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Introduction

This is the second of two volumes that present the revised national income and product accounts (NIPA) estimates resulting from the most recent comprehensive, that is, benchmark, revision. This volume presents the set of NIPA tables for 1959–88;¹ summary information on the comprehensive revision was released in December 1991.² Volume 1, which is scheduled for publication later in 1992, will present the NIPA tables for 1929–58.

The 1991 comprehensive revision was the ninth of its kind since the Commerce Department first published national income statistics in 1942. Comprehensive revisions, which usually occur at about 5-year intervals, are so termed because of the scope of the changes incorporated and because of the number of years subject to revision. These revisions involve three kinds of changes: Definitional and classificational changes, which update the accounts to reflect the evolving U.S. economy; statistical changes, which update the estimates to reflect shifts in the base period, to incorporate newly available and revised source data, and to introduce new and improved estimating procedures; and new and redesigned tables, which update the presentation of the NIPA's to reflect the definitional, classificational, and statistical changes and to make the tables more informative. (For specific information about the 1991 comprehensive revision, see the Survey of Current Business articles listed in the box on page M-3.)

This volume also presents definitions of the NIPA entries, definitions of real output and related measures, and classifications of production found in the NIPA tables. These definitions and classifications reflect changes that were introduced with the comprehensive revision in December 1991. Thus, they supersede definitions provided in earlier publications.

Additional information on the conceptual framework of the NIPA's and the methodologies used to prepare the estimates is available in a series of methodology papers (MP's). MP-4 also contains an extensive annotated list of publications going back to the mid-1970's. It should be noted, however, that these publications do not reflect the definitional and classificational changes or the methodology changes introduced in the most recent comprehensive revision. The list of the six MP's that have been published is shown in the box on page M-3.

Presentation of the NIPA's

Organization of the NIPA tables

The NIPA tables are grouped into nine categories:

- 1. National Product and Income
- 2. Personal Income and Outlays
- 3. Government Receipts and Expenditures
- 4. Foreign Transactions
- 5. Saving and Investment
- 6. Income, Employment, and Product by Industry
- 7. Quantity and Price Indexes
- 8. Supplementary Tables
- 9. Seasonally Unadjusted Estimates

The "Supplementary Tables" category consists of tables showing percentage changes in the major NIPA aggregates; selected per capita series; auto, truck, farm sector, and housing sector output; detail on several components of gross national income—consumption of fixed capital, capital

Cycle of the NIPA Estimates

Quarterly estimates of gross domestic product (GDP) are released on the following schedule: "Advance" estimates are released near the end of the first month after the end of the quarter; as more detailed and comprehensive data become available, "preliminary" and "final" estimates are released near the end of the second and third months, respectively. Quarterly estimates of gross national product (GNP), national income, corporate profits, and net interest lag the GDP estimates by one month: The first estimates of these items are released with the preliminary GDP estimates, and the revised estimates are released with the final GDP estimates. (The fourth-quarter estimates of these items lag by an additional month.) Monthly estimates of personal income and outlays are released near the end of the month following the reference month; estimates for the two to four most recent months are revised at that time. Ordinarily, annual revisions are carried out each July and cover the months and quarters of the most recent calendar year and the 2 preceding years. (For example, the July 1992 revision covers 1989, 1990, and 1991.) These revisions are timed to incorporate newly available major annual source data. Comprehensive revisions are carried out at about 5-year intervals.

^{1.} The estimates in this volume—except those for the alternative measures of constant-dollar real output and prices (see page M-10)—will not be revised again until the next comprehensive revision.

^{2.} Tables presenting estimates of gross domestic product by industry covering the period 1977 to 1990 are scheduled for publication later in 1992.

consumption adjustment, business transfer payments, supplements to wages and salaries, rental income of persons, dividends, and interest; imputations; and reconciliations of several NIPA measures to the source data (for example, tax return tabulations) from which they are derived or to which they are closely related.

Tables are individually numbered both by category and within categories. The first digit indicates the category, and subsequent digits indicate the table number within that category. A letter suffix is used to represent major discontinuities in coverage, for example, the edition of the Standard Industrial Classification (SIC) underlying the estimates (see the section on industry classification, page M-12).

From time to time, changes in the coverage or in the quality of the statistics result in discontinuities in NIPA time series. For example, beginning with 1960, the estimates cover the 50 States and the District of Columbia; before 1960, Alaska and Hawaii were partly omitted. While it is not possible to identify all discontinuities, major discontinuities are indicated in the tables. In addition to the use of letter suffixes to indicate major discontinuities in coverage, other types of discontinuities are referenced in the footnotes; see, for example, those for tables 2.2 through 2.7 and tables 4.1 through 4.4.

The full set of NIPA tables, which consists of 132 tables and about 5,100 line items, contains annual, quarterly, and monthly estimates. (The box "Cycle of the NIPA Estimates" describes the schedule of release for the estimates.) The complete list of NIPA tables on pages v-ix indicates the frequency of the estimates shown and the time period covered in each table. Annual estimates are based on source data that are typically not available on a quarterly or monthly basis. Many of the tables with only annual estimates show detailed breakdowns of components; for example, tables 5.6 and 5.7 show purchases of structures by type (in current and constant dollars, respectively).

The index beginning on page 00 identifies the NIPA table (or tables) containing that line item. Commonly used terms that differ from the NIPA wording are included, with a reference to the appropriate NIPA item.

Publication of the NIPA tables

The "National Income and Product Accounts Tables" section in the Survey of Current Business is the primary vehicle for the publication of the NIPA's. Except for years in which comprehensive revisions are released, July Survey issues contain a full set of NIPA tables for the annual revisions. In months other than July, a set of "Selected NIPA Tables" presents the quarterly estimates that are released each month (and the corresponding annual estimates). The selected set comprises 53 tables from the first eight categories listed above. (Seasonally unadjusted estimates are compiled only once a year and thus are not included in the selected set of tables.) For users' convenience in tracking specific estimates, the numbering system established for the full set of tables is retained in the selected set; as a result, gaps in table numbering occur in the presentation of the selected tables.

The Survey issue for a particular month presents the estimates released during that month; for example, advance

first-quarter estimates are released during the month of April and appear in the April Survey. A note preceding the NIPA tables indicates whether the estimates are advance, preliminary, or final.

Certain NIPA estimates also appear in other parts of the SURVEY. The additional presentations described below show estimates or analyses that do not fit neatly into the system or publication schedule for the standard presentation.

"Reconciliation and Other Special Tables" regularly shows tables that reconcile NIPA estimates to related series and tables that present analytically useful extensions of NIPA estimates. At present, tables in this section show the reconciliation of relevant NIPA series to those in the balance of payments accounts and the reconciliation of BEA compensation to Bureau of Labor Statistics earnings.

"Constant-Dollar Inventories, Sales, and Inventory-Sales Ratios for Manufacturing and Trade" (in March, June, September, and December) shows quarterly and monthly estimates for the series indicated. Also shown are quarterly fixed-weighted inventory-sales ratios (using sales as weights) and quarterly and monthly inventories for manufacturing by stage of fabrication. The current-dollar sales figures are from the Census Bureau and are deflated by BEA; the inventory estimates are from the NIPA's.

Statistical conventions used for NIPA estimates

Most of the estimates are presented in billions of dollars. The major exceptions are certain current-dollar annual estimates, which are presented in millions of dollars, and estimates presented as index numbers. Current-dollar estimates are valued in the prices of the period in which the transaction takes

Alternative Media

Within minutes of their official release, BEA makes the NIPA estimates available electronically through the Economic Bulletin Board (EBB) maintained by the U.S. Department of Commerce's Office of Business Analysis (OBA). In addition, BEA provides annual and quarterly NIPA estimates to the National Trade Data Bank (NTDB). The NTDB, which contains over 50 information programs from 15 government agencies, is produced monthly by OBA on Compact Disc Read-Only Memory (CD-ROM). For information about the EBB and the NTDB, call OBA at (202) 377–1986.

BEA also prepares recorded telephone messages summarizing key estimates immediately after their release: For gross domestic product, call (202) 898–2451; for personal income and outlays, call (202) 898–2452.

Many of the NIPA estimates are available on computer tape and on diskettes. A complete listing of NIPA information products is available by writing the National Income and Wealth Division, BE-54, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or by calling (202) 523–0669.

place. Constant-dollar estimates (see the section on real output and related measures, page M-10) are valued in the prices of a period designated the base period (at present, 1987), thus removing price change from any period-to-period movement in the series. The designation of 1987 as the base period also means that levels in 1987 are set equal to 100 in calculating quantity and price indexes and implicit price deflators.

For quarters and months, the estimates (except indexes) are presented at annual rates. Annual rates show values for a quarter or a month at their annual equivalent (that is, the value that would be registered if the rate of activity measured for a month or a quarter were maintained for a full year). Annual rates make it easier to compare values for time periods of different lengths—for example, quarters and years.

The percent changes shown in table 8.1 are also expressed at annual rates and are calculated from the published quarterly estimates, which are rounded to the nearest one-tenth of a billion dollars. The annual rates for quarterly percent changes

are calculated with a variant of the compound interest rate formula:

$$r = \left[\left(\frac{Q_t}{Q_{t-1}} \right)^4 - 1 \right] \times 100$$

where r is the percent change at an annual rate and Q_t and Q_{t-1} are the quarterly estimates for a quarter and for the preceding quarter, respectively.

Quarterly and monthly NIPA estimates are seasonally adjusted, if necessary. Seasonal adjustment removes from the time series the average impact of variations that normally occur at about the same time and in about the same magnitude each year—for example, weather, holidays, and tax payment dates. In most cases, BEA uses source data that are seasonally adjusted by the source agency; in others, the statistical procedures used by BEA—for example, the X-11 variant of the Census Method II seasonal adjustment program—are based on historical experience. After seasonal adjustment, cyclical and other short-term changes in the economy stand out more clearly.

Additional Information About the NIPA's

NIPA methodology

No. 1: An Introduction to National Economic Accounting. (1985). 19 pp. \$12.50 (NTIS Accession No. PB 85-247567).

No. 2: Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends. (1985). 67 pp. \$19.00 (NTIS Accession No. PB 85–245397).

No. 3: Foreign Transactions. (1987). 52 pp. \$19.00 (NTIS Accession No. PB 88–100649).

No. 4: GNP: An Overview of Source Data and Estimating Methods. (1987). 36 pp. \$17.00 (NTIS Accession No. PB 88–134838). The source data and estimating methods are updated in the July 1992 SURVEY OF CURRENT BUSINESS (see below).

No. 5: Government Transactions. (1988). 120 pp. \$26.00 (NTIS Accession No. PB 90-118480).

No. 6: Personal Consumption Expenditures. (1990). 92 pp. \$4.50 (GPO Stock No. 003-010-00200-0).

NIPA Methodology Papers 1 through 5 (photocopies) are available from the National Technical Information Service (NTIS); to order, write to U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 or call (703) 487–4650. NIPA Methodology Paper 6 is available from the U.S. Government Printing Office (GPO); to order, write to New Orders, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250–7954 or call (202) 783–3238.

Reliability of the NIPA's

• The Use of National Income and Product Accounts for Public Policy: Our Successes and Failures (BEA Staff Paper

No. 43). (1985). 32 pp. \$17.00 (NTIS Accession No. PB 86-191541).

 "Evaluation of the GNP Estimates," August 1987 SURVEY OF CURRENT BUSINESS.

Recent revisions of the NIPA's

The following is a list of articles in the SURVEY OF CURRENT BUSINESS that cover the 1991 comprehensive revision and the 1992 annual revision.

- "Gross Domestic Product as a Measure of U.S. Production," August 1991.
- "A Preview of the Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes," September 1991.
- "A Preview of the Comprehensive Revision of the National Income and Product Accounts: New and Redesigned Tables," October 1991.
- "The Comprehensive Revision of the U.S. National Income and Product Accounts: A Review of Revisions and Major Statistical Changes," December 1991
- "Alternative Measures of Change in Real Output and Prices," April 1992.
- "The U.S. National Income and Product Accounts: Revised Estimates," July 1992.

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^{*} Estimates for this table are not available for 1929-58.

Introduction

This is the first of two volumes that present the revised national income and product accounts (NIPA) estimates resulting from the most recent comprehensive, that is, benchmark, revision. This volume presents the set of NIPA tables for 1929–58; summary information on the comprehensive revision was released in December 1991. Volume 2, which was published in September 1992, presents the NIPA tables for 1959–88.

The 1991 comprehensive revision was the ninth of its kind since the Commerce Department first published national income statistics in 1942. Comprehensive revisions, which usually occur at about 5-year intervals, are so termed because of the scope of the changes incorporated and because of the number of years subject to revision. These revisions involve three kinds of changes: Definitional and classificational changes, which update the accounts to reflect the evolving U.S. economy; statistical changes, which update the estimates to reflect shifts in the base period, to incorporate newly available and revised source data, and to introduce new and improved estimating procedures; and new and redesigned tables, which update the presentation of the NIPA's to reflect the definitional, classificational, and statistical changes and to make the tables more informative. (For specific information about the 1991 comprehensive revision, see the Survey of Current Business articles listed in the box on page M-3.)

This volume also presents definitions of the NIPA entries, definitions of real output and related measures, and classifications of production found in the NIPA tables. These definitions and classifications reflect changes that were introduced with the comprehensive revision in December 1991. Thus, they supersede definitions provided in earlier publications.

Additional information on the conceptual framework of the NIPA's and the methodologies used to prepare the estimates is available in a series of methodology papers (MP's). MP-4 also contains an extensive annotated list of publications going back to the mid-1970's. It should be noted, however, that these publications do not reflect the definitional and classificational changes or the methodology changes introduced in the most recent comprehensive revision. The list of the six MP's that have been published is shown in the box on page M-3.

Presentation of the NIPA's

Organization of the NIPA tables

The NIPA tables are grouped into nine categories:

1. National Product and Income

- 2. Personal Income and Outlays
- 3. Government Receipts and Expenditures
- 4. Foreign Transactions
- 5. Saving and Investment
- 6. Income, Employment, and Product by Industry
- 7. Quantity and Price Indexes
- 8. Supplementary Tables
- 9. Seasonally Unadjusted Estimates

The "Supplementary Tables" category consists of tables showing percentage changes in the major NIPA aggregates; selected per capita series; auto, truck, farm sector, and housing sector output; detail on several components of gross national income—consumption of fixed capital, capital consumption adjustment, business transfer payments, supplements to wages and salaries, rental income of persons, dividends, and interest; imputations; and reconciliations of several NIPA measures to the source data (for example, tax return tabulations) from which they are derived or to which they are closely related.

Tables are individually numbered both by category and within categories. The first digit indicates the category, and

Cycle of the NIPA Estimates

Quarterly estimates of gross domestic product (GDP) are released on the following schedule: "Advance" estimates are released near the end of the first month after the end of the quarter; as more detailed and comprehensive data become available, "preliminary" and "final" estimates are released near the end of the second and third months, respectively. Quarterly estimates of gross national product, national income, corporate profits, and net interest lag the GDP estimates by 1 month: The first estimates of these items are released with the preliminary GDP estimates, and the revised estimates are released with the final GDP estimates. (The fourth-quarter estimates of these items lag by an additional month.) Monthly estimates of personal income and outlays are released near the end of the month following the reference month; estimates for the 2 to 4 most recent months are revised at that time. Ordinarily, annual revisions are carried out each July and cover the months and quarters of the most recent calendar year and the 2 preceding years. (For example, the July 1992 revision covers 1989, 1990, and 1991.) These revisions are timed to incorporate newly available major annual source data. Comprehensive revisions are carried out at about 5-year intervals.

subsequent digits indicate the table number within that category. A letter suffix is used to represent major discontinuities in coverage, for example, the edition of the Standard Industrial Classification (SIC) underlying the estimates (see the section "Industry" on page M-12).

From time to time, changes in the coverage or in the quality of the statistics result in discontinuities in NIPA time series. For example, beginning with 1960, the estimates cover the 50 States and the District of Columbia; before 1960, Alaska and Hawaii were partly omitted. While it is not possible to identify all discontinuities, major discontinuities are indicated in the tables. In addition to the use of letter suffixes to indicate major discontinuities in coverage, other types of discontinuities are referenced in the footnotes.

The full set of NIPA tables, which consists of 132 tables and about 5,100 line items, contains annual, quarterly, and monthly estimates. (The box "Cycle of the NIPA Estimates" describes the schedule of release for the estimates.) The complete list of NIPA tables is shown on pages v-ix. For each of the tables included in this volume, the frequency of the estimates and the time period covered is given. The remaining tables listed show the frequency of the estimates, but the asterisk (*) indicates that the estimates are not available for the 1929-58 period. Annual estimates are based on source data that are typically not available quarterly or monthly. Quarterly estimates in current dollars begin with those for 1946, and quarterly estimates in constant dollars begin with those for 1947. Many of the tables with only annual estimates show detailed breakdowns of components; for example, tables 5.6 and 5.7 show purchases of structures by type (in current and constant dollars, respectively).

The index beginning on page 217 identifies the NIPA table (or tables) containing that line item. Commonly used terms that differ from the NIPA wording are included, with a reference to the appropriate NIPA item.

Publication of the NIPA's

The section "National Income and Product Accounts" in the Survey of Current Business is the primary vehicle for the publication of the NIPA's. Except for years in which comprehensive revisions are released, July Survey issues contain a full set of NIPA tables for the annual revisions. In months other than July, a set of "Selected NIPA Tables" presents the quarterly estimates that are released each month (and the corresponding annual estimates). The selected set comprises 53 tables from the first eight categories listed above. (Seasonally unadjusted estimates are compiled only once a year and thus are not included in the selected set of tables.) For users' convenience in tracking specific estimates, the numbering system established for the full set of tables is retained in the selected set; as a result, gaps in table numbering occur in the presentation of the selected tables.

The Survey issue for a particular month presents the estimates released during that month; for example, advance first-quarter estimates are released during the month of April and appear in the April Survey. A note preceding the NIPA ta-

bles indicates whether the estimates are advance, preliminary, or final.

Certain NIPA estimates also appear in other parts of the Survey. The additional presentations described below show estimates or analyses that do not fit neatly into the system or publication schedule for the standard presentation.

"Reconciliation and Other Special Tables" regularly shows tables that reconcile NIPA estimates to related series and tables that present analytically useful extensions of NIPA estimates. At present, tables in this section show the reconciliation of relevant NIPA series to those in the balance of payments accounts and the reconciliation of BEA compensation to Bureau of Labor Statistics earnings.

"Constant-Dollar Inventories, Sales, and Inventory-Sales Ratios for Manufacturing and Trade" (in March, June, September, and December) shows quarterly and monthly estimates for the series indicated. Also shown are quarterly fixed-weighted inventory-sales ratios (using sales as weights) and quarterly and monthly inventories for manufacturing by stage of fabrication. The current-dollar sales figures are from the Census Bureau and are deflated by BEA; the inventory estimates are from the NIPA's.

Statistical conventions used for NIPA estimates

Most of the estimates are presented in billions of dollars. The major exceptions are certain current-dollar annual estimates, which are presented in millions of dollars, and estimates presented as index numbers. Current-dollar estimates are valued in the prices of the period in which the transaction takes

Alternative Media

Within minutes of their official release, BEA makes the NIPA estimates available electronically through the Economic Bulletin Board maintained by the U.S. Department of Commerce's Office of Business Analysis (OBA). In addition, BEA provides annual and quarterly NIPA estimates to the National Trade Data Bank (NTDB) and the National Economic, Social, and Environmental Data Bank (NESE•DB). The NTDB and the NESE•DB are produced by OBA on Compact Disc Read-Only Memory. For information, call OBA at (202) 482–1986.

BEA also prepares recorded telephone messages summarizing key estimates immediately after their release: For gross domestic product, call (202) 898–2451; for personal income and outlays, call (202) 898–2452.

Many of the NIPA estimates are available on computer tape and on diskettes. For a list of NIPA information products, write the National Income and Wealth Division, BE-54, Bureau of Economic Analysis, U.S. Department of Commerce, Washington, DC 20230, or call (202) 523-0669.

place. Constant-dollar estimates (see the section on real output and related measures, page M-10) are valued in the prices of a period designated the base period (at present, 1987), thus removing price change from any period-to-period movement in the series. The designation of 1987 as the base period also means that levels in 1987 are set equal to 100 in calculating quantity and price indexes and implicit price deflators,

For quarters and months, the estimates (except indexes) are presented at annual rates. Annual rates show values for a quarter or a month at their annual equivalent (that is, the value that would be registered if the rate of activity measured for a month or a quarter were maintained for a full year). Annual rates make it easier to compare values for time periods of different lengths—for example, quarters and years.

The percent changes shown in table 8.1 are also expressed at annual rates and are calculated from the published quarterly estimates, which are rounded to the nearest one-tenth of a billion dollars. The annual rates for quarterly percent changes

are calculated with a variant of the compound interest rate formula;

$$r = \left[\left(\frac{Q_t}{Q_{t-1}} \right)^4 - 1 \right] \times 100$$

where r is the percent change at an annual rate and Q_t and Q_{t-1} are the quarterly estimates for a quarter and for the preceding quarter, respectively.

Quarterly and monthly NIPA estimates are seasonally adjusted, if necessary. Seasonal adjustment removes from the time series the average impact of variations that normally occur at about the same time and in about the same magnitude each year—for example, weather, holidays, and tax payment dates. In most cases, BEA uses source data that are seasonally adjusted by the source agency; in others, the statistical procedures used by BEA—for example, the X-11 variant of the Census Method II seasonal adjustment program—are based on historical experience. After seasonal adjustment, cyclical and other short-term changes in the economy stand out more clearly.

Additional Information About the NIPA's

NIPA methodology

No. 1: An Introduction to National Economic Accounting. (1985). 19 pp. \$12.50 (NTIS Accession No. PB 85–247567).

No. 2: Corporate Profits: Profits Before Tax, Profits Tax Liability, and Dividends. (1985). 67 pp. \$19.00 (NTIS Accession No. PB 85-245397).

No. 3: Foreign Transactions. (1987). 52 pp. \$19.00 (NTIS Accession No. PB 88-100649).

No. 4: GNP: An Overview of Source Data and Estimating Methods. (1987). 36 pp. \$17.00 (NTIS Accession No. PB 88-134838). The source data and estimating methods are updated in the July 1992 SURVEY OF CURRENT BUSINESS (see below).

No. 5: Government Transactions. (1988). 120 pp. \$26.00 (NTIS Accession No. PB 90-118480).

No. 6: *Personal Consumption Expenditures*. (1990). 92 pp. \$4.50 (GPO Stock No. 003-010-00200-0).

NIPA Methodology Papers 1 through 5 (photocopies) are available from the National Technical Information Service (NTIS); to order, write to U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 or call (703) 487-4650. NIPA Methodology Paper 6 is available from the U.S. Government Printing Office (GPO); to order, write to New Orders, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954 or call (202) 783-3238.

Reliability of the NIPA's

The Use of National Income and Product Accounts for Public Policy: Our Successes and Failures (BEA Staff Paper

No. 43). (1985). 32 pp. \$17.00 (NTIS Accession No. PB 86-191541).

 "Evaluation of the GNP Estimates," August 1987 SURVEY OF CURRENT BUSINESS.

Recent revisions of the NIPA's

The following is a list of articles in the SURVEY OF CURRENT BUSINESS that cover the 1991 comprehensive revision and the 1992 annual revision.

- "Gross Domestic Product as a Measure of U.S. Production," August 1991.
- "A Preview of the Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes," September 1991.
- "A Preview of the Comprehensive Revision of the National Income and Product Accounts: New and Redesigned Tables," October 1991.
- "The Comprehensive Revision of the U.S. National Income and Product Accounts: A Review of Revisions and Major Statistical Changes." December 1991.
- "Alternative Measures of Change in Real Output and Prices," April 1992.
- "Annual Revision of the U.S. National Income and Product Accounts," July 1992.