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Feeding the National Accounts

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FEEDING THE NATIONAL ACCOUNTS

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ABSTRACT

Modern market economies are probably the most complex institutions ever devised by human beings. In the United States, by far the most complex of these tracking systems is the National Income and Product Accounts (NIPA). This article's objective is to survey the main data sources currently used in the NIPA. It is not primarily an article about methodology, but focuses instead on the raw inputs to the process: Who is answering what kinds of questions? Closer acquaintance with the data sources behind the accounts highlights the considerable uncertainty about exact magnitudes of various aggregate quantities (and their growth rates) and the need for ongoing evaluation of the data-collection efforts that support the accounts

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Note to readers: Dollar amounts will be updated to 1998 after the October 1999 comprehensive revisions. In other respects, this version should be consistent with the revisions.

INTRODUCTION

Modern market economies are probably the most complex institutions ever devised by human beings. Both the private and public sectors need reliable information about the condition of the economy, and systems for tracking the economy are ubiquitous, ranging from trade magazines to measurements of help-wanted advertising to unemployment insurance claims to the consumer price index. Even weather data has an important place in understanding what is happening in the economy.

In the United States, by far the most complex of these tracking systems is the National Income and Product Accounts (NIPA). The NIPA attempt to track income and production for the entire United States economy. The accounts are compiled by the Bureau of Economic Analysis (BEA), an agency of the Department of Commerce. Some sense of the scale of this undertaking comes from the numbers involved: At this writing, more than 130 million people are employed by more than 5 million firms and several thousand governmental entities to produce a gross domestic product (GDP) of about \$9,000,000,000,000 per year.

Every student of macroeconomics gains some understanding of the abstract accounting principles that underlie the NIPA. Most introductory macroeconomics texts devote a chapter to these principles but give almost no attention to the data that fill in the blanks in the accounting framework. In fact, few economists have more than a superficial knowledge of how deeply the BEA is willing to dig to produce plausible estimates. There are a number of reasons BEA's sources of data should be more widely

understood. First, a sense of the complexity of the raw data emphasizes the importance of the national income accounting system itself; without the organizational principles devised by Simon Kuznets and others, those interested in the overall condition of the economy would find themselves overwhelmed by its sheer complexity. John Haltiwanger (1997) described the impression many economists have of the NIPA: “This depiction ... causes one to imagine that aggregate statistics emerge from some great black cauldron, mixed together with data from an alphabet soup of surveys (p. 68).” To some extent, this impression is inevitable, given the extent and complexity of the task. Partly, however, it comes from the fact that the data-collection system behind the NIPA is closely tied to the structure of the accounts; there is no overarching database design from which NIPA statistics are derived. Instead, major statistical programs are designed to feed specific NIPA tables.

Second, the phrase “garbage in, garbage out” applies as well to data production as it does to computer programs. The NIPA are the result of a complex process based on many inputs, so it is impossible to construct formal measures of their statistical reliability (as can be done for the unemployment rate for example).¹ The data BEA uses to construct the NIPA are generally reliable, but they are far from perfect. They may be inaccurate, or they may not be precisely what is needed. Consumers of NIPA statistics should have at least a passing understanding of how errors can arise.

Third, federal statistical programs overlap extensively, with the NIPA being the most processed form of the data. Virtually every major statistical release feeds data into the NIPA. A data consumer should understand the extent to which the figures on the

monthly GDP press release are simply new packaging for information that was in last month's headlines.

Fourth, economists often make comparisons of the economy's performance during different periods. There has been considerable debate, for instance, about whether the U.S. economy was more volatile during the nineteenth and early twentieth century than since World War II (see, for example, Romer, 1999). Another example is the debate about the slowdown of productivity growth that started during the 1970s and may or may not have ended. One question always arises in these comparisons: Do apparent differences between two periods reflect actual changes in the economy, or do they result from inadequacies or changes in data-collection procedures? Understanding of the present procedures is therefore a necessary starting point for these comparisons.

Finally, data collection is not free. Large shares of the budgets of the statistical agencies involved in the production of the NIPA are devoted to data collection. Changes in the agencies budgets change the data-collection procedures for better or for worse. Furthermore, not all of the costs are borne by the statistical agencies. Those who are asked or required to provide data sometimes bear significant reporting costs. In addition to budgetary decisions, therefore, policymakers must make choices about how large a burden the private sector will be asked to bear. To determine how much of society's resources should be devoted to data collection for the NIPA, a policymaker should understand the weaknesses of the raw data, as well as the magnitude of the data-collection task.

¹ The unemployment rate is calculated from answers to yes-or-no questions posed to a systematic sample of U.S. households by the Current Population Survey. The measured unemployment rate is essentially a sample mean, so it is easy to estimate its standard error (approximately 0.11 percentage point).

Another aspect of the resource allocation issue has been highlighted by Haltiwanger (1997). Ideally, the major data collection efforts behind the NIPA would produce a database that could be used to study the economy using various approaches, including the NIPA. Instead, as mentioned above, the structure of data collection for the NIPA is closely tied to the structure of the accounts, and, therefore, it is rather difficult to use the data in a different analytical framework. In particular, Haltiwanger and others have argued that it is important to be able to track the behavior of individual economic entities over time, but doing so with current data sources ranges from difficult to impossible, depending on the sector and the question under study.

This article's objective is to survey the main data sources currently used in the NIPA. It is not primarily an article about methodology, but focuses instead on the raw inputs to the process: Who is answering what kinds of questions? Fortunately, a relatively small number of sources account for most of GDP. Subsequent sections take for granted a basic understanding of the logical structure of the NIPA.² The next section discusses the structure of the NIPA from the standpoint of the flow information over time, followed by surveys of the data used in the product account, the income account, quarterly estimates, and price adjustment.

THE NIPA ESTIMATES

The NIPA are a double-entry accounting system; the dollar values of income and production for a given quarter or year should be the same. Since production and income are calculated separately, using largely separate data sources, a reconciling entry, the statistical discrepancy, appears in the income account. From 1989 to 1998, the absolute

value of the statistical discrepancy for annual estimates averaged 0.5 percent of GDP. It is BEA's judgement that the product side of the accounts is more accurate, and, therefore, GDP is defined as the sum of product-side components.

This overview focuses on the construction of nominal or current-dollar GDP. In general, this means that the thorny issues of price change do not arise.³ The income side of the accounts is never adjusted for inflation, in any case. There are some areas of the accounts—the production of motor vehicles, for example—where it is natural to multiply a physical quantity by an average price to get the current value of production, and this is what BEA does. This procedure is not the same as multiplying the real GDP component by a price index, however, since there is no attempt to adjust for quality changes.

There are really three tiers of GDP estimates. About every five years, benchmark estimates incorporate the most comprehensive information.⁴ The benchmarks are definitive estimates for a given year. For present purposes, the most important aspect of the benchmark estimates is easily described: It is the use of information from the quinquennial economic censuses. There are censuses of manufacturing; services; retail trade; wholesale trade; construction; transportation, communications, and utilities; mining; finance, insurance, and real estate; and state and local governments. The censuses attempt to gather information from every establishment engaged in a particular type of activity, allowing BEA to pin down precisely the level of economic activity in a given sector.

² A basic discussion of the accounts can be found in virtually any macroeconomics text such as Mankiw (199?) or Abel and Bernanke (199?).

³ Estimation of price change for product-side GDP components is discussed in Seskin and Parker (1998), Triplett (1997), and U.S. Department of Commerce (1998).

⁴ The benchmark revisions are also when most conceptual revisions are introduced into the accounts.

Between benchmark estimates and following the most recent benchmark year, the pattern of changes from year to year comes from annual estimates. The annual estimates incorporate information from data sources, such as tax returns, that are available annually and from surveys with smaller samples of establishments (compared to the economic censuses). Estimates of the pattern of economic growth during the year—the quarterly GDP estimates—are based on still less comprehensive and, for the most recent quarters, incomplete data. The quarterly estimates are revised to be consistent with the annual estimates once the latter have been compiled.

Revisions of GDP estimates are made on a similar schedule, but the differences among benchmark, annual, and quarterly GDP estimates should *not* be thought of primarily as revisions; they are different estimates, derived from largely different sources. The three-tiered structure of data collection and estimates ensures that GDP estimates do not drift too far off track, while avoiding the expense of collecting exhaustive data for every quarter.

Most of this article concentrates on the annual estimates. When sources differ for the most recent year or years (usually because of data availability lags), the article concentrates on the methodology that ultimately determines the annual estimate for a given year.

THE PRODUCT ACCOUNT

The main pointers to data sources for the various NIPA entries in this and the following sections are U.S. Department of Commerce (1990, 1998b). Most of the information on the data sources themselves can be found on the responsible agencies' web

sites (primarily www.census.gov and www.stats.bls.gov). Figures 1, 2, and 3 show the relative sizes of the most important components of GDP.

Consumption of Durable and Nondurable Goods

For annual estimates, the most important source of data for the calculation of consumption expenditures is the Annual Retail Trade Survey, conducted by the Census Bureau. This survey currently covers about 22,000 retail firms, which report their sales and end-of-year inventories (used in the calculation of change in business inventories). For 1997, personal consumption expenditures based mainly on the retail trade survey totaled about \$1.9 trillion.⁵ (GDP was about \$8.1 trillion in 1997.)

The use of these surveys illustrates the kind of weakness in the source data that can induce errors in the NIPA. First, ordinary sampling variation comes from using a sample of firms rather than every firm to make the estimates.⁶ Second, there are nonsampling errors caused by nonresponse, mistakes, and so forth. The Census Bureau reports that 11 percent of reported national annual retail sales are imputed because of internal inconsistencies or errors in the raw survey data.⁷ Imputations are, of course, less reliable than actual data, though it is generally impossible to gauge precisely how much less reliable.

⁵ Information required to divide total retail sales into sales to persons, businesses, and governments is based on the most recent input-output tables. The input-output tables themselves are based primarily on the economic censuses. A similar allocation among purchasers must be accomplished in various other parts of the NIPA, when the source data come from entities that serve more than one category of buyer.

⁶ Sampling variability is not particularly large relative to the level of retail sales, but when the sample changes from one survey to the next, it makes up a much larger proportion of the change in sales. In other words sampling variation ultimately has a larger impact on growth rates in the NIPA than on levels.

⁷ “Imputation” refers to the substitution of estimates for missing or clearly incorrect data. The imputation may be based on previous behavior of the economic unit under study, the behavior of similar units, or on a theoretical construct. An example of the latter is the treatment of services produced by owner-occupied housing described below.

A perennial problem with business surveys is maintaining a representative sample as the underlying population of businesses evolves. Recently, for example, rapid evolution of the Internet and related activity required special attention.

Much of the information about new auto expenditures (\$86 billion in 1997) comes from trade sources from the motor vehicle industry. In particular, these sources provide information about number of vehicles sold domestically, list prices, and type of purchaser. The latter is used to determine how to split vehicle sales into consumption, private investment, and government investment. Additional information on dealer discounts, sales taxes, and transportation charges comes from other sources. New truck expenditures (\$69 billion in 1997) are handled in much the same way, except that the number of vehicles is based on shipments data from the Annual Survey of Manufactures.

Consumption of Services

The single largest item in most consumers' budgets is housing. Housing services accounted for \$800 billion of 1997 GDP. The Census of Housing, conducted every ten years, provides a benchmark for the number of occupied housing units. In other years the American Housing Survey, conducted every other year, and the monthly Current Population Survey are used to update the occupied housing figures. For rented housing, the dollar value of the service flow is obtained by multiplying the tenant-occupied housing stock by average rent, which is also collected in the Census of Housing or the American Housing Survey. In years when neither of those surveys is available, rent is extrapolated from the previous value using the change in the consumer price index (CPI) for residential rent. (The CPI also used for quarterly NIPA estimates.)

Owner-occupied housing services are handled in the same way, though a rental rate must be imputed. This is done using actual rents on comparable rented dwellings from the Census of Housing. In other years and for quarterly estimates, the change in average imputed rent is based on the *change* in the CPI for homeowners' equivalent rent, which is itself based on the monthly CPI Housing Survey.⁸

The Service Annual Survey, with a sample of about 30,000 service businesses, provides the basic data for roughly another \$800-900 billion of consumption expenditures in various categories. One of the largest of these service categories is professional medical services.

Annual surveys of state and local governments generate data on publicly provided services such as public hospitals, state universities, and municipal water systems.⁹

The data sources for the remainder of services consumption (roughly half of the total) are difficult to summarize. They include a wide variety of sources such as regulatory agencies, trade sources, and wages and salaries of employees engaged in a particular activity (collected as part of state unemployment insurance programs).

Investment

Investment in residential and nonresidential structures, about \$568 billion in 1997, is based on the value of construction put in place, reported by the Census Bureau.

Residential value is based on the Census Bureau's Housing Starts Survey and Housing

⁸ Homeowners' equivalent rent is based on the question, "How much do you think you could rent this house out for monthly, not including utilities?" For details see Bureau of Labor Statistics (1997), chapter 17. Notice that the question and answer refer to the homeowner's opinion, not to market transactions (the generally preferred, but in this case unavailable, data source for the NIPA).

⁹ Public elementary and secondary education falls under government consumption, since it is paid for by governments.

Sales Survey. Nonresidential value put in place is based largely on data from a trade source, the F. W. Dodge division of McGraw-Hill.

Except for autos, trucks, and aircraft, estimates of investment in producers' durable equipment are based on manufacturers' shipments reported in the Annual Survey of Manufactures. The Service Annual Survey is the primary source for data on software investment (\$zzz billion in 1998).¹⁰ Producers' durables investment, excluding autos, totaled about \$575 billion in 1997. Autos and trucks are handled in the same way as those which show up in consumption. Aircraft investment is based on shipments reported to the Census Bureau, adjusted for imports and exports.

Most of the change in business inventories is associated with manufacturing and trade. Businesses in these sectors are asked about end-of-year inventories in the Annual Retail Trade Survey, the Annual Wholesale Trade Survey, and the Annual Survey of Manufactures.

Government consumption and investment expenditures

Not surprisingly, data on federal expenditures come from the federal government in one way or another. Most of the complications here come from translating budgetary concepts into NIPA concepts.

The largest single input to the NIPA calculations of federal consumption expenditures is civilian wages and benefits, reported by the Office of Personnel Management. Compensation is the largest component of state and local expenditures as well. The same entries for compensation of government employees show up on the income side of the accounts under compensation of employees (where the data sources

¹⁰ Software purchased by businesses and government was reclassified as investment in the comprehensive NIPA revisions released in October 1999.

are discussed). The compensation of government employees is the largest component of the NIPA for which corresponding entries on the income and product sides of the accounts do *not* come from separate sources (see Figure 3). This deviation from the usual principle is necessary because the product of government activities is not generally marketed, and for most government activities there is no closely related private activity. Consequently, there are no market prices to use in valuing the output of government, and no good way to impute the value.¹¹ (By comparison, owner-occupied housing is not marketed, but comparable rental housing provides a reasonable basis for imputation.)

A similar issue arises for government consumption of fixed capital (economic depreciation).¹² In the private sector, the fixed capital that is “used up” during the year produces output that is measured separately (canning machines produce canned peas for example). Since the output of government capital is typically not sold and, therefore, not measured, consumption of government fixed capital is entered in both the product and income accounts in order to maintain the internal consistency of the accounts. (The data sources are discussed below under “Consumption of fixed capital.”)

State and local structures investment is based on the same construction surveys that are used for private investment in structures. The remainder of state and local consumption and investment expenditures are based primarily on information from Census Bureau Annual Survey of Government Finances.

¹¹ One implication is that using NIPA output data to calculate the labor productivity (output per hour) of government employees is meaningless. The same is true of the service industries mentioned earlier for which output is estimated using primarily compensation of employees.

¹² Beginning in 1996 <<check>> the NIPA handling of government activities was refined to treat government consumption and investment separately. Previously all government purchases were treated as consumption, so there was no calculation of depreciation for government.

Net exports

Exports and imports of goods (\$688 billion and \$888 billion, respectively) are based on compilations of documents collected by the Customs Service. In principle, these documents cover all goods that are exported or imported, but there are significant under-reporting problems, particularly for exports.¹³ Estimates of trade in services (exports, \$277 billion; imports, \$170 billion) are based on a number of BEA surveys of potential domestic importers and exporters.

THE INCOME ACCOUNT

Compensation of employees

For most industries and for state and local government, wages and salaries data come primarily from state unemployment insurance agencies (ES-202 data). Employers are required to report this data as part of the unemployment insurance system. This one source accounted for about 77 percent of compensation, or 45 percent of GDP in 1997. As mentioned above, federal civilian compensation is based on data from the Office of Personnel Management. Military compensation is based on the *Budget of the United States*.

Employer contributions for social insurance come mostly from the agencies administering various social insurance programs (the Social Security Administration for example).

¹³ Trade with Canada, the United States' largest trading partner, is a special case. Import information is generally scrutinized more thoroughly by customs officials because of tariffs, quotas, and so forth. Consequently, import data are generally more reliable than export data. Canada and the United States have established a bilateral agreement to share detailed import data, so that now United States exports to Canada are based on Canadian imports from the United States and vice versa.

The largest components of other labor income are employer contributions for group health insurance and employer contributions to private pension and profit-sharing plans. Employer contributions are calculated as the difference between total and employee contributions. The Health Care Financing Administration collects data on total health insurance contributions. The portion paid by employees (classified as consumption) is based on the Consumer Expenditure Survey, which asks households to track all of their expenditures. (The Consumer Expenditure Survey is also used to determine how to weight different prices in assembling the CPI.) Because of data availability lags, however, less comprehensive data from Bureau of Labor Statistics (BLS) compensation surveys are used for the most recent three years of employer group health insurance contributions. These are the same surveys of employers used to produce the Employment Cost Index.

Data on pensions and profit-sharing also come from the BLS compensation surveys, and from business tax returns, Census Bureau surveys of state and local retirement funds, and the federal Office of Personnel Management.

Corporate profits and proprietors' income

The primary data source for calculation of corporate profits (\$818 billion in 1997) and nonfarm proprietors' income (\$485 billion in 1997) is Internal Revenue Service tabulations of business tax returns.

Rental income of persons

Most of rental income is the income-account counterpart of the imputed space rent on owner-occupied housing, adjusted for expenses.¹⁴ The imputed services of

¹⁴ The expenses show up elsewhere in the income account as, for example, plumber's income.

owner-occupied housing are therefore another example of a product-account component whose income-account counterpart is based on the same data source. The largest of the expenses, mortgage interest, is subtracted here, but reappears under net interest.¹⁵ The required mortgage debt data come from the Federal Reserve Board.

Rents from tenant-occupied housing are handled in the same way, but appear here only if they accrue to a person not primarily engaged in the real estate business, otherwise they are classified as proprietors' income or corporate profits.

Net interest

Except for mortgage interest, estimates of net monetary interest paid by business are based on Internal Revenue Service tabulations from business tax returns.

Most of the net interest component of national income is composed of imputations, however. Financial businesses such as banks and life insurance companies invest depositors' or policy-holders' funds in various ways that earn returns, but what they provide to depositors or policy-holders is not, typically, a monetary return. A bank, for example, may provide only checking services and no monetary interest in exchange for the use of deposits in a checking account. Another bank might pay interest on checking accounts, but levy an explicit service charge for checking services. In either case the bank is "producing" checking services that should be counted in GDP (the corresponding entry in the product account is "financial services furnished without payment," a \$190 billion entry under services consumption). The imputations capture the value of the services provided "free" in the first case. These imputations are based

¹⁵ There is a tricky accounting convention hidden here. In the NIPA, homeownership is treated as a business so that owned and rented housing will be treated symmetrically. Therefore, mortgage interest is subtracted as an expense in rental income and added as monetary interest paid by business under net interest. Therefore it has no net effect on GDP.

mainly on business tax return data and information provided by regulatory agencies (the Federal Reserve for example).

Indirect business taxes

Indirect business tax and nontax liabilities (\$627 billion) come directly from federal government sources and for state and local taxes from the Annual Survey of Government Finances.

Consumption of fixed capital

Consumption of fixed capital (economic depreciation) estimates for both government and the private sector are based on perpetual-inventory calculations. Physical capital accumulates during each period through gross investment, and capital consumption is calculated by applying different depreciation rates to the stock of each type of physical capital.

QUARTERLY ESTIMATES

This section provides a quick overview of the differences in sources between quarterly and annual NIPA estimates. It is useful to keep in mind that estimates for recent quarters differ from estimates for quarters in past years in two ways. First, of course, estimates for the most recent quarter are based on much less complete information. Estimates for a given quarter are first released during the first month of the following quarter (advance estimates), and often change substantially during the next two months (preliminary and final estimates). Second, the most recent quarters are extrapolations from the most recent annual estimate, while quarterly estimates from, say, 1996 have been revised to be consistent with the annual estimates for 1996.

Except for relatively short delays in data availability, the following NIPA components are based on largely the same sources for both quarterly and annual estimates: auto purchases, investment in residential and nonresidential structures, most federal expenditures, and compensation of employees.

Quarterly estimates for most of goods consumption are derived from the Monthly Retail Trade Survey, which uses a much smaller sample than the annual survey.

In BEA descriptions of quarterly estimates of services consumption, the phrase “judgemental trend” figures prominently, particularly for early estimates. The phrase refers to a range of method less formal than standard NIPA methodology, which are used prior to the availability of actual data, and which experience indicates do not produce systematic errors. Typically the judgemental trend applies to changes in quantities, while components of the CPI (which are rapidly available) are used to estimate price change. For example, early estimates of housing services are based on a judgemental trend for the housing stock, combined with actual data on rents from the CPI. For a number of service categories, quantity change is estimated using employment change in the industry providing the service.

Quarterly producers’ durable equipment investment is based on the monthly Manufacturers’ Shipments, Inventories, and Orders (M3) survey, which is regularly revised for consistency with the Annual Survey of Manufactures.

Early quarterly estimates of compensation use the BLS monthly payroll survey (BLS-790) to estimate wages and salaries. This is a very large survey, but not as reliable as data that arrive later from the unemployment insurance system and are used for annual estimates.

Quarterly corporate profits estimates are based partly on the Quarterly Financial Report survey of manufacturing, mining, and trade corporations. Publicly available corporate financial statements and information from regulatory agencies (public utilities commissions, for example) underlie the estimates for other sectors.

REAL GDP

Although accounting for the effects of price change on the NIPA—that is, the construction of quantity indexes or, informally, real GDP—has been the subject of considerably controversy, describing the data sources is surprisingly easy.

Most components of personal consumption expenditures are deflated using components of the CPI.¹⁶ Most of the components of producers' durable equipment and software investment, as well as change in business inventories, are deflated using components of the Producer Price Index (PPI). For items other than housing, BLS personnel collect price data directly from a sample of retail outlets for the CPI, while surveyed producers report transaction prices for the PPI. Census and BEA construct special construction price indexes for structures investment (private and government) with data from the same construction surveys used in estimating the nominal value of construction.

A number of other specialized price indexes are used to deflate smaller components of GDP, but most of the remainder of real GDP is estimated by directly using quantity information. One important example illustrates the principle: As mentioned above, a big piece of government consumption corresponds to compensation

¹⁶ Many quality adjustments, such as accounting for improvements in automobile safety, are embedded in the low-level CPI aggregates. Thus much of the debate over quality change in the CPI is largely germane to the estimation of real consumption. For details see Triplett (1997).

of government employees. The same sources that provide dollar compensation for use in estimating nominal GDP also provide data on the number of government employees. Changes in the real GDP component (quantity index) primarily reflect changes in government employment (labor input), although BEA adjusts for changes in hours worked and in the composition of government employment,

CONCLUSION

The successful tracking of the U.S. economy through the NIPA is an astounding feat. Nevertheless, closer acquaintance with the data sources behind the accounts highlights at least two facts: (1) There is considerable, but not well understood, uncertainty about exact magnitudes of various aggregate quantities and their growth rates; this is one reason sophisticated observers of the economy do not rely exclusively on GDP growth rates to evaluate the health of the economy. (2) Ongoing evaluation of the data-collection efforts that support the accounts is needed to maintain the reliability of the accounts, to evolve in response changes in the economy, and to support the needs of data consumers.

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Table 1**Census Bureau Surveys Used in the NIPA Annual Estimates**

<i>Survey</i>	<i>Sample</i>	<i>Main Data Used</i>	<i>GDP Components Affected</i>
Annual Retail Trade Survey	22,000 retail firms	Sales, inventories	Consumption of goods, inventory change
American Housing Survey	55,000 homes	Occupied housing, rents	Housing consumption, rental income
Current Population Survey	50,000 households	Occupied housing	Housing consumption, rental income
Service Annual Survey	30,000 service businesses	Sales	Consumption of services
Annual Survey of Manufactures	55,000 establishments	Shipments, inventories	Fixed investment, inventory change, capital consumption
Annual Wholesale Trade Survey	7,100 wholesale firms	Inventories	Inventory change
Annual Survey of Government Finances	All state and local governments	Miscellaneous	Government consumption and investment, consumption of services, indirect business taxes
Housing Starts Survey	Selected builders or owners	Units started	Residential investment

Figure 1

Personal Consumption Expenditures

1997 Annual Estimates

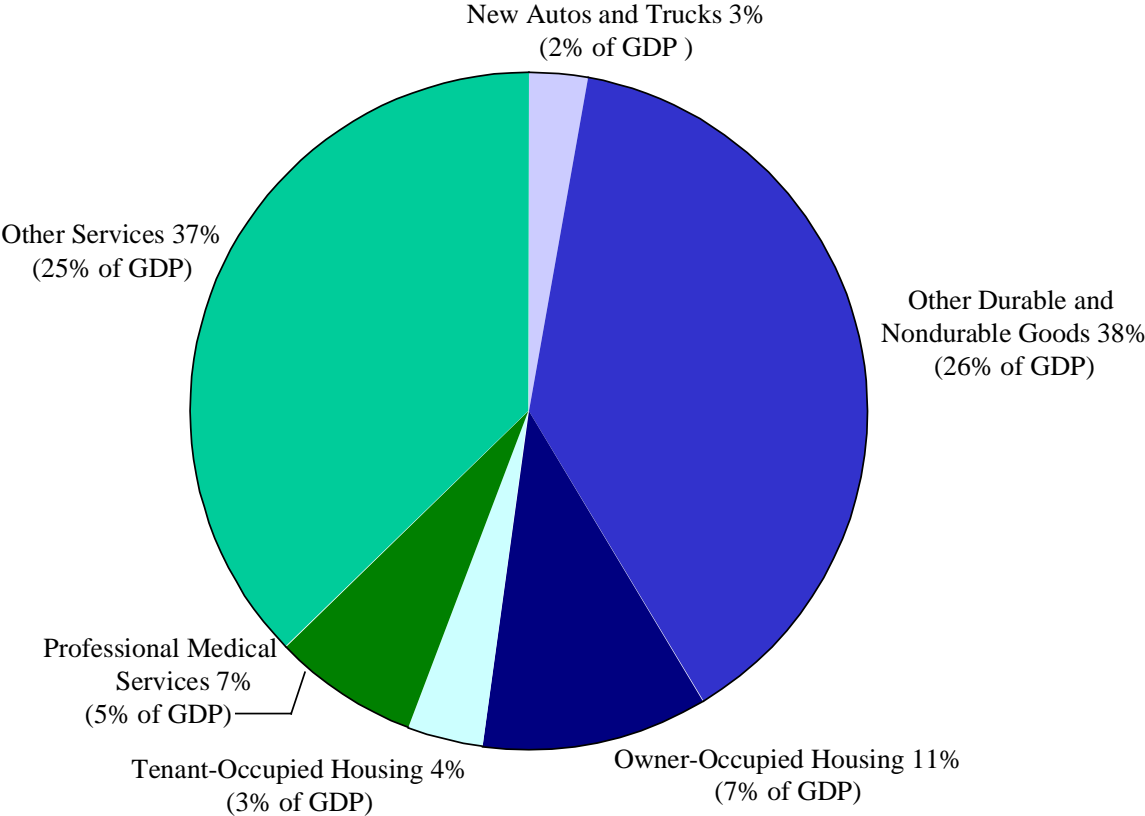


Figure 2

Gross Private Domestic Investment

1997 Annual Estimates

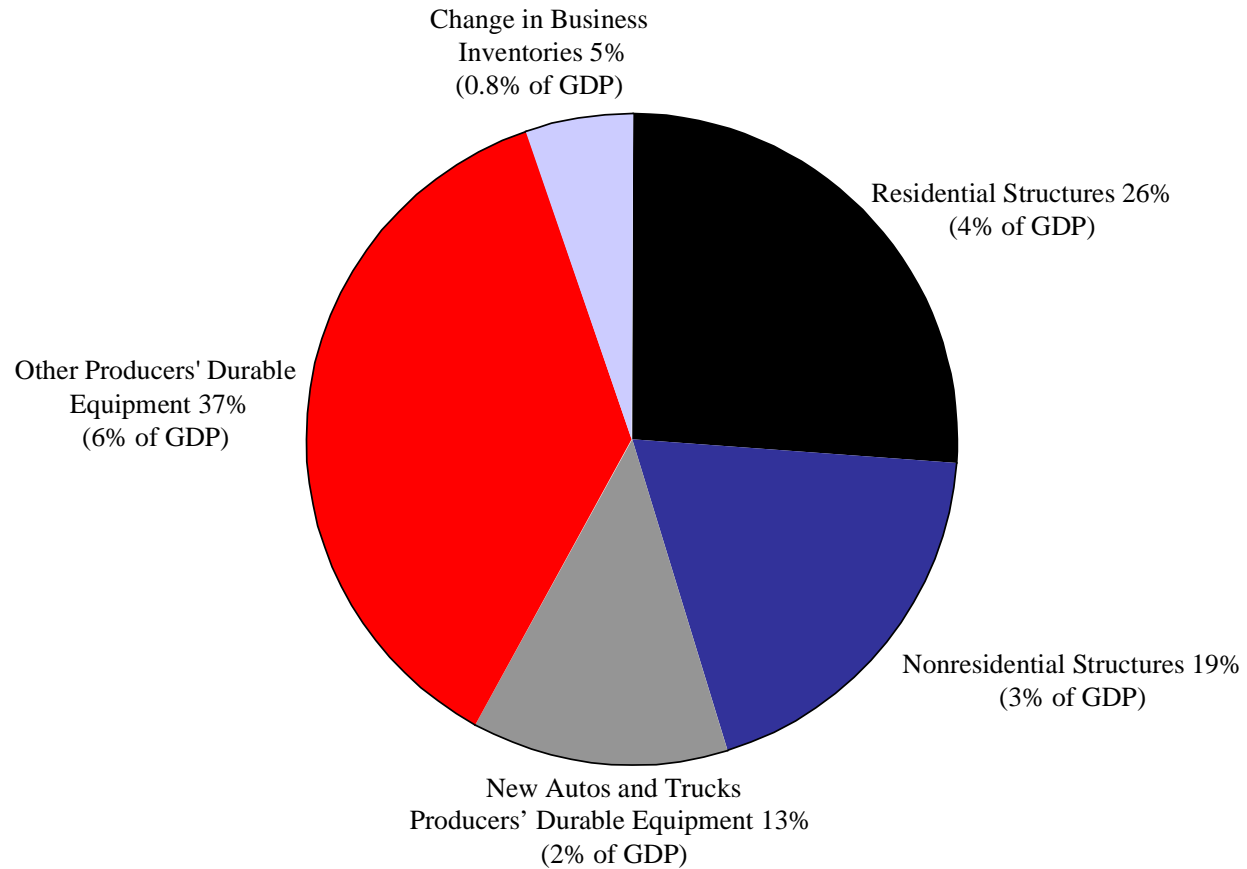


Figure 3 NIPA Data Sources, 1997

