annual Wholesale Trade Survey	Census Bureau
Annual Retail Trade Survey	Census Bureau
Service Annual Survey	Census Bureau
Annual surveys of state and local government finances	Census Bureau
Annual update of the International Transactions Accounts	Bureau of Economic Analysis
Annual farm statistics	Agriculture Department
Quarterly Census of Employment and Wages	Bureau of Labor Statistics
Tabulations of tax returns	Internal Revenue Service
Federal government annual budget	Office of Management and Budget

The first four sources listed in table 3.2 are the annual counterparts of the Census Bureau monthly surveys used for the current quarterly estimates. The more extensive annual survey samples are from companies listed in the Business Register, and the recipients are selected by stratified probability sampling. Response to these surveys is mandatory. New samples are usually selected after each economic census, and the samples are updated periodically to reflect business “births” and “deaths.”

*Annual Survey of Manufactures* (ASM) is a Census Bureau survey of manufacturing establishments with paid employees. The ASM is conducted in the years between economic censuses—that is, in all years not ending in 2 or 7. Data are collected on employment, payroll, value added by manufacture, materials consumed, value of shipments, detailed capital expenditures, supplemental labor costs, fuels and electric

<sup>13</sup> As part of the 2018 comprehensive update of the NIPAs, BEA extended the typical open period for annual updates of the NIPAs from 3 to 5 years. As part of the “flexible” approach to annual updates that BEA introduced in 2010, the open period may be extended beyond 5 years to allow for the incorporation of improvements in methodology. See Pamela A. Kelly, Stephanie H. McCulla, and David B. Wasshausen, “[Improved Estimates of the National Income and Product Accounts: Results of the 2018 Comprehensive Update](#),” *Survey* 98 (September 2018) and “[BEA Briefing: Improving BEA’s Accounts Through Flexible Annual Revisions](#),” *Survey* 88 (June 2008): 29–32.

energy used, and inventories by stage of fabrication. These source data are primarily used in estimating private investment in equipment, change in private inventories, and nonfarm proprietors' income. The ASM data are published about 11 months after the close of the reference year.

*Annual Wholesale Trade Survey (AWTS)* is a Census Bureau survey of companies that have significant activity in wholesale trade. These companies include wholesalers that take title of the goods they sell—such as jobbers, industrial distributors, exporters, importers, and manufacturer sales branches and offices (MSBOs)—and, beginning in 2007, wholesalers that do not take title—such as agents, merchandise and commodity brokers, commission merchants, and electronic business-to-business marketers. Merchant wholesalers excluding MSBOs provide data on sales, inventories, inventory valuation, purchases, and gross margin. MSBOs provide data on sales, inventories, inventory valuation, and operating expenses. The wholesalers that do not take title provide data on sales, commissions earned, gross selling value of sales conducted for others, and operating expenses. The AWTS data are primarily used in estimating change in private inventories and nonfarm proprietors' income. The statistics for all wholesalers are normally published about 15 months following the close of the reference year.

*Annual Retail Trade Survey (ARTS)* is a Census Bureau survey of retail companies with one or more establishments that sell merchandise and associated services to final consumers. The survey is sent to a sample of retail establishments with paid employees, and the data collected are supplemented by administrative data to account for businesses without paid employees (typically self-employed individuals or unincorporated partnerships). The ARTS collects data on the dollar value of retail sales, sales taxes collected, inventories, inventory valuation, cost of purchases, and accounts receivables balances. These source data are primarily used in estimating PCE and change in private inventories. The statistics are normally published about 15 months following the close of the reference year.

*Service Annual Survey (SAS)* is a Census Bureau survey of companies that provide services to individuals, businesses, and governments. The survey is sent to selected businesses with paid employees, and the data collected are supplemented by administrative data or imputed values to account for businesses without paid employees. The data collected include operating revenue for both taxable and tax-exempt firms and organizations, sources of revenue, exports, and inventories for selected industries, and selected industry-specific items. The SAS has been expanded over time in order to improve the coverage of the service industries in the U.S. economy.<sup>14</sup> The SAS data are primarily used in estimating PCE and private investment in intellectual property products. The statistics are normally published about 12 months after the close of the reference year.

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<sup>14</sup> For a discussion of the most recent expansion of the SAS, see Eugene P. Seskin and Alyssa E. Holdren, 24.

*Annual surveys of state and local government finances*, prepared by the Census Bureau, provide data on the financial activities of state governments and of local governments, including counties, municipalities, townships, special districts, and school districts. The data are compiled from three sources: an enumeration of all 50 states, a probability sample survey of local governments, and data from federal government agencies. Reported data are for each government's annual accounting period (fiscal year) that ends on or before June 30 of the survey year. Data are obtained for revenue, expenditure, debt, and financial assets. These source data are primarily used in estimating state and local government spending, employee compensation, and taxes on production and imports. The data are available about 12 months after the close of the survey year.

*Annual revision of the International Transactions Accounts (ITAs)*, prepared by BEA, incorporates newly available annual source data and statistical, methodological, and presentational improvements into the accounts, which may result in revisions that extend back for a number of years.<sup>15</sup> (The ITAs were described in the preceding section on sources for the current quarterly estimates.) These source data are primarily used in estimating exports of goods and services, and imports of goods and services. The annual update of the ITAs is released in mid-June.

*Annual farm statistics* are collected in the Agricultural Resource Management Survey (ARMS), which is sponsored jointly by the Economic Research Service and the National Agricultural Statistics Service of the U.S. Department of Agriculture. The ARMS starts in the fall with the collection of data on crop production and costs and finishes in the spring with the collection of data on whole farm and livestock production practices and costs. The data, which underpin USDA's annual estimates of net farm income, cover virtually every aspect of U.S. agriculture, including production and supplies, prices paid and received, farm labor and wages, and farm finances. These source data are primarily used in estimating change in private inventories and farm proprietors' income. The ARMS data are available in the fall following the close of the reference year.

*Quarterly Census of Employment and Wages (QCEW)* is a cooperative program (also known as the ES-202 program) involving BLS and the state employment security agencies. The QCEW produces a comprehensive tabulation of employment and wage information for workers who are covered by state unemployment insurance programs or by the unemployment insurance program for federal employees; as such, the QCEW is a virtual census of nonagricultural employment and wages. These source data are primarily used in estimating PCE, wages and salaries, and nonfarm proprietors' income. The QCEW data are usually released to the public 6 to 7 months after the close of the reference quarter.<sup>16</sup>

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<sup>15</sup> For a description of an annual update of the ITAs, see the most recent July issue of the *Survey*.

<sup>16</sup> As noted in footnote 9, some preliminary information from the QCEW is incorporated into the quarterly estimates on a delayed basis. However, the annual NIPA update provides the opportunity for a more complete incorporation of these data.

*Tabulations of tax returns*, prepared by the IRS Statistics of Income program, are compilations of information from the tax returns of corporations and of sole proprietorships and partnerships. The aggregate data are compiled based on stratified probability samples of tax or information returns. The data collected include by-industry information on assets, business receipts and deductions, and net income. The source data are primarily used in estimating corporate profits and nonfarm proprietors' income. The data for nonfarm sole proprietorships and partnerships are released to the public about 1 ½–1 ¾ years after the end of the tax year, and the data for corporations are released to the public about 1 ¾ years after the end of the tax year.<sup>17</sup>

*Federal government annual budget*, a report prepared by the Office of Management and Budget, presents preliminary estimates of U.S. Government receipts and expenditures for the current fiscal year (October 1 through September 30) and revised data for the preceding fiscal year, as well as the President's proposed budget for the upcoming fiscal year. Data are provided on budget receipts by source, such as individual and corporate income taxes, and on budget outlays by function, such as national defense and Medicare. These source data are primarily used in estimating federal government spending and wages and salaries. The report is usually released in early February.

### Source data for the comprehensive updates

Comprehensive updates of the NIPAs are carried out about every 5 years, and they may result in revisions that extend back for many years. These revisions are timed to incorporate the infrequent but most comprehensive source data, and they also provide the opportunity to incorporate definitional, statistical, and presentational improvements to the accounts. Generally, comprehensive updates replace the annual update that would normally take place in that year, and so they also incorporate the source data that would normally be incorporated in the annual update. The most important source for the comprehensive update is BEA's benchmark input-output tables, which, in turn, are primarily based on the detailed information collected in the economic census conducted by the Census Bureau (table 3.3).

Table 3.3—Principal Newly Available Sources for NIPA comprehensive updates

Source	Agency
Benchmark input-output accounts	Bureau of Economic Analysis
Economic census	Census Bureau
Census of governments	Census Bureau

<sup>17</sup> For corporations, the tax year covers tax returns that are filed for accounting periods ending in July of one year through June of the following year; for most corporations, the accounting period coincides with the calendar year.

*Benchmark Input-Output (I-O) Accounts*, prepared by BEA, are U.S. economic accounts that provide detailed statistics on economic processes and the relationships between various industries in the U.S. economy. The core of the I-O accounts consists of the “supply” table, which shows the value of each commodity produced by each industry, and the “use” table, which shows the consumption of each commodity by each industry or final user. The benchmark I-O accounts, which are prepared at about 5-year intervals, incorporate a vast amount of source data, the most important of which are data from the economic census. The I-O account estimates are used extensively as benchmarks for many of the corresponding NIPA estimates, but I-O accounts also directly incorporate some of the NIPA estimates, such as the estimates for owner-occupied housing and for motor vehicles. The benchmark I-O accounts are usually released about 5 years after the reference year for the economic census.<sup>18</sup>

*Economic Census* conducted by the Census Bureau, is a mandatory census that provides a detailed portrait of the nation’s economy once every 5 years.<sup>19</sup> The economic census consists of several censuses that cover nearly all private industries, including manufacturing, wholesale and retail trade, construction, transportation, information, services, and finance and insurance.<sup>20</sup> In the 2007 Economic Census, report forms were sent to the establishments of all large employers (all multi-establishment firms and all firms with a payroll above a specified cutoff) and to a stratified sample of small employers (single-establishment firms with payroll below the cutoff). Statistics for selected small employers (for example, those with fewer than 10 employees) and all firms without employees were compiled from administrative records of the IRS and other federal government agencies. The economic census is the most important data source for the benchmark I-O accounts. Results from the economic census are released over a period of several years.

*Census of Governments*, which is conducted by the Census Bureau in the same years as the economic census, is a voluntary census that provides periodic and comprehensive statistics about governments and governmental activities. The census covers all state and local governments, including counties, cities, townships, special districts, and school districts. Data are collected on revenues, expenditures, debt, assets, employees, payroll, and benefits for the individual fiscal year that ended prior to July 1 of the census year. These source data are primarily used in estimating state and local government spending. The financial data are released beginning about 16 months after the close of the census year, and the employment data are released beginning about 12 months after the close of the census year.

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<sup>18</sup> Effective with the 2013 cycle of comprehensive updates of the NIPAs and releases of the benchmark I-O accounts, the two sets of accounts are fully integrated—that is, the results of the 2013 comprehensive NIPA revision were released before publication of the 2007 benchmark I-O accounts. Previously, benchmark I-O accounts were released first, and thus they were not fully consistent with the revised NIPA estimates. For more information, see Erich H. Strassner and David B. Wasshausen, “[Preview of the 2013 Comprehensive Revision of the Industry Economic Accounts](#),” *Survey* 93 (June 2013): 19–33.

<sup>19</sup> See “Economic Census” at <https://www.census.gov/programs-surveys/economic-census.html>.

<sup>20</sup> Prior to the 1997 Economic Census, these censuses were referred to in the plural—that is, as “economic censuses”—because they were considered to be compilations of distinct censuses for each major industry.