

## 0. Prerequisites

### 0.1 Legal environment

#### 0.1.1 Responsibility for collecting, processing, and disseminating statistics

##### **Statistical Institute of Jamaica**

The Statistical Institute of Jamaica (STATIN) is created as a body corporate by the Statistics Act. Section 28 of the Interpretation Act defines the powers of a body corporate simply as having the rights as any legal person to hold property and to enter into contracts.

STATIN is granted the legal authority under the Statistics Act to take any Census, to collect, compile, analyze, abstract and publish statistical information relating to commercial, industrial, social, economic and general activities and condition of the people of Jamaica. In addition Section 7 lists twenty-one areas on which STATIN, with the approval of the Minister to collect statistical information.

The taking of a Census is subject to a direction of the Minister, and by Ministerial Order the Regulations determine the content and administrative arrangements.

#### 0.1.2 Data sharing and co-ordination among data producing agencies

The Statistics Act provides for coordination, collaboration with public agencies in the collection, compilation and publication of statistical information including statistical information derived from activities of such agencies. (administrative data)

#### 0.1.3 Confidentiality of individual reporters' data

Section 17 of the Statistics Act, mandates that STATIN shall not publish or otherwise make available to any person statistics that would enable the identification of any person or business.

To balance STATIN's extensive powers to collect information, mostly through mandatory reporting, the Statistics Act establishes the rigorous legal obligation for the Agency to keep the respondent's information in trust. The legislation makes a formal commitment to respondents that the information they provide will never be released to anyone in a form that will identify them without their authorization. Respondents who believe that providing the Agency with information will not identify them are much more

	<p>likely to answer truthfully and to cooperate with the collector.</p> <p>Much of the Agency's credibility rests on confidentiality protection as a bedrock condition of operation. Given its critical importance, this commitment to confidentiality is found not only in the law but also in the culture of STATIN.</p> <p>0.1.4 Ensuring statistical reporting</p> <p>STATIN has the authority to require an individual or establishment to supply particulars for Census or other statistical collection in accordance with the Act.</p>
0.2 Resources	<p>0.2.2</p> <p>STATIN is funded mainly from the national budget, however, where necessary STATIN seeks technical assistance from international agencies to introduce or improve systems.</p>
0.3 Relevance	<p>0.3.1 Monitoring user requirements</p> <p>Feedback is sought from various customers via the Communications and Marketing Unit as a means of improving the provision of statistical products. Targeted stakeholders' sessions are also hosted to get feedback on the work of the organization.</p>
0.4 Quality Management	<p>0.4.1 Quality policy</p> <p>The Statistical Institute of Jamaica is currently developing a Quality Assurance Framework for our statistical products and processes. This is based largely on the generic National Quality Assurance Framework developed by an expert group of the United Nations Statistical Commission. The Statistical Institute of Jamaica is also in the process of adopting the Code of Good Practice in Statistics for Latin America and the Caribbean developed by the Working Group on Institutional Strengthening of the Economic Commission for Latin America and the Caribbean (ECLAC). These initiatives aim to improve the overall quality of official statistics on Jamaica.</p> <p>0.4.2 Quality monitoring</p> <p>The quality of the programme is evaluated against constraints. STATIN currently applies various quality assurance techniques to the production of official statistics to ensure that the information produced is of the highest standard. Other initiatives to improve and</p>

	<p>maintain the quality of the data produced by STATIN include continuous staff training, participation in local and international courses, meetings and workshops among others.</p>
<p><b>1. Integrity</b></p>	
<p><u>1.1 Professionalism</u></p>	<p>1.1.1 Impartiality of statistics</p> <p>Statistical Institute of Jamaica acts independently to establish the methods used in data estimation as well as the timing and content of all data releases.</p> <p>1.1.2 Selection of sources, methodology, and modes of dissemination</p> <p>Section 8 of the Statistics Act gives STATIN the authority for statistics collected under the Act to be compiled, tabulated and published in such manner as STATIN may determine.</p> <p>1.1.3 Commenting on erroneous interpretation and misuse of statistics</p> <p>STATIN has the authority to comment on erroneous interpretation and misuse of statistics.</p>
<p><u>1.2 Transparency</u></p>	<p>1.2.1 Disclosure of terms and conditions for statistical collection, processing, and dissemination</p> <p>The Statistics Act is available on the website. For more information please visit: <a href="http://www.statinja.gov.jm">http://www.statinja.gov.jm</a>.</p> <p>1.2.2 Internal governmental access to statistics prior to release</p> <p>Advanced copies of the publications are sent to the Minister with portfolio responsibility for STATIN, the Ministry of Finance and Planning, the Office of the Prime Minister as well as to the Bank of Jamaica and the Planning Institute of Jamaica where necessary, one day before the official press release to the general public. This access is however granted under strict embargo to prevent the unauthorized distribution of pre-release data.</p> <p>1.2.3 Attribution of statistical products</p> <p>The Statistical Institute of Jamaica is clearly identified by the STATIN logo and Corporate Image on all disseminated statistics produced and released by the Agency. Organizations or individuals using data produced by the Statistical Institute of Jamaica are required to cite the Statistical Institute of Jamaica as the data</p>

	<p>source. The dissemination of STATIN’s data is not accompanied by any ministerial commentary. The Minister does not influence what is included or excluded from these statistical reports.</p> <p>1.2.4 Advance notice of major changes in methodology, source data, and statistical techniques.</p> <p>Major revisions to the methodology source data and statistics are made available to the users.</p>
<p><u>1.3 Ethical standards</u></p>	<p>1.3.1 Guidelines for staff behavior</p> <p>Prior to the execution of a contract of employment (Permanent Staff) or Contract employment persons are required to complete a Form of Oath pursuant to Section 9 of the Statistics Act and Declaration pursuant to Section 2 of the Official Secrets Act.</p> <p>Both statutory provisions require that employee shall not disclose or make known any matter which come to their knowledge by reason of their employment to STATIN.</p> <p>In the event of the breach of this provision the Act also provides for criminal prosecution.</p>
<p><b>2. Methodology</b></p>	
<p><u>2.1 Concepts and definitions</u></p>	<p>2.1.1 Concepts and definitions</p> <ul style="list-style-type: none"> <li>• Analytical framework: The national accounts for Jamaica are compiled in accordance with the United Nations System of National Accounts 1993 (1993 SNA), adjusted to take account of the local situation. Information on the concepts and definitions can be found on the STATIN website <a href="http://www.statinja.gov.jm">www.statinja.gov.jm</a> and in the National Income and Product reports.</li> <li>• Definition: Gross Domestic Product (GDP) is the total unduplicated value of the goods and services produced in Jamaica during a given period. Annual GDP is estimated using the three different approaches: Production Approach, Expenditure Approach and Income Approach. Quarterly GDP is produced using the production approach.</li> </ul>
<p><u>2.2 Scope</u></p>	<p>2.2.1 Scope</p>

	<p>Scope of the data</p> <ul style="list-style-type: none"> <li>• Transactions coverage: The national accounts include all transaction categories within the 1993 SNA production boundary except some form of illegal activities such as illicit drug trade.</li> <li>• Geographic coverage: National accounts cover the whole territory of Jamaica</li> <li>• Unrecorded activity: Indirect estimates are made for most categories of informal production. Most forms of illegal activities are excluded due to data constraints.</li> </ul>
<p><u>2.3</u> <u>Classification/sectorization</u></p>	<p>2.3.1 Classification/sectorization</p> <p>Classification systems: The classification of industries used in the accounts is the Jamaica Industrial Classification (JIC 2005). This is a local adaptation of the United Nations International Standard Industrial Classification of all Economic Activities (ISIC Rev.3). The production accounts by industry are calculated at the five digit level of the JIC. However due to data constraints some aggregation of the five digit JIC is done. The 12 major activities used in the dissemination of national accounts statistics are:</p> <p style="padding-left: 40px;">Agriculture, Forestry &amp; Fishing; Mining &amp; Quarrying; Manufacture; Electricity &amp; Water Supply; Construction; Wholesale &amp; Retail Trade; Repairs; Installation of Machinery &amp; Equipment Hotels &amp; Restaurants Transport, Storage &amp; Communication; Finance &amp; Insurance Services; Real Estate, Renting &amp; Business Activities; Producers of Government Services; Other Services.</p> <p>Expenditure component of Gross Domestic Product are</p> <p style="padding-left: 40px;">Final consumption expenditure (Household and Government); Gross capital formation (Gross fixed capital formation and change in inventories); Exports of goods and services less imports of goods and</p>

	<p>services.</p> <p>Household Final Consumption Expenditure is classified using Classification of Individual Consumption According to Purpose (COICOP).</p> <p>Gross fixed capital formation is broken down by type of capital goods.</p> <p>The income components are compensation of employees; operating surplus/mixed income; consumption of fixed capital; taxes less subsidies on production and imports.</p> <p>For national accounts purposes, the Harmonized Commodity Description and Coding System (HS) used in the foreign trade statistics in respect of imports and exports of merchandise is converted to the Standard International Trade Classification (SITC), Rev. 4.</p>
<p><u>2.4 Basis for recording</u></p>	<p>2.4.1 Valuation</p> <p>Valuation: Gross Value Added is estimated at basic prices. The expenditure components are valued at purchasers' prices. Imports and exports are valued free on board (f.o.b.)</p> <p>2.4.2 Recording basis</p> <p>Time of recording: In principle, all transactions are recorded on an accrual basis, except for receipts and outlays of general government, which are on a cash basis.</p>
<p><b>3. Accuracy and reliability</b></p>	
<p><u>3.1 Source data</u></p>	<p>3.1.1 Source data collection programs</p> <p>Annual Estimates</p> <p><u>Production approach:</u></p> <ul style="list-style-type: none"> <li>• The main data source for the current estimates is the Annual National Income (ANI) Survey that is administered to a sample of establishments. All establishments employing fifty or more employees and twenty per cent of establishments with ten to forty-nine employees are included in the sample. Data for establishments with fewer than ten employees are obtained from tax records, household consumption and other surveys and studies. In</li> </ul>

addition, other supplementary data, such as financial statements, are used. Financial statements may be obtained from different sources including Tax Administration Jamaica (TAJ) and other regulatory agencies.

Sources for specific industries are as follows:

***Agriculture, Forestry, & Fishing:*** Data on agricultural production and production expenses are collected from several sources. With respect to commodities that are mainly for export, production information is obtained from commodity boards and International Merchandise Trade Statistics. For animal farming, fishing and commodities produced mainly for local consumption, data on quantity and prices are obtained from the Agricultural Marketing Information Division of the Ministry of Agriculture & Fisheries (MOA).

Information on cost of production is obtained from the Agricultural Marketing Information Division and commodity boards. Financial statements from large farms and studies undertaken by the MOA are incorporated into the compilation of the estimates.

***Mining & Quarrying:*** Bauxite and alumina output data are obtained from the bauxite and alumina companies, the Jamaica Bauxite Institute, and International Merchandise Trade Statistics (STATIN). Costs are obtained from the bauxite companies. Production and price data on quarrying are obtained from the Department of Mines & Geology and include estimates of informal quarrying. Data on costs are obtained from the ANI Survey and financial statements. Price data are obtained from the Indices & Price Analyses Unit (STATIN).

Output and cost data on gypsum are obtained from the ANI survey. Data on prices are obtained from the Indices & Price Analyses Unit (STATIN).

***Manufacture:*** Manufacture output and costs are obtained from the ANI Survey. The survey data are supplemented by information from General Consumption Tax (GCT) records and financial statements from TAJ. Output of establishments with fewer than 10 employees is estimated from tax records, household consumption and other surveys and studies. Data on prices are obtained from the

Indices & Price Analyses Unit (STATIN).

***Electricity & Water Supply:*** Output and costs data are obtained from the ANI Survey. This is supplemented by financial statements of the establishments. Physical quantities are obtained from monthly statistical reports from the electricity and water providers.

***Construction:*** Output is estimated using a commodity flow method. Data for the commodity flow is had from domestic production and imports of building materials flowing from the International Merchandise Trade Statistics (STATIN). Costs data are derived from the ANI survey and other supplementary data such as financial statements from TAJ. Data on prices are obtained from the Indices & Price Analyses Unit (STATIN), Master Builders Association, the merchandise trade indices and Bank of Jamaica.

***Wholesale & Retail Trade; Repairs; Installation of Machinery & Equipment: :***

Output data for Wholesale & Retail Trade is estimated using a commodity flow method. Data for the commodity flow is had from domestic production and imports of goods flowing from the International Merchandise Trade Statistics (STATIN). Costs data are derived from the ANI survey and financial statements from TAJ. Additional data are obtained from the Indices & Price Analyses Unit (STATIN).

The ANI Survey, Household Expenditure Survey (HES), Labour Force Survey (LFS) and administrative records are the main sources of data for Repairs of Motor Vehicles and Personal & Household Goods. Data on prices are obtained from the Indices & Price Analyses Unit (STATIN).

Output data for Installation of Machinery & Equipment is estimated using a commodity flow method. Data for the local and imported flows are obtained from the Production accounts and the International Merchandise Trade Statistics (STATIN) respectively. Costs data are derived from the ANI survey and financial statements. Data on prices are obtained from the Indices & Price Analyses Unit (STATIN), Master Builders Association and Bank of



Jamaica.

***Hotels & Restaurants:*** Output and cost data are obtained from the ANI Survey. The survey data are supplemented by General Consumption Tax (GCT) records and financial statements from TAJ. Output of establishments with fewer than 10 employees is estimated from tax records, household consumption and other surveys and studies. Data on prices are obtained from the Indices & Price Analyses Unit (STATIN). Physical quantities are obtained from the Jamaica Tourist Board.

***Transport, Storage & Communication:*** The ANI Survey is the primary source of data for output and cost for activities excluding road transport.

Output of establishments with fewer than 10 employees is estimated from tax records, household consumption and other surveys and studies. Data on prices are obtained from the Indices & Price Analyses Unit (STATIN). Physical quantities are obtained from Port Authority of Jamaica, Jamaica Civil Aviation Authority and Jamaica Tourist Board.

Output data for road transport are obtained from Transport Authority and International Merchandise Trade Statistics (STATIN). Cost data are obtained from financial statements and regulatory bodies affiliated with the industry.

***Finance & Insurance Services:*** Data on output and costs are obtained from the ANI survey and financial statements from TAJ and other regulatory agencies such as Financial Services Commission (FSC), Jamaica Stock Exchange (JSE) and Bank of Jamaica. Data on prices are obtained from the Indices & Price Analyses Unit and Employment and Earnings Survey (STATIN). Quantities are obtained from the Quarterly National Income and ANI Surveys.

***Real Estate, Renting & Business Activities:*** Data on output and costs for real estate are obtained from the Population Census, HES and the Survey of Living Conditions (SLC). Data on output and costs for business activities are obtained from the ANI Survey, information from GCT records and financial statements from TAJ. Price data are obtained from the Indices & Price Analyses Unit and Employment and Earnings Survey (STATIN).

***Producers of Government Services:*** Data for government services are obtained from the estimates of revenue and expenditure of central government, government educational institutions, statutory bodies, parish councils, public sector bodies and the Civil Service Establishment Act.

***Other Services:*** Data on output and costs for other services are obtained from the ANI Survey, information from GCT records, financial statements from TAJ, HES, Labour Force Survey and SLC. Data on prices are obtained from the Indices & Price Analyses Unit and Employment and Earnings Survey (STATIN). Physical quantities are obtained from Demographic Statistics (STATIN).

Expenditure approach:

***Private Final Consumption Expenditure:*** A commodity flow approach is used. Data are obtained from the production accounts (National Accounts estimates), International Merchandise Trade Statistics, GCT records, the HES, SLC and Balance of Payments statistics from the BOJ.

***Government Final Consumption Expenditure:*** The main data sources are the estimates of revenue and expenditure of central government, government educational institutions, parish councils and statutory bodies.

***Gross Fixed Capital Formation:*** Gross fixed capital formation is estimated by the commodity flow method. The main data sources are the production accounts (National Accounts estimates) and International Merchandise Trade Statistics (STATIN). The data sources for intangible fixed assets are production accounts (National Accounts estimates) and Balance of Payments.

***Changes in inventories:*** The main data sources for changes in inventories are the ANI Survey and financial statements from TAJ.

***Imports and Exports of Goods and Services:*** International Merchandise Trade Statistics (STATIN) is the data source for imports and exports of goods. Data for trade in services are obtained from the Balance of Payments statistics.

Income approach:

***Compensation of Employees:*** The data sources are the ANI Survey

	<p>and financial statements from TAJ. Information on employment in small enterprises and the informal sector is obtained from the LFS.</p> <p><b><i>Consumption of Fixed Capital:</i></b> The data sources are the ANI Survey and financial statements from TAJ.</p> <p><b><i>Taxes and Subsidies on production and imports:</i></b> Data are obtained from monthly statements of government revenue and estimates of revenue and expenditure of central government and its departments.</p> <p>Quarterly Estimates</p> <p><u>Production approach:</u></p> <ul style="list-style-type: none"> <li>• The main data source for quarterly GDP by economic activity is administrative data and the Quarterly National Income survey.</li> </ul>
<p><u>3.3 Statistical techniques</u></p>	<p>3.3.1 Source data statistical techniques</p> <p>The three approaches are used in compiling the annual GDP estimates while the production approach is used in compiling the quarterly GDP estimates.</p> <p><u>Production approach at current prices</u></p> <p>The production approach to calculating GDP is the sum of the value added at basic prices of all industries plus taxes less subsidies on products. The value added of an industry is equal to its gross output (mainly its sales) less its purchases from other industries (intermediate consumption).</p> <p><b><i>Agriculture, Forestry, and Fishing:</i></b></p> <ul style="list-style-type: none"> <li>• Gross output for export crops is estimated by quantity (adjusted for spoilage) multiplied by price. Estimates are imputed for own consumption, sales to households and for intermediate consumption. Where necessary, estimates are adjusted to reflect local consumption.</li> <li>• Gross output for other agricultural crops is estimated by quantity (adjusted for spoilage) multiplied by price.</li> <li>• Gross output for animal farming is estimated by the number</li> </ul>

of animals slaughtered multiplied by farm gate price.

- Output for dairy cattle is estimated by the quantity of milk produced multiplied by farm gate price.
- Gross output for fishing is estimated by quantity of fish caught times price.

Intermediate consumption is compiled from production expenses obtained from Ministry of Agriculture, financial statements of large farms and commodity boards.

***Mining & Quarrying:***

- Gross output for bauxite and alumina is the sum of quantity exported multiplied by export price  
*plus* volume of local sales multiplied by price  
*plus* quantity of inventory change multiplied by price  
*plus* sales of other secondary products.

Intermediate consumption is compiled from production expenses obtained from annual questionnaire received from bauxite and alumina companies.

- Gross output for gypsum is sales plus secondary output plus inventory change of finished goods and work in progress.
- Gross output for other quarrying is estimated by quantity of industrial minerals produced multiplied by price.

Intermediate consumption is compiled from production expenses obtained from the ANI Survey.

***Manufacture:*** Gross output is estimated using sales plus secondary output plus inventory change of finished goods and work in progress. Intermediate consumption is compiled from production expenses.

***Electricity & Water Supply:*** Gross output is estimated using sales plus secondary output. Intermediate consumption is compiled from production expenses.

***Construction:*** Gross output is estimated using a commodity flow

approach. This approach uses the flow of imported and locally produced goods. All goods are assigned an end-use, based on whether they are used as consumer goods, raw materials or capital goods. Account is taken of any item having more than one end use. This end use assignment is based on the United Nation's Classification by Broad Economic Categories (BEC). There is a further disaggregating of capital goods into construction materials, transport equipment and other machinery and equipment.

The imported flows into capital goods (whether for capital formation or maintenance) for construction materials form part of the output of the construction industry. Locally produced goods that are used as inputs into construction also form part of the output of the industry. Distribution and contractor margins are applied to the estimated value of all materials purchased during the year to derive the output for the industry. One assumption of the commodity flow method is that all goods are used up during the period in which they are imported or sold by local producers. Adjustments therefore have to be made whenever there are unusual occurrences such as hurricanes where the use of increased imports might carry over into the following period.

Establishment data from the ANI survey and other supplementary data are used to estimate intermediate consumption and distribution and contractor/ installation margins.

***Wholesale & Retail Trade; Repairs; Installation of Machinery & Equipment:***

- The process for estimating gross output for wholesale and retail trade is similar to construction. The flow of goods through the wholesale and retail trade consists of all imported goods and locally produced goods originating from agriculture, mining & quarrying and manufacture. The goods are assumed to pass through three stages (distribution, wholesale, and retail). The total sales and the applicable margins are estimated at each stage. The total output is equal to the sum of these margins. Establishment data from the ANI survey and other supplementary data are used to estimate intermediate consumption.

- Gross output for repairs of motor vehicles, personal & household goods is estimated from the demand side using information from the HES and supply and use tables. During the non-survey periods gross output is extrapolated from other data sources including the LFS and administrative data. Intermediate consumption is estimated from the ANI Survey and anecdotal data.
- Gross output for installation of machinery and equipment is estimated using a commodity flow approach based on production and imports of machinery and equipment. Installation margins are calculated and applied to the estimated value of all machinery and equipment purchased during the year, including materials purchased by government. Establishment data from the ANI survey and other supplementary data are used to break down the inputs.

***Hotels & Restaurants:***

- Gross output for hotels is estimated using sales plus secondary output. Intermediate consumption is compiled from production expenses. Information is obtained from the ANI Survey, financial statements and GCT records.
- Output for restaurants, bars and canteen is estimated from the demand side using information from the HES, SLC, tourism expenditure from Jamaica Tourist Board and the Supply and Use table. This is supplemented with data from GCT records. Intermediate consumption is compiled from production expenses and anecdotal data.

***Transport, Storage, and Communication:*** Gross output is estimated using sales plus secondary output. Intermediate consumption is compiled from production expenses. Information is obtained from the ANI Survey, financial statements and GCT records. Output for some road transport activities is estimated by the stock of motor vehicles (engaged in road transport) multiplied by average revenue. Information is obtained from regulatory agencies and International Merchandise Trade statistics.

***Finance & Insurance Services:*** Gross Output for financial intermediaries (excluding insurance services) is the sum of net interest income (FISIM), fees and service charges, other sales and rental income. Intermediate consumption is compiled from production expenses. Output for the central bank is estimated using the sum of costs (wages and salaries, other taxes on production, consumption of fixed capital and intermediate consumption). Information is supplied by the Bank of Jamaica.

Output for insurance services is the sum of actual net premiums earned, interest and investment income, other sales and rental income less claims due and changes in actuarial reserves (for life insurance). Intermediate consumption is compiled from production expenses.

***Real Estate, Renting & Business Activities:*** Gross output for housing services is estimated by the number of rented and owner occupied dwellings multiplied by average rent. Data on the number of dwellings is obtained from the Population Census. This is supplemented by annual estimates from the Survey of Living Conditions. Output of owner occupied dwellings is valued using the prices of rented housing services, i.e. imputed rent. This is the estimated rental that a tenant would pay for the same accommodation taking into account factors such as location, neighbourhood amenities, size, quality of dwelling etc. Intermediate consumption is compiled from production expenses.

Gross output for business activities is estimated using sales plus secondary output. Intermediate consumption is compiled from production expenses.

***Producers of Government Services:*** Gross output is estimated using the sum of costs.

***Other Services:*** Gross output for other services excl. personal services is estimated using sales plus secondary output. Intermediate consumption is compiled from production expenses. Information is obtained from the ANI Survey, financial statements and GCT records.

Gross output for personal services is estimated from the demand side using information from the HES. During the non-survey

periods gross output is extrapolated using data from the LFS. This is supplemented by information from GCT records. Prices are obtained from the Indices & Price Analyses Unit.

#### Production Approach at constant prices

Valued added at constant prices is derived by the single indicator method and involves the extrapolation of base year value added using volume indicators. These can be estimated from the deflation of gross output by an appropriate price index or physical quantities. The base year for the constant price estimates is 2007.

#### Expenditure Approach at current prices

Expenditure approach – sum of household spending, government spending on goods and services, investment in fixed capital (construction, machinery and equipment), change in inventory and exports less imports of goods and services.

***Private Final Consumption Expenditure:*** This includes household final consumption expenditure and final consumption from private non profit institutions serving households (NPISH). A commodity flow approach for local and imported goods is used to estimate household final consumption expenditure. The estimation process takes account of only those goods classified as consumer goods. Taxes on products and margins are added to the c.i.f. value of imports to arrive at purchasers' prices. Imported consumer goods are further classified using the Classification of Individual Consumption According to Purpose (COICOP). With the local commodity flow, retail value of local goods is estimated using data on local production obtained from the production approach.

Final consumption from NPISH is computed as gross output less sales

***Government Final Consumption Expenditure:*** The estimates are computed as gross output less sales of goods and services by government entities.

***Gross Fixed Capital Formation:*** Gross fixed capital formation is



estimated using the same methodology as private final consumption expenditure. With the local and imported commodity flow, the estimation process takes account of only those goods classified as capital goods. There is a further disaggregating of capital goods into the following types:

- Construction materials
- Transport equipment
  - motor cars
  - trucks and buses
  - other transport equipment
- Other machinery & Equipment
  - agricultural machinery & equipment
  - industrial machinery & equipment
  - other machinery & other capital goods

For each type of capital good, allocations are made to capital and maintenance. The distribution, wholesale, retail and installation margins are applied to the allocated values for capital and maintenance. Only the value allocated to capital is included in gross fixed capital formation. Estimates of intangible fixed assets are also included using data from the production accounts and the balance of payments.

***Changes in inventories:*** This is estimated using the valuation placed on inventories by the reporting establishments. Information is obtained from the ANI survey and financial statements.

***Imports and Exports of Goods and Services:*** Data from International Merchandise Trade Statistics are used to estimate imports of goods at cost insurance freight (c.i.f) valuation and exports of goods at free on board (f.o.b) valuation. Imports of goods are adjusted to f.o.b valuation by deducting estimates of merchandise freight and merchandise insurance.

Trade in services data from the Extended Balance of Payments Services (EBOPS) obtained from the Bank of Jamaica are used to estimate imports and exports of services: this includes transportation and freight, travel, insurance, and other services.

#### Expenditure Approach at Constant prices

Relevant consumer price indices (CPI) are used for Household Final Consumption; export and import unit value indices and

relevant price indices are used for Exports and Imports of Goods and Services; Gross Capital Formation is deflated using import unit value indices and appropriate PPI and CPI of major trading partners adjusted for exchange rate; Government Final Consumption is deflated using relevant wage indices and CPI.

#### Income (cost structure) Approach

Income approach - sum of compensation of employees, operating surplus, consumption of fixed capital and taxes on production and imports less subsidies on production and import.

Compensation of employees is estimated from the results of the ANI Survey, financial statements of establishments and the Labour Force Survey.

Consumption of fixed capital is based on unadjusted estimates of depreciation from the ANI Survey and financial statements of establishments.

Taxes on production and imports are obtained from monthly statements of government revenue and estimates of revenue and expenditure of central government and its departments.

Subsidies are estimated by a detailed review of government subsidy and transfer expenditures. Included in subsidies are grants on current account to government enterprises in compensation for operating losses that are clearly consequences of the policy of the government to maintain prices at a level below cost of production.

#### **Quarterly Estimates**

The preparation of quarterly estimates at constant prices incorporates the use of quarterly indicators to extrapolate GDP by economic activity. The estimates are derived from quantity indicators or value indicators, which are deflated by appropriate price indices. Trend extrapolation is also utilized when there are no available indicators.

#### 3.3.2 Other statistical procedures

- Reconciliation

A Supply and Use table is prepared every three to five

	<p>years. It identifies gaps in the estimates and assists in the reconciliation of the estimates. The SUT is also used as the benchmark estimates. On an annual basis the GDP estimates are published using the three approaches. They are consolidated on the Gross Domestic Product and Expenditure Account. The tables do not reflect statistical discrepancies for the current estimates as adjustments are made to the Private Final Consumption Expenditure and Changes in Inventories. However statistical discrepancies are reflected for the constant estimates.</p> <ul style="list-style-type: none"> <li>• Benchmarking <p>The quarterly estimates are benchmarked to the annual estimates using the XLPBM. The XLPBM is an excel function for benchmarking quarterly series to annual series using the proportional first differences (PFD) method proposed by Denton (1971). The function was developed within the Real Sector Division of the IMF’s Statistics Department.</p> </li> <li>• Seasonal adjustment <p>The quarterly estimates are seasonally adjusted using the X11ARIMA seasonal adjustment method developed by Statistics Canada (STATSCAN).</p> </li> </ul>
<b>4. Serviceability</b>	
<p><u>4.1 Periodicity and timeliness</u></p>	<p>4.1.1 Periodicity</p> <p>Quarterly and Annually</p> <p>4.1.2 Timeliness</p> <p>Quarterly estimates are published three months after the end of the reference quarter. Annual estimates are published six months after the end of the reference year.</p>
<p><u>4.2 Consistency</u></p>	<p>4.2.1 Internal consistency</p>

	<p>Supply and Use and Input Output tables are prepared every three to five years. The Supply and Use table assists in the reconciliation of the estimates. The Input Output table shows the local and imported use of products by industries.</p> <p>4.2.2 Temporal consistency</p> <p>National Accounts estimates are done on a time series. This allows for analysis of the cost components to ensure consistency of the series.</p>
<p><u>4.3 Revision</u></p>	<p>4.3.1 Revision schedule</p> <p>Annual estimates: the first estimate is preliminary and this is followed by two subsequent revisions. However, estimates are open for revisions when new or improved data become available.</p> <p>Quarterly estimates: estimates are revised when those of the subsequent quarters of the same calendar year are released. Estimates of previous years are only revised at the time of release of the first quarter estimates.</p>
<p><b>5. Accessibility</b></p>	
<p><u>5.1 Data</u></p>	<p>5.1.1 Statistical presentation</p> <p>Data are published in millions of Jamaican dollars. For annual estimates the following are presented:</p> <ol style="list-style-type: none"> <li>1. Accounts of the nation <ul style="list-style-type: none"> <li>• Gross domestic product by expenditure and income</li> <li>• Generation and use of disposable income</li> <li>• Capital account</li> <li>• Rest of the world account</li> </ul> </li> <li>2. GDP and Value added by industry at current prices</li> <li>3. GDP and Value added by industry at constant prices</li> <li>4. GDP by expenditure at constant prices</li> <li>5. Supply and Use table</li> <li>6. Input Output table</li> <li>7. Tourism Satellite Account (TSA)</li> </ol> <p>For the quarterly estimates the following tables are presented:</p> <ol style="list-style-type: none"> <li>1. Value added by industry at constant prices – seasonally adjusted and unadjusted</li> </ol>

	<ol style="list-style-type: none"> <li>2. GDP and Value added by industry at current prices – seasonally unadjusted</li> <li>3. Fiscal Year Value added by industry at constant prices</li> <li>4. Fiscal Year GDP and Value added by industry at current prices</li> </ol> <p>5.1.2 Dissemination media and format</p> <p>Publications are available in English, from the Communications and Marketing Unit of the Statistical Institute of Jamaica – 7 Cecelio Avenue. Kingston 10, Jamaica. Tel. (1-876-630-1600) Fax (1-876-926-1138) Email: <a href="mailto:info@statinja.gov.jm">info@statinja.gov.jm</a>.</p> <p>Hard Copy – National Income and Product - Tourism Satellite Account (TSA)</p> <p>Electronic - National Income and Product Tourism Satellite Account (TSA) Quarterly Gross Domestic Product Supply and Use Table Input Output Table</p> <p>Quarterly Gross Domestic Product Press Release is available at <a href="http://www.statinja.gov.jm">http://www.statinja.gov.jm</a>; <a href="http://statinja.gov/Pressreleases.apx">http://statinja.gov/Pressreleases.apx</a></p> <p>Various ad-hoc requests are also supplied.</p> <p>Tables are available on the STATIN website <a href="http://www.statinja.gov.jm">www.statinja.gov.jm</a></p> <p>5.1.3 Advance release calendar The precise release dates for the next six months are available on the website <a href="http://www.statinja.gov.jm">www.statinja.gov.jm</a></p> <p>5.1.4 Simultaneous release</p> <p>Tables are released to the Ministry of Finance and other stakeholders 24 hours before release to the public.</p>
<p><u>5.2 Metadata</u></p>	<p>5.2.1 Dissemination of documentation on concepts, scope, classifications, basis of recording, data sources, and statistical techniques</p> <p>Documentation on the methodology is published in the ‘National</p>

Income and Product Report' and on the STATIN's website at [www.statinja.gov.jm](http://www.statinja.gov.jm)