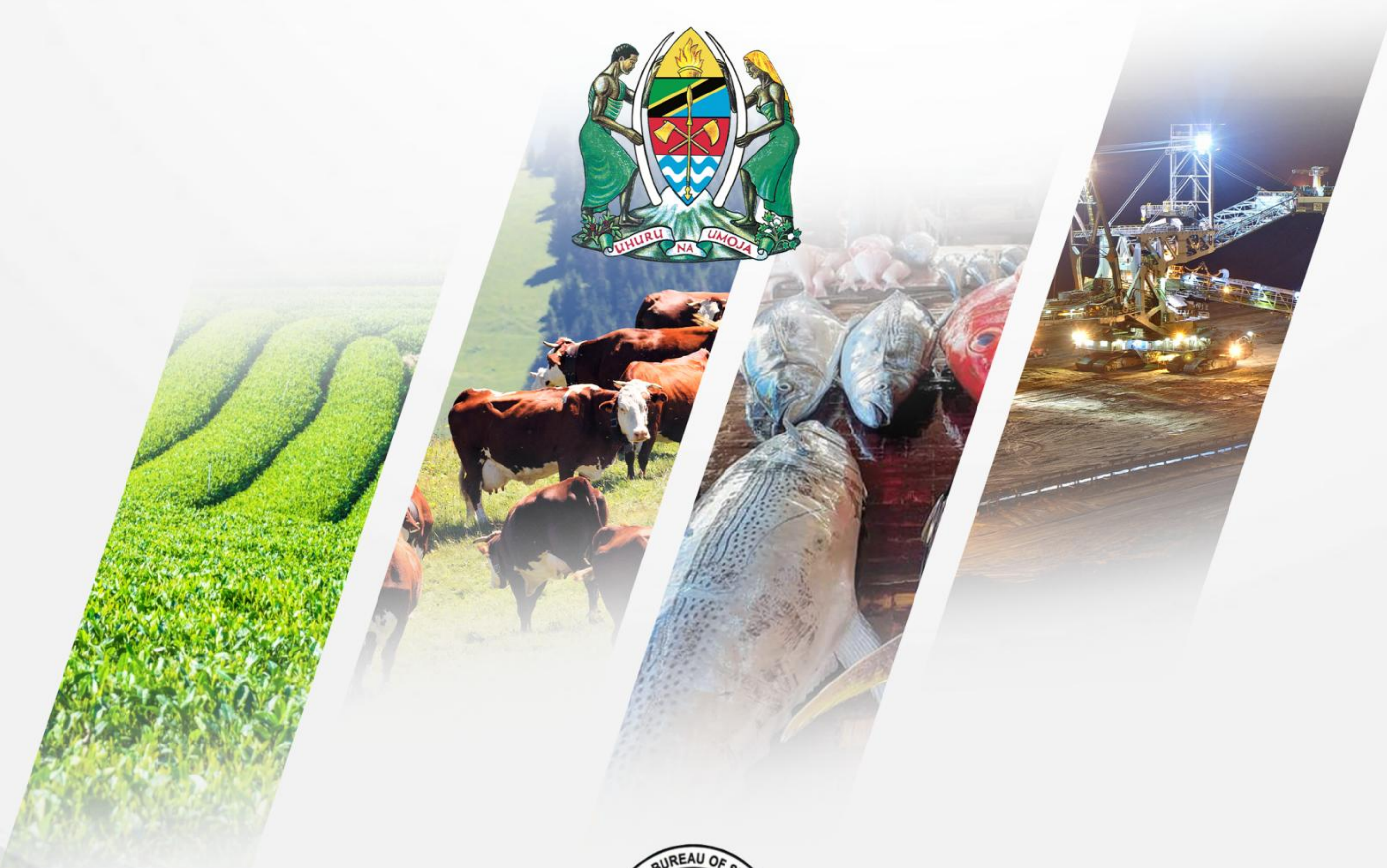
REVISED NATIONAL ACCOUNTS STATISTICS
MAINLAND TANZANIA
BASE YEAR 2019

SOURCES AND METHODS



NATIONAL BUREAU OF STATISTICS
MINISTRY OF FINANCE
June 2026

THE UNITED REPUBLIC OF TANZANIA

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Abbreviations

AfDB	Africa Development Bank
ANA	Annual National Accounts
BM	Benchmark
BOP	Balance of Payment
BOT	Bank of Tanzania
CIF	Cost Insurance Freight
CII	Changes in Inventories
CPI	Consumer Price Index
CPV	Current Price Value
FISIM	Financial Intermediation Services Indirectly Measured
FOB	Free on Board
GDP	Gross Domestic Product
GFS	Government Finance Statistics
GFCF	Gross Fixed Capital Formation
GO	Gross Output
GVA	Gross Value Added
HBS	Household Budget Survey
IC	Intermediate Consumption
IMF	International Monetary Fund
IO	Input-Output Ratio
ISIC	International Standard Industrial Classification
KPV	Constant Price Value
NAS	National Accounts Statistics
NASC	National Sample Census of Agricultural
NBS	National Bureau of Statistics
NCC	National Construction Council
NPISH	Non-Profit Institutions Serving Households
rD	Interest Rate of Deposits
rL	Interest Rate of Loans
rr	Reference Rate
SUMATRA	Surface and Marine Transport Regulatory Authority

MCL	Marine Company Limited
SUTs	Supply and Use Tables
TAZAMA	Tanzania and Zambia Crude Oil
TRA	Tanzania Revenue Authority
TPC	Tanzania Posta Corporation
TPDC	Tanzania Petroleum Development Corporation
VAT	Value Added Tax
WIP	Work-In-Progress

Prefece

The National Bureau of Statistics compiles Gross Domestic Product estimates for Mainland Tanzania in accordance with internationally accepted standards and best practices for national accounts statistics. This publication, Sources and Methods for the Revised GDP Estimates – Mainland Tanzania (2019 Base Year), provides a comprehensive description of the data sources and methods and in the compilation of revised GDP, base year 2019

The revision of GDP estimates integrated various data sources, improved coverage of economic activities, and methodological improvements. The revised estimates are based on the 2019 base year and incorporate information all economic activities classified by ISIC Rev 4, including agriculture, mining and quarrying, manufacturing, construction, trade, transport, financial services, public administration, and other service activities. The data used in the rebasing and revision of GDP were obtained from administrative records, censuses, surveys, enterprise reports, and other relevant statistical sources

This document aims to enhance transparency and provide more clarity to the users on the sources and methods applied in compiling the revised GDP estimates. It summarises the detailed GDP compilation by production and expenditure covering all economic activities. The methodologies presented in this publication reflect the ongoing efforts to improve the quality of national accounts statistics. The revision of GDP estimates with the 2019 base year incorporates improvements arising from changes in the economy, availability of new data sources and methodology.

The National Bureau of Statistics remains committed to fulfilling its mandate of coordinating the NSS, producing, and disseminating quality official statistics that support evidence-based decision-making as all levels.

Through continuously strengthening of statistical systems, close collaboration with data producers, and applying internationally recognized standards and best practices, The NBS ensures that national accounts statistics are produced using reliable data sources, effective methodologies, so as to provide quality economic analysis for planning and decision-making.

These efforts aim to enhance the accuracy, consistency, relevance, and timeliness of GDP estimates while ensuring that they effectively reflect the evolving economic structure of Mainland Tanzania

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1.0. Introduction

The National Bureau of Statistics (NBS) carried out the rebasing and revision of the National Accounts Statistics (NAS) for the base year 2019. The base year 2019 reflects significant improvements in data sources and methodologies, enhancing the accuracy, timeliness, and consistency of the national accounts over time.

The revision exercise was conducted with a technical support of consultant from Turkey who seasonally worked closely with the National Accounts Statistics compilers. The rebasing process was conducted using Supply and Use Tables (SUTs), a tool that enhanced consistency between supply and use of products in the estimation of products generated through domestic production and imports and the corresponding uses of the supplied product. The finalized SUT provided benchmark 2019 estimates of Gross Domestic Product (GDP) by production, income and expenditure in a reconciled manner without discrepancy between the two GDP approaches.

This report outlines the general procedures used in compilation of revised GDP time series estimates 2016 – 2024, then provide a comprehensive explanation of the data sources and methods used for compilation of GVA by individual economic activities. The GDP series estimates were estimated from the 2019 benchmark values (SUT 2019). The report further explains on the procedures used to compile constant and current price GDP estimates by production and expenditure approaches

The specific tasks addressed include redevelopment of compilation worksheets and the generation of annual and quarterly GDP series for the years 2016 to 2024. The exercise also involved reviewing and validation of source data to ensure reliability of the estimates. Detailed descriptions of compilation techniques are presented in subsequent sections, organized according to International Standard Industrial Classification of Economic Activities (ISIC Rev. 4).

1.1 Objectives

The objective of revision national accounts statistics is to comply with international guideline which require member countries to rebase and revise National Accounts

Statistics (NAS) in every 5 years to enhance the quality and accuracy of national accounts statistics.

1.2. Scope and Coverage

The revision of National Accounts Statistics (NAS) was carried out by the National Bureau of Statistics (NBS) covering the entire territory of Mainland Tanzania. All economic activities were covered as per ISIC Rev 4 and CPC 2.1 in line with the 2008 SNA

1.3 The Rationale for Revising National Accounts Statistics

Compilation of backward and forward GDP series (base year 2019) and its allied aggregates from 2016 -2025 was carried out after replacing the 2015 base year with the new base year 2019. The revision of series has been done so as to among other reasons:

1. Improve data coverage and availability
2. Update compilation methodology according to the 2008 SNA
3. Take into account of structural changes in the economy, including production and consumption and investment patterns
4. Improve classifications and deflators

1.4. Concepts and Definitions

System of National Accounts

The System of National Accounts (SNA) is a coherent, consistent, and integrated set of macroeconomic accounts based on internationally agreed concepts, definitions, classifications, and accounting procedures. The 2008 SNA was published in 2009

Gross Domestic Product

The sum of value added of all resident producers in the economy. It represents the monetary value of all goods and services produced within a country by economic activities during a specified period, usually a year, before provision for consumption of fixed capital

GDP at basic Prices VS Market Prices

GDP at basic prices excludes any taxes payable on products and includes any subsidies receivable on products while GDP at market prices taxes less subsidies on products;

Gross Fixed Capital Formation

Consists of net additions to the assets of producers' tangible reproducible goods whose expected lifetime use is more than one year

Production:

In economic sense, production is economic activity carried out under the control and responsibility of an institutional unit that uses inputs of labour, capital, and intermediate goods and services to produce outputs of goods and services. These outputs must be of a kind that can be delivered to other units;

Goods:

Physical, produced objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another by engaging in transactions on markets.

Market Output:

The normal situation in a market economy where producers make decisions about what to produce and how much to produce in response to expected levels of demand and expected costs of supply. It consists of the output intended for sale at economically significant prices.

Non-Market Output:

The output undertaken by General Government and NPISHs that takes place in the absence of economically significant prices. A price is said to be not economically significant when it has little or no influence on how much the producer is prepared to supply and is expected to have only a marginal influence on the quantities demanded

Valuation of output:

Goods and services produced for sale on the market at economically significant prices may be valued either at basic prices or at producers' prices

Basic price:

the basic price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable and plus any subsidy receivable, by the producer as a consequence of its production or sale. It excludes any transport charge invoiced separately by the producer.

Producer's price:

The producer's price is the amount receivable by the producer from the purchaser for a unit of good or service produced as output minus any VAT, or similar deductible tax, invoiced to the purchaser. It excludes transport charges by the producer.

Purchaser's price:

The purchaser's price is the amount paid by the purchaser, excluding any VAT or similar tax deductible by the purchaser. In order to take delivery of a unit good or service at the time and place required by the purchaser. The purchaser's price of a good includes any transport charges paid separately by the purchaser to take delivery at the required time and place.

Compensation of Employees:

This is the total remuneration payable by an enterprise to employees for work done by them during the accounting period.

Taxes on products:

These are payable on goods and services when they are produced, sold or used. They include taxes on imports that become payable when products enter the country. Subsidies are current transfers that government pays to producers that constitute additions to the income receivable from their output;

Household Final Consumption Expenditure:

consists of expenditure, including expenditure whose value must be estimated indirectly, incurred by resident households on individual consumption goods and services, including those sold at prices that are not economically significant and including consumption goods and services acquired from abroad.

NPISHs Final Consumption:

Consists of the expenditures, including expenditure whose value must be estimated indirectly, incurred by resident NPISHs on individual consumption goods and services and possibly on collective consumption services.

General Government Final Consumption expenditure:

Consists of expenditure, including expenditure whose value must be estimated indirectly, incurred by General Government on both individual consumption goods and services and collective consumption services.

2.0. Sources and Methods

A Supply and Use Table (SUT) framework, aligned with the SNA 2008, was adopted to construct a SUT 2019 for the Mainland Tanzania. The benchmark GDP estimates 2019 was derived from SUT then aggregated by kind of economic activity. The 2019 benchmark GDP enabled the construction of a comprehensive and consistent GDP series for 2016 – 2024, supporting both backward revision and forward series. The revised GDP series at current and constant market prices were obtained by extrapolation of benchmark values using appropriate output or input indicator in each economic activity.

Data Sources

The revision process used multiple data sources to improve the accuracy and completeness of the updates. As part of the rebasing exercise, measures were taken to expand the coverage of economic activities by incorporating most recent data from administrative records, surveys, censuses, and specialized studies targeting specific sectors.

.The data used in the revision of National Accounts Statistics for Mainland Tanzania include:

1. Surveys and Census: Household Budget Survey 2017/18; The Integrated Labour Force Survey 2020/21; Agricultural and Livestock Sample Census 2019/20 and Annual Survey of Industrial Production 2018.
2. Administrative data on imports and exports of goods and services, Government Finance Statistics and VAT turnover Statistics; and

3. Special Studies including Trade Margin Study 2019; Non-Profit Institutions Servings Households 2019 and Service Sector Study 2019.
4. Main data source institutions include Ministry of Finance (MoF), Bank of Tanzania (BOT), National Bureau of Statistics (NBS), Tanzania Revenue Authority (TRA), and other pertinent MDAs.

Revision Approaches

The revised national accounts statistics base year 2019 used the Supply and Use Tables (SUTs) framework to provide a systematic and consistent frame for the estimation of the Gross Domestic Product (GDP) by production, expenditure and income approaches for the base year. However, the GDP series were compiled using Production and Expenditure approaches.

1. **Production Approach**: GDP at market prices is derived by summing up the gross value added at basic prices of each activity and adding taxes less subsidies on products. This approach was used for the compilation of all economic activities.
2. **Expenditure Approach**: GDP at market prices is derived by adding up the purchases that are made for final consumption by (NPISHs, Government and Household), Gross Capital Formation, and Net exports.

2.1. GDP by Production Approach

This is one of the three standard methods for calculating Gross Domestic Product. It measures the total gross value added by all economic activity within the economy. The estimation of GDP by the production approach serves as a fundamental framework for assessing the economic performance as well as economic growth.

The integrity and accuracy of GDP estimate through production approach depend heavily on consistent methodology, robust data collection, and alignment with international standards. The National Bureau of Statistics (NBS) compiles both quarterly and annual GDP estimates using production approach. The comprehensive coverage, data sources and methods for the revised GDP 2019 series by economic activity is outlined below:

A: Agriculture, Livestock, Fishing and Forestry

Estimates of output of crops, livestock, and aquaculture are based on work-in-progress (WIP) techniques. The worksheets of the respective industries have been incorporated into the annual framework. The agriculture WIP model is based on the cost structure by crop type where information on crop calendar; estimated production costs and output per acre are collected. To update the model, quarterly information on acreage and prices or price movements of output and input are collected to estimate output and production costs at constant and current prices. A total of 20 crops is currently covered in the model.

Crops

The crop production activity is estimated by using a crop model, which is made up of a sample of 20 crops. The sub-activity includes growing maize, paddy, sorghum/millet, other cereals, cassava, round potatoes, sweet potatoes, other roots and tubers, beans and other pulses, dried oil seeds, other vegetables, bananas, other fruits, cashew nuts, coffee, cotton, tea, tobacco, pyrethrum, sisal and sugar cane.

Data Sources

Ministry of Agriculture: The volumes of crops production and area planted on annual basis National Bureau of Statistics: Consumer price indices for each particular crop. The gross output at current prices is derived by reflating the output at constant prices by the appropriate crop CPI.

Intermediate Consumption

The Intermediate Consumption (IC) at constant prices is compiled based on a work-in-progress model and aligned to benchmark value. Annual acreage costs for long and short rain seasons are used to compile constant prices IC and thereafter allocated on quarters using cost structure for long and short seasons. The IC at current prices is derived by reflating the weighted CPI for seeds, inorganic fertilizers pharmaceutical products, insecticides/Pest sides, fuel and lubricants, actual rents on housing, maintenance and repairs, water supply, cotton cloth and miscellaneous goods/services. The annual estimate is derived through summation of four quarters.

Livestock

Livestock covers activities of rearing indigenous and improved cattle, goats, sheep, pigs, donkeys and horses, guinea pigs and rabbits, indigenous and commercial chicken and other birds.

Data Sources

Ministry of Livestock and Fisheries: The number of livestock, animal products (eggs, hides and skins) and their corresponding prices. National Bureau of Statistics: CPI for livestock.

Gross Output

Gross output at current prices is compiled based on a work-in-progress model in which output of different types of livestock is derived by summing up the value of inventory, animals sold for slaughter and other farm output such as meat, milk, manure, manure, egg, offal, hides and skin and aligned to benchmark value. Gross output at constant prices is derived by deflating current prices gross output using the quarterly prices of inventory and corresponding prices of farm products such as meat, milk, eggs, offal, hides and skin for each animal species.

Intermediate Consumption

Intermediate Consumption (IC) at constant prices is derived using fixed ratios generated from the Agricultural and Livestock Sample Census 2019/2020.The items of intermediate consumption used are medicines, dips, insecticides, vaccines, animal feed/fodder, water, fuel and lubricants, electricity, repairs and maintenance. IC at current prices is derived by reflating the output at constant prices IC.

***Calculation in the WIP model for cattle, as an example, is as follows*:**

Total farm output

= (Animal output - Animal slaughtered on farm (is reflected as meat and other products on farm in (b)) + Other farm output

Whereby

Animal output

= Increase in livestock (see section on inventories) + Animals slaughtered on farm + Animals slaughtered in abattoirs – Imports

other farm output

= Meat produced on farm + Offal produced on farm + Fat/Lard produced on farm + Milk + Manure + Hides and skins

Increase in livestock

Inventory of livestock

Total Supply = Opening/beginning inventory +Births +Purchases and received as gifts +Imports (Quarterly data)

Dead

Total uses *= +Slaughtered on farm +Slaughtered by abattoirs and informal butcher +Sold or given away as gifts +Exports (Quarterly data)*

End/closing inventory = Total supply - Total uses

Increase in livestock = Closing -opening inventory

Data included are numbers of livestock; quarterly prices of different products i.e. animals, meat, offal, hides etc.; exports; imports; slaughter by abattoirs and list of assumptions in form of ratios.

Fishing

This activity covers fishery resources from marine or freshwater environments, with the goal of capturing fish, crustaceans and other marine products. The activity has two components - commercial fishing and aquaculture.



Data sources

Ministry of Livestock and Fisheries: Volumes and value of fish catch from Marine and Freshwater on an annual basis. National Bureau of Statistics on CPI for fish, other food products, clothing and diesel.

Gross Output

Gross output at current prices is derived by extrapolating the benchmark value with the value of fish harvested from fresh and marine water. Gross output at constant prices is derived by deflation of gross output at current prices by using CPI of fish.

Intermediate Consumption

Intermediate consumption (IC) at constant prices is derived based on the fixed input-output ratio from the benchmark value. The IC at current prices is derived by reflating the weighted index for other food products, CPI clothing, and diesel.

Forestry

The activity covers the production of logs, charcoal, and fuel wood, as well as the gathering of non-wood forest products.

Data Sources

National Bureau of Statistics - Household Budget Survey 2017/18, quarterly survey of industrial and CPI from NBS.

Methodology

Gross Output

Gross output at constant prices is obtained by extrapolating the benchmark value with volume indices of firewood, Charcoal, and logs. Gross output at current prices for forestry and logging is derived by reflating the constant prices gross output using weighted CPI for fuel wood, coke refined petroleum products, wearing apparel and CPI services.

Intermediate consumption (IC)

Intermediate consumption (IC) at constant prices is derived by using a fixed input-output ratio. IC at current prices is derived by reflating using weighted CPI for fuel wood, coke refined petroleum products, wearing apparel and services.

B: Mining and Quarrying

Mining and quarrying activities covers, Mining of coal and lignite, Extraction of natural gas, Mining of metal ores, other mining and quarrying incl. salt, sand, stones, clay, diamond, Tanzanite and other minerals.

Data Sources

National Bureau of statistics - Annual Survey of Industrial Production (ASIP) and Tanzania Petroleum Development Corporation- volume data; Ministry of Energy - volume data and Ministry of Minerals - volume data.

Methodology

Gross Output

Gross output at constant prices for metal ores is estimated depending on the type of mineral. For coal and other minerals, which include salt, diamond, tanzanite, and others such as pozzolana, limestone, and gypsum, the output is estimated by extrapolating their benchmark values using the respective quantity index. In the case of gold, the output is obtained by extrapolating its benchmark value using its respective quantity index. Similarly, for iron ores, the value is derived by extrapolating the benchmark value using the quantity of silver. Meanwhile, for stone, sand, and clay, estimates are made by extrapolating the benchmark value using the quantity of stone, sand, and clay.

Additionally, output from other mining and quarrying activities which cover other non-ferrous metal ores and concentrates as well as stone, sand, and clay is also included. For other non-ferrous metal ores and concentrates, the output is estimated by extrapolating their benchmark value using the output at constant prices of stone, sand, and clay. For the sand and clay, the benchmark value is extrapolated by using the quantity of cement produced. Lastly, for natural gas, the output is obtained by extrapolating the benchmark value using the quantity of natural gas.

For coal gross output at current prices is derived by extrapolating the benchmark value using its unit value index, which captures changes in both quantity and price. Similarly, for gold and natural gas, output is obtained by extrapolating their benchmark values using their corresponding current values. For iron ores and stone, sand, and clay, output is determined by reflating their constant price estimates using the output prices of construction materials.

Moreover, for other minerals under other mining and quarrying such as other non-ferrous metal ores and concentrates; stone, sand, and clay; and other minerals (salt, diamond, tanzanite, pozzolana, limestone, and gypsum), the output at current prices is obtained by reflating the constant price output using the specific price index for each category.

Intermediate Consumption

The Intermediate Consumption at constant prices of coal, natural gas, metal ores (gold, iron ores, stone, sand and clay), other mining and quarrying (other non-ferrous metal ores and concentrates, stone, sand and clay and other minerals (salt, diamond, tanzanite and other minerals such as pozzolana, limestone, limestone, gypsum) is estimated by applying the fixed benchmark Input Output Ratio to their respective output at constant prices.

For coal, natural gas, and metal ores such as gold, iron ores, and stone, sand, and clay, the IC at current prices is derived by reflating constant price IC using a weighted price index. Likewise, for other mining and quarrying which covers other non-ferrous metal ores and concentrates; stone, sand, and clay; and other minerals (salt, diamond, tanzanite, pozzolana, limestone, and gypsum), the IC is obtained by reflating IC at constant prices using CPI weighted.

C: Manufacturing

The compilation worksheets are designed to explicitly estimate the following manufacturing sub-activities:

- C10: Manufacture of food products
- C11: Manufacture of beverages
- C12: Manufacture of tobacco products
- C13, 14 and 15: Manufacture of textiles, wearing apparel and leather and leather products
- C16: Manufacture of wood and of products of wood and cork, except furniture
- C18: Printing and reproduction of recorded media
- C19: Manufacture of Coke
- C20 and 21: Manufacture of chemicals and chemical products
- C22: Manufacture of rubber and plastics products
- C23: Manufacture of other non-metallic mineral products
- C25: Manufacture of fabricated metal products, except machinery and equipment
- C26-30: Manufacture of electrical, transport and machinery equipment
- C31: Manufacture of furniture and other manufacturers.

Data Source

Data sources for manufacturing economic activity include Annual Survey Industrial Production (2018 ASIP), Producer Price Index (PPI) and Consumer Price Index (CPI) from NBS; and VAT turnover from TRA.

Methodology

Gross Output

Output at current prices is obtained from the extrapolation of benchmark values for manufacturing sub products derived from VAT turnover. Output at constant prices is obtained by extrapolating benchmark estimates using values derived from deflated turnover/ VAT from TRA. The deflator used is PPI of respective manufacturing sub products.

Intermediate Consumption

IC at current prices is obtained through reflating constant IC using PPI and aligned by benchmark values. Fixed IO ratio was used to derive IC estimates at constant prices once the output estimates are calculated.

D: Electricity Supply

This section includes the activity of providing electric power, natural gas and the like through a permanent infrastructure (network) of lines, main and pipes. Also, distribution of electricity, gas, and the like in industrial parks or residential buildings. This section therefore includes the operation of electric and gas utilities, which generate, control and distribute electric power or gas.

Data Sources

Data for this economic activity are obtained from Tanzania Electric Supply Company Limited (TANESCO) which includes data on generation, transmission, and distribution of electricity, while data for gas supply is obtained from Tanzania Petroleum Development Corporation. Furthermore, Producer Price Index and Consumer Price Index are obtained from NBS.

Methodology

Gross Output Electricity

Quarterly gross output at constant prices is derived from volume extrapolation of the 2019 benchmark value using the quantity of electricity distributed. Gross output at current prices is derived by reflating constant output. The reflator used is the Producer Price Index (PPI) of electricity.

Gross Output Gas Supply

Constant price gross output for Gas supply is estimated by extrapolating the benchmark value using the volume index for gas consumption. To obtain current price gross output the benchmark value is extrapolated using the value index for gas consumption.

Intermediate Consumption

Intermediate consumption consists of generation, transmission and distribution expenses as captured in the benchmark estimate. Constant price intermediate consumption is obtained by applying the fixed IO ratio from benchmark to constant output. The current price intermediate consumption is obtained by reflating the constant price IC.

The IC price index used for reflation is constructed as a weighted consumer price index of electricity, repair and maintenance, gas, transport services, services and fuel and lubricants prices. Intermediate consumption at constant prices is obtained by applying the fixed benchmark IO ratio to constant output. Intermediate consumption at current prices is obtained by reflating constant price IC. The reflator used is a weighted index of goods and services.

The annual gross value added for this economic activity is estimated as a sum of the four quarters.

E: Water Supply, Sewerage, Waste Management and Remediation

This section includes activities related to the management (including collection, treatment and disposal) of various forms of waste, such as solid or non-solid industrial or household waste, as well as contaminated sites. The output of the waste or sewage treatment process can either be disposed of or become an input into other production processes. Activities of water supply are also grouped in this section, since they are often carried out in connection with, or by units also engaged in, the treatment of sewage.

Data Sources.

Administrative data from water and sanitation authorities. This data is supplemented by data from the household-based surveys, and the Population Census from NBS.

Methodology

Water supply activity is categorized into "own account supply" and water supplied through water authorities. Sewerage activities are assumed to be a fixed relationship with the total population. Same methodology is applied for both quarterly and annual compilation. The specific estimates are outlined:

Own account water supply is based on inter Demographic Health Survey growth rate in the number of households that use sources of water other than piped. The generated series of households is used to derive volume index for extrapolating the 2019 benchmark value. Current price estimates are computed through reflation using CPI for water charges.

Gross Output

Water supplied by Authorities: Data on quantity of water supplied is used to derive output estimates through volume extrapolation of the benchmark values. Current price values are obtained by reflating the constant price estimates using the CPI for water charges. The production account for “Water supply, sewerage and waste disposal” is derived through summation of the production components of the sub-activities.

Intermediate Consumption

Constant price IC is estimated using a fixed IO ratio while current price estimate of IC is obtained by reflating the constant price IC. The reflator is a weighed CPI for electricity, water, diesel, chemicals and CPI services. Current price IC for sewerage services is obtained by reflating constant price IC using weight CPI for services, electricity, diesel and maintenance and repair.

F: Construction

Construction activities include construction of buildings; civil engineering and other specialized construction activities such as construction of road, railways and utility projects; construction of other civil engineering projects; industrial facilities other than buildings, waterways, harbor, dredging of waterways and dams; demolition and site preparation, electrical, plumbing and other construction, installation activities, building completion and finishing.


Data sources

Survey of Industry Production data and CPI from NBS. Construction material index from National Construction Council (NCC) and customs data including import and export of construction materials from BOT.

Methodology

Gross output: Estimated based on work-in-progress model. Gross output at current prices is estimated from industry production data aligned to benchmark value. Gross output at constant prices is derived by deflating gross output at current prices using National Construction Council (NCC) prices.

Intermediate Consumption: Estimation of Intermediate consumption at current price based on construction working in progress model, aligned with benchmark IC. Constant price IC was obtained by deflating current price intermediate consumption.

G: Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles

This section includes wholesale and retail sales (i.e., sales without transformation) of any type of goods and the rendering of services incidental to the sale of these goods. Wholesaling and retailing are the final steps in the distribution of goods. Goods bought and sold are also referred to as merchandise. Also included in this section are the repair of motor vehicles and motorcycles. Production accounts have been created for Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles, while estimates for wholesale trade and retail trade are combined.

Data Sources

Data sources for this economic activity are turnover extracted from Value Added Taxes as obtained from TRA and CPI from NBS.

Methodology

Gross Output: Gross output at current prices is obtained by extrapolating benchmark output using VAT turnover. For constant price output, current output is deflated using weighted CPI to obtain constant output. The deflator is a weighted CPI on spare parts and accessories; and maintenance and repair of motor vehicles for class 45 and CPI goods excluding motor vehicles for class 46 and 47.

Intermediate Consumption: Intermediate consumption at current prices is derived by applying fixed benchmark IO ratio to current output. The obtained current IC is then deflated using weighted CPI to obtained IC at current prices. The deflator for class 45 is weighed CPI of purchase of vehicles and services, while for class 46 and 47 is a weighted

CPI of other services, communication, transport services, accommodation, rent, electricity and fuel. Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles production accounts are then summed up to obtained total for Industry. The annual GVA for this economic activity is obtained as a summation of the four quarters.

H: Transportation and Storage

The compilation level of detail includes transport and storage activity, covers the following sub-activities; land transport and transport via pipelines; water transport; air transport; warehousing and supporting activities for transportation; and postal and courier activities.

The activity includes passenger and freight rail transport; passenger and freight road transport; transport via pipeline; passenger and freight water transport; passenger and freight air transport; warehousing and support activities for transportation includes ports activities; and postal and courier activities

Data Source

Data sources for this economic activity vary depending on the mode of transport. The road transport data specifically the number of licensed passengers and freight vehicles is obtained from SUMATRA. Rail transport statistics on passengers and cargo movement are sourced from TAZARA and TRC. The pipeline transport data is provided by TAZAMA Limited and SONGAS. Water transport figures, covering the number of passengers and freight moved, come from Marine Company Limited (MCL). Air transport data, including passengers and freight volumes, is sourced from Precision Air and Air Tanzania Limited. Postal and courier service information is obtained from Tanzania Posta Corporation (TPC). Additionally, Consumer Price Index (CPI) data is derived from the National Bureau of Statistics (NBS).

Gross output

Gross output at constant prices is derived by extrapolating benchmark value using volume indicators derived from number of vehicles licensed; air passengers and cargo; rail passengers and cargo; water passengers and cargo and volume of natural gas transported through pipelines. However, all passengers and cargo data are in number and tonne-kilometres respectively.

Gross output at constant prices for warehousing and support activities for transportation is derived by extrapolating benchmark values with deflate the gross output at current prices using CPI rent. Gross output at constant prices for postal and courier service is derived by deflating the current prices gross output using CPI for air transport services and general services.

Gross output at current prices for road; rail; air and water transport are derived by reflating constant prices gross output using corresponding CPI for road, railway, air and water transport. Gross output at current prices for pipeline transportation is estimated based on value of transported gas. Gross output at current prices for warehousing and support services for transportation is compiled by reflating constant prices gross output using CPI for rent. Gross output at current prices for postal and courier services is derived by extrapolating benchmark value with sales of postal and courier services.

Intermediate Consumption

Intermediate consumption at constant prices for all activities is derived by multiplying fixed input output ratio by constant prices gross output. Intermediate consumption at current prices for all activities is derived by reflating constant prices IC with corresponding CPI. Annual gross value added for this economic activity is estimated as a sum of the four quarters.

I. Accommodation and Food Service

The activity covers; Accommodation, Food and beverage service activities; It includes the provision of short-stay accommodation for visitors and other travelers, and provision of complete meals and drinks fit for immediate consumption.

Data Source.

Data for the accommodation activity is obtained from hotel surveys capturing domestic and international bed occupancy. For food services activities, data on international tourist arrivals were sourced from immigration records, while population figures and Consumer Price Index (CPI) data were obtained from the National Bureau of Statistics (NBS).

Methodology

Gross output

Gross output at constant prices for accommodation services is compiled using weighted beds occupancy as volume indicator and extrapolate with benchmark value. Gross output at current prices is derived by reflating constant prices gross output using CPI of accommodation.

Gross output at constant prices for food and beverage services is obtained by extrapolating benchmark value by weighted volume index for number of tourist arrivals and total population for Tanzania Mainland. Gross output at current prices is compiled by reflating constant prices gross output using CPI catering services.

Intermediate Consumption

Intermediate consumption at constant prices for accommodation services is derived by multiplying fixed input-output ratio with constant prices gross output. IC at current prices for accommodation services is estimated by reflating using weighted price index of beer and malt, wearing apparel, meat and meat product and services.

Intermediate consumption at constant prices for food and beverage services is derived by multiplying fixed input-output ratio with constant prices gross output. IC at current prices for food and beverage services is estimated by reflating using weighted price index of paddy (CPI rice), meat and meat product, fuel wood, and services.

J: Information and Communication

Information and communication activity is an economic activity that includes the production and distribution of information and cultural products; the provision of the means to transmit or distribute these products, as well as data or communications, information technology activities; and the processing of data and other information service activities.

The sub activities of this activity are publishing activities (D:58); motion picture, video and television programme production, sound recording and music publishing activities (D:59);

radio and TV programming and broadcasting activities (D:60); telecommunications activities (D:61), computer programming, consultancy and related activities (D:62) and information services activities (D:63).

Data Sources

The data sources are collected mainly from private and public telecommunication companies including detailed income and expenditure data extracted from audited financial reports. Additional information on turnover and Consumer Prices Index (CPI) are obtained from Tanzania Revenue Authority (TRA) VAT records and NBS respectively.

Methodology

Gross Output

Gross output at current prices is derived by extrapolating the benchmark value with quarterly survey, income data for telecommunication companies and computer and related services, which reflect the activities of Division 61, 62 and 63. Sub activities of divisions 58, 59 and 60 output estimates are based on turnover information from VAT records. Gross output at constant prices is derived by extrapolating the benchmark value with deflated quarterly income survey data. The deflator used is CPI of communication.

Intermediate Consumption

Intermediate consumption (IC) at constant prices is obtained by applying a fixed IO ratio to gross output at constant prices. IC at current prices is derived by extrapolating the benchmark value by reflating IC at constant prices with weighted CPI of services, communication and maintenance and repairs.

K: Financial and Insurance

Financial activity includes insurance, reinsurance and pension funding activities and activities to support financial services. In addition, the activity also includes the activities of holding assets, such as services of holding companies and the activities of trusts, funds and similar financial entities.

The sub activity covered are financial service activities except insurance, reinsurance and pension funding; insurance, reinsurance and pension funding, except compulsory social security activities (D: 64); insurance activities (D:65) and auxiliary to financial service activities (D:66).

Data Sources

The data sources are collected mainly from private and public commercial banks, Bank of Tanzania (BOT), and Insurance companies including detailed income and expenditure data extracted from audited financial reports. Additional information is turnover VAT and CPI data obtained from TRA and NBS respectively.

Methodology

Central Bank

Gross Output

Gross output at current prices is compiled by using sum cost approach based on quarterly collected data such as summing up compensation of employees (COE), intermediate expenses and depreciation as proxy of consumption of fixed capital (CFC). Gross output at constant prices is estimated by extrapolating benchmark value with deflated gross output at current prices. The deflator used is the CPI of all items.

Intermediate Consumption

Intermediate consumption at current prices is derived by extrapolating benchmark value with IC of central banks from BOT audited report. Intermediate consumption at constant prices is compiled by extrapolating benchmark value with deflated current prices IC. The deflator used is the CPI of services.

Commercial Bank

Gross Output

Gross output at current market prices for commercial banks and auxiliary services is derived by extrapolating output benchmark value with sum of value for stock of loans and deposits. Gross output at constant market prices is derived by extrapolating benchmark value with deflated stock of loans and deposits. The deflator employed is CPI of all items.

Intermediate Consumption

Intermediate consumption at constant prices is compiled based on fixed IO ratio with gross output at constant prices. IC at current prices is obtained by extrapolating benchmark value of commercial banks and auxiliary services with reflated IC at constant prices. The reflator applied is CPI of services.

Financial Intermediation Services Indirectly Measured

Financial Intermediation Services Indirectly Measured **(**FISIM) refers to the value of financial intermediation services provided by financial institutions for which no explicit charges are made, but which are paid for indirectly by customers through interest rate margins. FISIM is computed using the following formula:

FISIM = $(rL - rr) \times L + (rr - rD) \times D.$

Whereby:

rL: average interest rate on loans.

rD: average interest rate on deposits.

rr: reference rate (risk-free or interbank rate).

L: stock of loans.

D: stock of deposits.

Estimation of FISIM output and IC during the rebasing are computed separately from financial activities. The key components used to estimate the FISIM are reference rate, stock of loans, stock deposits, average interest rate on loans and deposits. The reference rate (rr) is computed as a simple average of implied interest rate on interest received (i.e. interest received/stock of loans & advances) and interest rate paid (i.e. interest paid/stock of deposits). FISIM on loans is calculated as average interest rate on loan (rL) less reference rate (rr) multiplied by stock of loans (L). Similarly, FISIM on deposits is calculated as reference rate (rr) less average interest rate on deposits (rD) multiplied by stock of deposits (D). The sum of FISIM on loans and deposits gives the total value of FISIM at current prices.

The estimates for total FISIM in current prices are derived using the audited reported data on interest payable and receivable; and a weighted average interest rate applied to the value of deposits and loans. The total FISIM at constant prices is estimated through extrapolation of the benchmark value using deflated stock of loans and deposits. The stock of loans and deposits are deflated using the CPI of all items.

The aggregated FISIM was allocated to each economic activity based on the proportion of loans corresponding to that particular activity.

Insurance

This financial sub activity includes life insurance and life reinsurance with or without a substantial savings element and other non-life insurance. The output and intermediate consumption estimates are made for life and non-life insurance services. The output compilation is based on the following method:

Non-Life Insurance

Output estimate of non-life insurance and reinsurance is defined as:

Output = Total premium earned + premium supplements - adjusted claims incurred

Whereby**:** adjusted claims are captured by use of accounting information such as

Adjusted claims = Actual claims + changes in equalization provision

Gross Output

Gross output at current prices for non-life insurance and reinsurance is estimated by extrapolating benchmark value with total premiums earned premium supplement (proxy of total investment income) and incurred claims of non-life insurance and reinsurance. Gross output at constant prices is computed by extrapolating benchmark value with deflated gross output at current prices. The deflator applied is the weighted CPI of mobile, internet (i.e., proxy communication) and services.

Intermediate Consumption

Intermediate consumption at constant prices is compiled based on fixed IO ratio with gross output at constant prices. IC at current prices is compiled by extrapolating the benchmark value with reflated IC at constant prices. The reflator employed is weighted mobile CPI, internet (i.e., proxy communication) and services.

Life Insurance

The gross output estimate for life insurance is derived as follows:

Output = Premium earned + Premium supplements - Benefits due - Increase (+ decrease) in life insurance technical reserves.

Gross Output

Gross output at current prices is compiled by extrapolating benchmark value with data of written net premiums, premium supplement and benefits due for life insurance companies. Gross output at constant prices is estimated by extrapolating the benchmark value with deflated gross output at current prices. The deflator used is CPI for services.

Intermediate Consumption

Intermediate Consumption (IC) at constant prices is obtained based on a fixed IO ratio with gross output at constant prices. IC at current prices is compiled by reflated IC at constant prices. The reflator used to reflate is weighted CPI mobile, internet (i.e. proxy communication) and services.

L: Real Estate

Real estate activity is acting as lessors, agents, and/or brokers in one or more of the selling or buying real estate, renting real estate, providing other real estate services such as appraising real estate or acting as real estate escrow agents. This activity is carried out on its own or leased property and be done on a fee or contract basis.

Data Sources

The data source is turnover from VAT records of Tanzania Revenue Authority (TRA). Additional information is CPI data from NBS.

Methodology

Gross Output

The gross output at current prices is computed by extrapolated benchmark value with weighted turnover data for rental and owner-occupied dwellings. Gross output at constant prices for rental and owners occupied dwellings is derived by extrapolating benchmark value with deflated gross output at current prices. The deflator applied is the weighted CPI of rental, furnishings and services.

Intermediate Consumption

Intermediate Consumption (IC) at constant prices is derived based on a fixed IO ratio with gross output at constant prices. IC at current prices is compiled by reflated IC at constant prices. The reflator employed is weighted CPI index of rent, furnishing and services.

M: Professional, Scientific and Technical

This section includes specialized professional, scientific and technical activities. These activities require a high degree of training and make specialized knowledge and skills available to users. These activities include legal and accounting activities; activities of head offices; management consultancy activities; architectural and engineering activities; technical testing and analysis Scientific research and development; advertising and market research; other professional, scientific and technical activities; and veterinary activities.

Data Sources

The data source is the number of employments and CPI from NBS.

Methodology

Gross Output

The gross output at constant prices is derived by extrapolating benchmark value with volume index of number of employments. The gross output at current prices is obtained by reflating gross output at constant prices. The reflator applied for is the CPI of services.

Intermediate Consumption

Intermediate Consumption (IC) at constant prices is derived based on a fixed IO ratio with gross output at constant prices. IC at current prices is compiled by reflated IC at constant prices. The reflator employed is CPI of services.

N: Administrative and Support Service

The activity includes rental and leasing activities, employment activities, travel agency, tour operator, reservation service and related activities, security and investigation activities, services to buildings and landscape activities, and office administrative, office support and other business support activities.

Data Source

The data source is the number of employments and CPI from NBS.

Methodology

Gross Output

The gross output at constant prices is derived by extrapolating benchmark value with the number of employments. The gross output at current prices is obtained by reflating gross output at constant prices. The reflator applied for is the CPI of services.

Intermediate Consumption

Intermediate Consumption (IC) at constant prices is derived based on a fixed IO ratio with gross output at constant prices. IC at current prices is compiled by reflated IC at constant prices. The reflator employed is CPI of services.

O: Public Administration and Defense; Compulsory Social Security

This activity covers governmental nature, normally carried out by the public administration. It includes the enactment and judicial interpretation of laws and their pursuant regulation, as well as the administration of programmes based on them, legislative activities, taxation, national defense, public order and safety, immigration services, foreign affairs and the administration of government programmes. The activity also includes compulsory social security activities.

Data Source

The data source for annual estimates is based on detailed data from Government accounts, including the central, regional and development budget expenditures (where relevant); TSSF annual data; and grants amounts and allocation criteria for local governments and extra-budgetary units.

Methodology

Gross Output

Annual KPV GVA estimates are derived using a wage index for deflation of the CPV GVA estimates and a composite price index is used to deflate the CPV IC to derive the KPV IC estimate. Compulsory social security is also covered in the annual compilation together with the detailed analysis of public administration data derived from the annual government accounts. So, there are two separate frameworks of compilations; one for quarterly and the other for annual and the two sets of estimates will be benchmarked to have them aligned.

P: Education

This activity includes pre-primary and primary education; secondary education; post-secondary education; and tertiary education.

Data Source

The data used for public education are detailed data on salaries, wages, and expenditures from government accounts. The data used for private education is number of student enrolments obtained from the Ministry of Education. Consumer Price Index (CPI) data was sourced from the National Bureau of Statistics (NBS).

Methodology

Public Education Gross output

Gross output at current prices for public education was derived by the cost sum approach where compensation of employees (i.e. salary and wages), IC and consumption of fixed capital (i.e. depreciation) all these were obtained from Government Finance Statistics (GFS). However, compensation of employees was derived from salary and wages and depreciation used as proxy of consumption of fixed capital. Gross output at constant prices was obtained by deflating gross output at current prices using salary index.

Intermediate Consumption

Constant prices IC is derived by applying fixed IO ratio on constant prices gross output. IC at current prices was derived by reflating constant prices IC by using weighted CPI for fuels and lubricants. furniture and furnishings, repair and maintenance, air transport, and services.

Private Education Gross output

Gross output at constant prices for private education was derived by extrapolating benchmark value with average enrolment index. Gross output at current prices was compiled by reflating gross output at constant prices of each level of education by using CPI of education.

Intermediate Consumption

Constant prices IC is derived by applying fixed IO ratio on constant prices gross output. IC at current prices was derived by reflating constant prices IC by using weighted CPI for Stationery and drawing materials and services.

Q: Human Health and Social Work

This activity includes sub activities, human health activities e.g., hospital activities, residential care activities e.g. residential nursing care facilities and social work activities without accommodation e.g. care for the elderly without accommodation.

It covers the provision of health and social work activities, starting from health care provided by trained medical professionals in hospitals and other facilities, over residential care activities that still involve a degree of health care activities to social work activities without any involvement of health care professionals.

Data Source

The data used for public health are detailed data on salaries, wages, and expenditures from government accounts. The data used for private health is number of patients obtained from the Ministry of Health. Consumer Price Index (CPI) data was sourced from the National Bureau of Statistics (NBS).

Methodology

Public Health Gross output

Gross output at current prices for public health was derived by the cost sum approach where compensation of employees (i.e. salary and wages), IC and consumption of fixed capital (i.e. depreciation) all these were obtained from Government Finance Statistics (GFS). However, compensation of employees was derived from salary and wages and depreciation used as proxy of consumption of fixed capital. Gross output at constant prices was obtained by deflating gross output at current prices using salary index.

Intermediate Consumption

Constant prices IC is derived by applying fixed IO ratio on constant prices gross output. IC at current prices was derived by reflating constant prices IC by using weighted CPI for fuels and lubricants. furniture and furnishings, repair and maintenance, air transport, and services.

Private Education Gross output

Gross output at constant prices for private education was derived by extrapolating benchmark value with average enrolment index. Gross output at current prices was compiled by reflating gross output at constant prices of each level of education by using CPI of education.

Intermediate Consumption

IC at constant prices for private health is estimated based on fixed input-output ratio of gross output at constant prices. weighed CPI for fuels and lubricants. furniture and furnishings, repair and maintenance, air transport, and services.

R: Arts, Entertainment and Recreation

The activity covers creative, arts and entertainment activities; libraries, archives, museums and other cultural activities; gambling and betting activities; sports activities and amusement and recreation activities.

This activity includes a wide range of activities to meet varied cultural, entertainment and recreational interests of the general public, including live performances, operation of museum sites, gambling, sports and recreation activities.

Data Source

The data source is quarterly value added tax (VAT) turnover data from TRA. Additional CPI data from NBS.

Methodology

No formal survey data exists for the listed activities and as a result, estimates are based on turnover information from VAT returns. This methodology implies that the formal sector of the economy and the informal are assumed to have the same trend movement.

Gross Output

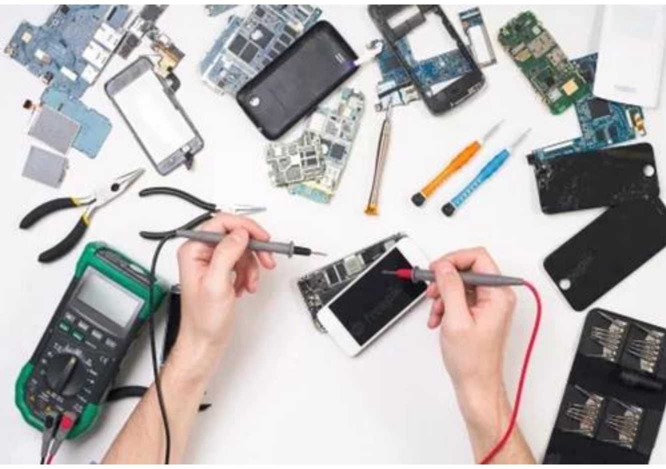
The gross output at current prices is estimated by extrapolating the benchmark value with VAT turnover of arts, entertainment, and recreation. The gross output at constant prices is obtained by extrapolating benchmark value with deflated VAT turnover of arts, entertainment, and recreation. CPI of recreational and sporting services is used as deflator.

Intermediate consumption

Intermediate consumption at constant prices is derived by applying fixed benchmark IO ratio to gross output at constant prices. To obtain IC at current prices is derived by reflating IC at constant prices with CPI of services.

S: Other Services

The activity covers Activities of membership organizations, repair of computers and personal and household goods and other personal service activities e.g., hairdressing services.




Data Sources

Data sources for this activity are turnover data from TRA,

Methodology

The gross output at current prices is obtained by extrapolating benchmark value with turnover data. Gross output at constant prices is estimated by deflating turnover with CPI repairs of household goods prices.

Intermediate Consumption

IC estimates at current prices are obtained through reflating constant IC using weighted CPI coke diesel, soap, basic metal and services. Fixed IO ratio was used to derive IC estimates at constant prices once the output estimates at constant prices is calculated.

T: Activities of Households as Employers

This section covers activities of households as employers of domestic personnel.

Data Sources

The main sources of data for activities of households as employers HBS 2017/18 from NBS.

Methodology

Gross Output

The gross output at constant prices is computed by extrapolating benchmark value with volume index of total population which is obtained from Population and Housing Census of 2022. Gross output at current prices is derived by extrapolating output benchmark value with reflated gross output at constant prices. CPI salary for domestic servants is used as a reflator to derive gross output at current prices.

Net Taxes on Products

Net Taxes on Products refers to the difference between taxes and subsidies on goods and services that are payable per unit of a product sold, produced, or imported.

Net taxes on products are equal to taxes on products minus subsidies on products

Taxes on products cover taxes that are payable per unit of a good or service (e.g., VAT, excise duty, import duties). In addition, **subsidies on products** are payments made by the government to reduce the market price of a product per unit.

Data Sources

The broad categories include taxes on imports (import duty, excise imports and VAT imports), domestic VAT and excise taxes, all these are obtained from Central Government Operations documents.

Methodology

Gross Output

Net taxes on products at current prices are directly obtained from government data on revenues. Taxes at constant prices are calculated based on goods and services that attract such taxes. Constant Price Value (KPV) of such products are used as volume indicators to extrapolate the benchmark tax values.

2.2. GDP By Expenditure Approach

The estimation of Gross Domestic Product (GDP) by the expenditure approach provides a comprehensive view of economic activity by measuring the total spending on final goods and services within an economy over a given period. This approach breaks down GDP into key expenditure components namely Household Final Consumption Expenditure, Government Final Consumption Expenditure, Gross Capital Formation, and Net Exports (Exports minus Imports).

By capturing the uses side dynamics of the economy, the expenditure approach complements the production approach offers valuable insights into consumption patterns, investment behavior, and external trade performance. In line with international standards such as the System of National Accounts (SNA), the National Bureau of Statistics (NBS) uses a combination of administrative records, surveys, and statistical modeling to compile accurate and timely GDP estimates. With the adoption of the 2019 base year, NBS has strengthened its methodology and expanded its coverage to produce both annual and quarterly GDP estimates using the expenditure approach.

All the components of GDP by expenditure have been compiled largely independently using a detailed product flow approach. This approach involves compiling expenditure data for individual products, which are then aggregated to derive the total expenditure. The compilation is based on the GDP by expenditure model:

$$Y = C + G + I + (X-M)$$

Whereby:

C – Final consumption (Household spending on goods and services)

I - Gross fixed capita formation and change in inventories

G - Government spending (on goods and services)

X - Exports (goods and services sold abroad)

M - Imports (goods and services bought from abroad)

GDP estimates under expenditure approach are compiled based on comprehensive coverage, well defined data sources, and detailed methodologies for each component, as outlined below:

Final consumption expenditure consists of expenditure incurred by resident institutional units on goods and services that are used for the direct satisfaction of individual or collective need. The final consumption expenditure Includes sectors like households, non-profit institutions serving households and general government.

Data Sources

The sources of data for household and NPISH are Household Budget Survey (HBS), 2017/18; Tanzania Population and Housing Census, 2022; and Survey of Services Sector, 2019 from NBS. The VAT turnover data from TRA; Foreign trade statistics and Balance of Payment (BOP) statistics from BOT.

A. Household Final Consumption Expenditure

Household Final Consumption Expenditure is the expenditure incurred by resident households on goods and services, whether purchased or received as income in kind, that are used for the direct satisfaction of individual needs or wants (i.e. quarterly or annually).

The household final consumption expenditure is based on the household consumption data for 2017/18 HBS. The household final consumption estimate is disaggregated into 70 products plus adjustment on direct purchases abroad by residents less purchases by non-residents in the territory.

The components constant prices estimates are indicator based where the benchmark value is extrapolated with the constant price estimate of the supply in the economy of a particular product. In cases where a particular product is used as an IC, household consumption or export, the net supply in the economy after deducting exports is used as an indicator for both areas where the product is used. This approach assumes same ratio of split in the use as in the benchmark year. CPV are derived through reflation using the relevant CPI item. Direct purchases abroad are deflated using global price movement and the exchange rate of the common currency in Tanzania.

B. Non-Profit Institutions Serving Households

Non-Profit Institutions Serving Households (NPISHs) Final Consumption Expenditure is the value of non-market output, that output is supplied free or at prices that are not economically significant to households. NPISHs consist of non-profit institutions that are not controlled by the government. and that provide goods or services to households free or at prices that are not economically significant.

The output of NPISH is obtained from the output of education, health, social work, arts entertainment and recreation, and activities of membership organizations. Output is measured as the sum of costs. The IC deflator has been used to arrive at constant price estimates.

C. Government Final Consumption Expenditure

Government Final Consumption Expenditure (GFCE) is the total value of goods and services consumed by the government to provide public services, either directly (through its own production) or indirectly (by purchasing and distributing to households), to satisfy both individual and collective needs.

Data Sources

Data employed to compile GFCE are data from general government accounts, local government accounts, annual financial statements of parastatals, NHIF, PSSSF and NSSF financial statements.

GFCE is derived as the gross value of output, less sale of goods and services of the following economic activities of general government such as public administration, education services, health services, research and development, recreational and cultural activities and other related services. The output of general government is categorized as non-market output, output for own final use, or market output. Since there is no tax on output of the government final consumption, the output of general government is non-market type.

The gross output of general government is calculated as the sum of costs, which includes Intermediate Consumption (IC), Compensation of Employees (COE), and Consumption of

Fixed Capital (CFC). CFC refers to the depreciation of fixed assets over time due to wear and tear, obsolescence, or normal usage. It reflects the decline in the value of capital goods such as buildings, machinery, and equipment used in the production process.

The required data for annual compilation is obtained from government accounts on an annual basis. In addition, consumption of fixed capital is computed based on the estimated opportunity costs of using the assets at the time they are used, as distinct from the prices at which the assets were acquired.

D. Gross Fixed Capital Formation

The Gross Fixed Capital Formation (GFCF) measures the total value of a producer's acquisitions of new and existing fixed assets, less disposals, of fixed assets during the accounting period, plus certain additions to the value of non-produced assets realized by the productive activity of institutional units. In addition, the fixed assets consist of buildings, civil works, machinery and equipment with a productive life of more than one year. Also, intellectual property and costs of major improvements to existing assets are included as fixed assets.

Data sources

The data sources for GFCF are foreign trade statistics and surveys such as agriculture and industrial production for the domestic production of capital goods. The sources for GFCF in buildings and structures are as described under construction working in progress models.

GFCF estimate covers the gross value of investment expenditure on building and construction as well as machinery, equipment and intellectual property products (including computer software, databases and research and development), and ownership transfer costs. Estimates include domestically produced goods and imports, and the compiled categories broadly include dwellings; buildings other than dwellings; other structures; transport equipment; ICT equipment; other machinery and equipment; animal resources yielding repeat products; intellectual property products such as research and development.

Domestically produced or imported machinery equipment is categorized as GFCF and IC after adjusting for exports. Generally, based on product description it is possible to identify fixed assets and those that are used for both or only household final consumption.

Changes in Inventories (CII) is measured by the value of the entries into inventories less the value of withdrawals and the value of any recurrent losses of goods held in inventories. Inventories include materials and supplies used in production (e.g. raw materials, etc.); work-in-progress like goods partially completed especially in long production cycles (e.g. aircraft, construction projects); cultivated biological assets like growing crops or livestock under development; finished goods produced and stored for later sale; and Goods for resale are items purchased by retailers or wholesalers for resale without further processing. The computation of change in inventories:

Changes in Inventories = Closing Inventories – Opening Inventories.

Data Sources

The data sources are data from domestic production, import and export of goods.

Changes in inventories is estimated using commodity flow approach, that is, total supply (imports plus domestic production) less final consumption, intermediate consumption and exports. Explicit estimates are done for live animals through the livestock work in progress model where a fixed ratio is assumed for the split between GFCF and changes in inventories; products of agriculture, horticulture and market gardening; coal and lignite (crude petroleum and natural gas, peat, metal ores, sand, other minerals); food products and beverage; refined petroleum products (nuclear fuel); tobacco, textile, wearing apparel, and footwear; products of wood and pulp paper; other chemical products; man-made fibres, basic chemicals, rubber, glass, and transport equipment; basic metals, and fabricated; office, accounting and computing machinery, machinery and equipment, transport equipment, and furniture.

E. Exports and Imports of Goods and Services

Exports are transactions in goods and services by resident units to non-residents, while ownership changes from residents to non-residents. Imports are transactions in goods and services by non-resident units to resident units, involving a change in ownership from non-residents to residents.

Data sources

The data sources of exports and imports of goods is trade statistics by HS code and balance of payments (BOP) statistics for exports and imports of goods and services.

Export and import values at current prices are obtained directly from the trade statistics with exports valued at free on board (FOB) and imports at cost insurance and freight (CIF) value. The import CIF is globally adjusted to FOB in line with the Balance of Payment (BOP) calculations. Constant price estimates of imports are largely derived using import unit values calculated at a detailed level. Exports at KP are derived through deflation using implicit price index of relevant domestic output or CPI component.

3.0. Conclusion

The revision of GDP estimates, anchored on the new base year (2019), marks a significant step forward in enhancing the accuracy, relevance, and reliability of national accounts statistics. By incorporating updated data sources, improved classification systems, and refined estimation methodologies, the revised GDP estimates better reflect the current structure and performance of the economy.

The shift from 2015 to 2019 base year has led to notable changes in the level and composition of GDP, highlighting evolving economic activities, emerging sectors, and changes in consumption and investment patterns. The introduction of quarterly and annual estimates using both the production and expenditure approaches further strengthens the analytical value of the GDP series and aligns with international best practices outlined in the System of National Accounts (SNA).

This revision not only improves the quality of macroeconomic indicators but also provides policymakers, researchers, and stakeholders with a more accurate foundation for economic planning, monitoring, and decision-making.

4.0 Reference

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5.0 Annex

Annex 1: International Standard Industrial Classification for All Economic Activities Revision 4 (ISIC Rev.4)

Section	Economic Activity
A	Agriculture, Hunting and Forestry
	Crops
	Livestock
	Forestry
	Fishing
	Agriculture support services
B	Mining and quarrying
C	Manufacturing
D	Electricity, gas, steam and air conditioning supply
E	Water supply; sewage, waste management and remediation activities
F	Construction
G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Transport and storage
I	Hotels and food service
J	Information and communication
K	Financial and insurance
L	Real estate
M	Professional, scientific and technical
N	Administrative and support service
O	Public administration and defense compulsory social security
P	Education
Q	Human health and social work
R	Arts, entertainment and recreation
S	Other service activities
T	Activities of households as employers;
	All economic activities
	Taxes on products
	GDP at Market Prices

Vision and Mission of the National Bureau of Statistics

Vision

To be the authoritative source of statistical information pertaining to socio-economic conditions in the country, an institution able to provide such information most effectively, a point of reference for statistical methodologies and standards.

Mission

To facilitate planning and decision making within the government and the business community, to stimulate research and inform public debate through the provision of relevant, reliable and timely statistics and a quality statistical service in general.