



SOURCES AND METHODS OF QUARTERLY NATIONAL ACCOUNTS

BASE YEAR = 2014



National Bureau of Statistics
Ministry of National Planning, Housing & Infrastructure
Republic of Maldives



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ABBREVIATIONS

BoP	Balance of Payments
CMI	Construction Material Index
CPC	Central Product Classification
CPI	Consumer Price Index
ES	Economic Survey
FISIM	Financial Intermediation Services Indirectly Measured
GDP	Gross Domestic Product
GVA	Gross Value Added
GVAR	Gross Value Added Ratio
IPD	Implicit Price Deflator
ISIC	International Standard for Industrial Classification of All Economic Activities
HIES	Household Income and Expenditure Survey
SNA	System of National Accounts
SUT	Supply and Use Tables
NAEA	National Accounts Economic Statistics Division
PPI	Producer Price Index
PSIP	Public Sector Investment Programme
QNA	Quarterly National Accounts
UVI	Unit Value Index

1. INTRODUCTION

The purpose of this report is to provide a description of the procedures, data sources and methods used in the compilation of the quarterly national accounts (QNA) estimates of Maldives. QNA constitute a system of integrated quarterly time series coordinated through an accounting framework. QNA adopt the same principles, definitions, and structure as the annual national accounts (ANA).

This document first outlines the general procedures used in the QNA compilation and then goes on to a comprehensive explanation of the data sources and compilation methods used for the individual industries and activities. For each activity how the constant price and current price estimates are derived are explained in detail.

1.1 USE OF QUARTERLY NATIONAL ACCOUNTS

The QNA provides government policymakers, business decision-makers, academics and other researchers, and the general public with timely information on the performance of the Maldivian economy.

The usefulness of the QNA estimates is determined by how effective they are in measuring the quarterly change in economic activity. This effectiveness may be summarized in terms of three characteristics: accuracy, reliability, and timeliness.

- **Accuracy** - The accuracy of statistical information refers to the degree to which it correctly describes the phenomena it was designed to measure. In the case of QNA, the estimate is accurate when it fully captures of the quarterly level and change in GDP.
- **Reliability** - Related to accuracy is the concept of reliability, which reflects the degree to which statistical information, consistently over time, correctly describes the phenomena it was designed to measure. For QNA, reliability refers to the size and frequency of revisions.
- **Timeliness** - The timeliness of a data product is defined as the length of time between the end of the reference period (or the reference date) to which the data relate and the date the product is made available. For QNA, the estimates are made available three months after the reference period.

1.2 REVISION OF THE QUARTERLY NATIONAL ACCOUNTS

Much of the source data the NBS use to prepare the estimates are partial or incomplete data that over time, become complete. To address this, the NBS has developed a release cycle for the QNA. This cycle progresses from the “Advanced” estimates which are released with a three month gap and are based on source data which are relatively incomplete. The “second” and “third” estimates are released with a six month and nine month lag respectively, and are based on more detailed and comprehensive data.

Annual updates are typically released in early October. Annual updates generally cover at least the three most recent calendar years (and their associated quarters) and incorporate newly available major annual source data as well as some changes in methods and definitions to improve the accounts.

Comprehensive (or benchmark) updates are carried out at about five-year intervals and incorporate major periodic source data, as well as major conceptual improvements.

2. OVERVIEW OF METHODOLOGY AND COMPILATION SYSTEM

The general methodology for deriving current and constant price estimates are the same for QNA and ANA. However QNA rely on a more limited set of information than ANA. For this reason, QNA may present non-negligible differences in the levels and movements with respect to ANA. However, the ANA provide the most reliable information on the overall level for the national accounts variables, while the QNA provide the only available explicit information about the short-term movements in the series. It is essential however that the QNA are consistent with the ANA. To achieve this, the QNA are aligned with the ANA in a process known as “benchmarking.” Benchmarking is a necessary step to combine the quarterly pattern in the indicator with the annual benchmarks of the ANA variable. QNA are benchmarked with the ANA base year 2014 series for each economic activity separately.

3. ESTIMATION PROCEDURES

This section summarises the methodologies used in the estimation. There are two main procedures for estimating constant and current price values; estimating constant price values first and reflatting the value to estimate the current price figure or estimating current price value first and deflating the values to estimate constant price figures.

3.1. CONSTANT PRICE TO CURRENT PRICE

Quarterly volume indicators are used as proxies for constant price growth in value added. For example, the quarterly growth in tourist arrivals is used to estimate the constant price growth in value added of the tourism sector. The current prices estimates are then subsequently derived by reflating the constant prices estimates as shown in the formula (1) below.

$$\text{Current price } (Y_t) = \left[\frac{P_{Qt}}{100} \right] \times K_{Qt} \quad (1)$$

where P_{Qt} is the price index in quarter t and K_{Qt} is the gross value added in constant prices in the quarter t .

3.2. CURRENT PRICE TO CONSTANT PRICE

In some cases, value added is estimated at current prices first. In this case, the constant value added is derived by deflating the current price estimate using a suitable price index.

The constant gross value added is derived using the illustrated formula (2) below.

$$\text{Constant price } (Q_t) = \left[\frac{Y_{Qt}}{P_{Qt}} \right] \times 100 \quad (2)$$

where Y_{Qt} is gross value added in current prices in the quarter t , and P_{Qt} is the price index in the quarter t .

3.3. BENCHMARKING USING XLPBM MACRO

The XLPBM is a Microsoft Excel add-in developed by IMF's Statistics Department to assist compilers of quarterly national accounts statistics. "The XLPBM function benchmarks quarterly series to annual series using the proportional first difference (PFD) method proposed by Denton". XLPBM: an excel function for benchmarking. This function is mainly used in QNA framework for two main reasons. Firstly, for interpolation of annual value added for certain industries where quarterly indicator is not available and to benchmark quarterly series to annual series.

When the indicator used in the ANA framework is not available quarterly, XLPBM has been used to interpolate the annual figures to quarterly figures. XLPBM uses a quarterly indicator to interpolate the annual series and when such indicator is not available, default interpolation (1) is used as a quarterly indicator. By doing this, the risk of having step growth rates when the values are divided equally can be eliminated. Moreover, when related indicators are available (eg:

quarterly bed nights used to interpolate annual quality change for resorts) these indicators are used in the interpolation.

Even though same methodology and indicators as ANA is used in QNA, the estimates can be slightly different from ANA. This is because in quarterly estimates disintegration is better especially for constant prices arrived at by using price deflators. Hence, quarterly estimates need to be benchmarked to annual estimates. This is done using XLPBM. The final quarterly estimates are benchmarked to the most recent annual update using XLPBM.

4. SPECIFIC METHODS USED IN THE INDUSTRY VALUE ADDED EXTRAPOLATION

In compilation of the 2014 base year series, Industries have been classified according to the “International Standard Industrial Classification of All Economic Activities (ISIC)” revision 4. This was an update over the classification used ISIC rev 3.1 in the 2003 base series. The new base year series classification demonstrates a more detailed version of the industries.

Annex II gives the industry breakdown and economic activities categorised under each industry grouping in the ISIC rev4 and Annex III shows the changes in the classification of the industries for 2014 series compared to that of 2003 series.

4.1. AGRICULTURE

This industry is classified under ISIC section A- Agriculture, forestry and fishing. This industry includes production of crop products and production of animal products, covers all forms of organic agriculture and also forestry and logging products.

Constant Price

Constant price estimates are extrapolated using the number of tourists and the population of Maldives.

Current Price

Estimates for Agriculture are measured by reflatting the constant price estimates on the basis of the CPI Food and beverages - excluding fish.

4.2. FISHERIES

This Industry covers the fishing and production of fishery resources from marine, brackish or freshwater environments, with the goal of capturing or gathering fish, crustaceans, molluscs and other marine organisms and products (e.g. aquatic plants, pearls, sponges etc.).

Constant Price

Constant price estimates are extrapolated using Fish Catch

Current Price

Current price estimates are derived by using double reflation method.

Output estimates are reflat on the basis of a weighted average index of the PPI and CPI fish price index.

Intermediate Consumption estimates are reflat on the basis of CPI Fuel and lubricants.

Value added is the difference between output and intermediate consumption.

4.3. FISH PREPARATION

This industry is a sub-industry of ISIC section C – Manufacturing. Fish preparation consists of fish preservation and processing: freezing, deep-freezing, canning operations by enterprises and small scale traditional fish drying, smoking, salting and fish paste production in the various fishing islands.

Constant Price

The volume measure is estimated using a volume index derived for the volume of fish purchased by the large scale companies.

Current Price

Current price values are estimated by reflating the constant price estimates for Fish preparation on the basis of the PPI Fish preparation.

4.4. OTHER MANUFACTURING

This industry includes manufacturing of all other products except for fish products. Manufacture of food products, beverages, tobacco products, textiles and wearing apparel, furniture and wood products, cement products, printing and related products and other manufacturing miscellaneous activities are included in this sector.

Similarly to ANA estimation framework, the value added of this sector is estimated by further disaggregation into the following ISIC sub-categories, but are published at an aggregate level.

ISIC subcategories	Activity description
107	Manufacture of other food products & tobacco (excluding fish)
11	Manufacture of beverages
13/14	Manufacture of textiles & wearing apparel
16/31	Manufacture of products of wood & furniture
181	Printing & services related to printing
2395	Manufacture of cement products
301	Manufacture of Ships
32	Other manufacturing products

4.5. MANUFACTURE OF OTHER FOOD PRODUCTS (EXCLUDING FISH)

This sector includes the production of a variety of food products excluding fish products. This also includes processing of tobacco, into a form suitable for final consumption.

Constant Price

Since no direct measure is available, estimates are extrapolated using the Population Index.

Current Price

Estimates are measured by reflating the constant price estimates on the basis of the CPI food and beverages excluding fish.

4.6. MANUFACTURE OF BEVERAGES

The beverages industry is made up of establishments engaged in the manufacture of beverages, such as non-alcoholic beverages and mineral water.

Constant Price

The production of beverages has been linked partly to the development of the tourism industry and partly to the development in the local market. The value added is extrapolated based on an index compiled using bednights at resorts and hotels and population.

Current Price

Estimates are measured by reflating the constant price estimates (refer below) with the PPI beverages index.

4.7. MANUFACTURE TEXTILES AND OF WEARING APPAREL

This sector comprises of preparation or spinning of textile fibres and tailoring, in all materials, of all items of clothing and accessories.

Constant Price

The value added of production is extrapolated using a volume index derived from local population.

Current Price

To measure the current price estimates, the constant price estimates (refer below) are reflated using average of the PPI and CPI wearing apparel price index.

4.8. MANUFACTURE OF PRODUCTS OF WOOD AND FURNITURE

This sector includes the manufacture of wood products, such as lumber, plywood, veneers, wood containers, wood flooring, wood trusses, and prefabricated wood buildings and manufacture of furniture.

Constant Price

The current price estimates are measured accordingly to the movement of the Construction industry, since most of the products which are used in construction.

Current Price

The constant price estimate are measured by deflating the current price estimates with the CPI plywood price index.

4.9. PRINTING AND SERVICES RELATED TO PRINTING

This sector includes printing of products, such as newspapers, books, periodicals, business forms, greeting cards, and other materials, and associated support activities, such as book-binding, plate-making services, and data imaging.

Constant Price

In constant prices this sector is extrapolated using an index compiled for local population.

Current Price

Estimates are measured with the constant price estimates reflatd by the Average PPI Publishing and Printing index.

4.10. MANUFACTURE OF CEMENT PRODUCTS

This sector includes manufacture of precast concrete, cement or artificial stone articles for use in construction and prefabricated structural components for buildings or civil engineering of cement, concrete or artificial stone.

Constant Price

Since the activity provides products which are used exclusively in construction, the industry is directly linked to the movement of the construction industry.

Current Price

Estimates are measured by deflating the current price estimates with the CPI Cement price index.

4.11. MANUFACTURE OF SHIPS

This sector includes the building of ships, boats and other floating structures for transportation and other commercial purposes.

Constant Price

The constant price is estimated based on the number of vessels made in Maldives.

Current Price

Estimates are measured using the constant price estimates, reflatd by the change in the PPI boat building index.

4.12. OTHER MANUFACTURING

This activity is a mix of all manufacturing activities not classified elsewhere.

Constant Price

The current price estimates are extrapolated based on the changes in the value of import of intermediate goods.

Current Price

Since manufacture of structural metal products dominates this industry, the volume estimate of this sector is measured by deflating the current price estimates (refer above) on the basis of CPI of other manufacturing products.

4.13. ELECTRICITY

Industry is classified under ISIC rev.4 section D - Electricity, gas, steam and air conditioning supply.

Constant Price

Electricity production by public sector is used as a volume indicator to extrapolate value added, output and intermediate consumption.

Current Price

Current price value added makes use of the quarterly reports from the major establishments in this industry.

Intermediate Consumption estimates are derived using the constant price estimates, reflatd by a the CPI Diesel.

Current price output is derived residually.

4.14. WATER AND SEWERAGE

This industry comes under the ISIC Rev.4 classification section E- Water supply. From the groups under the activity, two are relevant for Maldives

36 – Water collection, treatment and supply

37 - Sewerage

This industry comprise of the operation of sewerage systems and distribution of water through pipeline.

Constant Price

Water production by public sector is used as a volume indicator to extrapolate the constant price estimate.

Current Price

Current estimates are derived using constant estimates , reflatd by PPI water supply.

4.15. CONSTRUCTION

This activity is classified under section F- Construction of, ISIC Rev.4. This industry includes general construction and specialized construction activities for buildings and civil engineering works. It includes new work, repair, additions, finishing and alterations, the erection of prefabricated buildings or structures on the site and also construction of a temporary nature.

Constant Price

Volume estimate is extrapolated based on the changes in the index of building materials imports.

Current Price

Estimates are calculated by reflatng the constant price estimates on the basis of Construction Material Index.

4.16. WHOLESALE AND RETAIL TRADE

This industry comes under section G - Wholesale and retail trade; repair of motor vehicles and motorcycles of the ISIC Rev.4 classification.

Constant Price

Current price estimates are extrapolated based on the changes in the value of total merchandise imports.

Current Price

To estimate the constant price, the current price estimates are deflated based on the changes in CPI all groups.

4.17. TOURISM

In ISIC Rev.4 this industry comes under section, I - Accommodation and food service activities. This Industry includes the provision of short-stay accommodation for visitors and other travellers. Some establishments may provide only accommodation while others provide a combination of accommodation, meals and/or other facilities.

In reflecting the nature of the industry for the Maldives, the computation of GVA for this sector is done at a disaggregated level.

- Resorts
- Other accommodation services
 - Hotels
 - Guesthouses
 - Safari

4.17.1. RESORTS

This sector includes the provision and accommodation of short-stay in the resorts for visitors and other travellers. In terms of the value addition, 97% of the sector is generated by the tourist resorts.

Constant Price

Resorts bed nights are used as a volume indicator to estimate the constant price estimate.

Current Price

Current price estimates are measured by reflating constant price estimates on the basis of PPI for Resorts and Hotels.

4.17.2. OTHER ACCOMMODATION SERVICES

This sector includes all types of provisions of short-stay accommodation for visitors and other travellers except for resorts. There are three main types of establishments represented in this sector; hotels, guesthouses and safaris.

Constant Price

Hotels bed nights, Guesthouses bed nights, and Safari bed nights are used as a volume indicator to extrapolate the constant price estimates.

Current Price

Estimates are measured by reflating the constant price estimates on the basis of the PPI resorts and hotels, the CPI guest house price index, and the PPI resorts and hotels.

4.18. FOOD AND BEVERAGE SERVICES

This sector includes food and beverage serving activities providing complete meals or drinks fit for immediate consumption, such as café, hotel, restaurants.

Constant Price

Total resident population growth has been used as an indicator for growth in production of cafés and restaurant services, serving locals.

Current Price

Current price is estimated by reflating the constant price estimates using the CPI restaurants and Café price index.

4.19. TRANSPORT

This industry is categorized under ISIC, section H – Transport and storage. This industry includes the provision of passenger or freight transport, by road, water or air and associated activities such as terminal and parking facilities, cargo handling, storage etc..

For the estimation of GVA, the establishments under this ISIC category are further divided into the following sub-categories:

ISIC	Activity description
49	Land transport
50	Water transport
51	Air transport
52	Warehousing and support activities for transportation

4.19.1. Land Transport

This division includes the transport of passengers and freight via road.

Constant Price

The number of registered taxis has been selected as a volume indicator to extrapolate the constant price production estimates for this industry.

Current Price

The current price estimates are calculated by reflating the constant price estimates based on the changes in CPI Passenger transport by road index.

4.19.2. Water Transport

This division includes the transport of passengers or freight over water, whether scheduled or not.

Constant Price

The volume estimate is extrapolated based on the changes in a weighted average index compiled by giving equal weights to the volume of imports and population.

Current Price

Current price estimates are derived by reflating the constant price estimates by PPI sea transport Index.

4.19.3. Air Transport

This division includes the transport of passengers and freight by air.

Constant Price

The Aircraft movement at Velana international airport has been selected as a volume indicator to extrapolate the volume estimates for this industry.

Current Price

Current price estimate is computed by reflating the constant price estimates based on the PPI Air Transport index.

4.19.4. Warehousing and support activities for transportation

Current price estimates are measured based on quarterly revenue and expenditure from quarterly financial reports of the Maldives airports company limited and Maldives ports limited.

Constant Price

Constant price estimated are measured by deflating the current price estimates using PPI air transport.

4.20. POSTAL AND TELECOMMUNICATION

This sector includes postal and courier activities, such as pickup, transport and delivery of letters and parcels under various arrangements.

Constant Price

Volume estimate is derived by composite index derived using domestic and international mail handled at Velana International Airport.

Current Price

The value added for this industry is estimated by reflating the constant price estimate by CPI Postal Index.

4.20.2. Telecommunication and broadcasting

This industry includes the activities of providing telecommunications and related service activities, i.e. transmitting voice, data, text, sound and video.

Constant Price

Current price estimates are measured based on quarterly revenue and expenditure from quarterly financial reports of major telecommunications companies.

Current Price

Constant price estimates are measured by deflating current price estimates using PPI telecommunication.

4.21. FINANCIAL INTERMEDIATION

This industry is categorized under ISIC rev.4, section K – Financial Intermediation, division 64 – Financial service activities, except insurance and pension funding. This industry includes financial service activities of obtaining and redistributing funds other than for the purpose of insurance or pension funding. This industry includes the following three types of financial intermediaries.

- Central Bank
- Deposit banks and other banks
- Non-bank financial intermediaries

“Some financial intermediaries are able to provide service for which they do not charge explicitly, by charging different rates of interest to borrowers and lenders” (SNA 93, 6.124). To capture this, SNA proposes an indirect measure - financial intermediation services indirectly measure (FISIM) - of the value of services for which intermediaries do not charge explicitly. FISIM is computed using the following formula.

FISIM output

$$FISIM = FISIM_L + FISIM_D = \left(\frac{r_L - rr}{100.0}\right)Y_L + \left(\frac{rr - r_D}{100.0}\right)Y_D$$

- $FISIM_L$ = FISIM on loans
- $FISIM_D$ = FISIM on deposits
- r_L = lending rate
- r_D = deposit rate
- rr = reference rate
- Y_L = average stock of loans
- Y_D = average stock of deposits

Other output of financial intermediaries includes revenue from fees and commission charged for ancillary services, such as currency exchange and investment advice.

For the input structure financial statements of the central bank, banks and other financial intermediaries are used.

Constant Price

The current price values are compiled accordingly to above method.

Current Price

Volume estimates are moved on the basis of change in of FISIM on loan and deposits in constant price.

4.22. INSURANCE AND ACTIVITIES AUXILIARY TO FINANCIAL INTERMEDIATION

This industry is categorized under ISIC rev.4; section K – Financial Intermediation, division 65 and 66; Insurance, reinsurance and pension funding, except compulsory social security and Activities auxiliary to financial service and insurance activities.

This industry includes the underwriting of annuities and insurance policies and investing premiums to build up a portfolio of financial assets to be used against future claims. Provision of direct insurance and reinsurance are included. Also includes legal entities (i.e. funds, plans and/or programmes) organized to provide retirement income benefits exclusively for the sponsor's employees or members. This includes pension plans with defined benefits, as well as individual plans where benefits are simply defined through the member's contribution. It also includes the activities of stock exchange, brokers and dealers.

Constant Price

Current price estimates are measured using quarterly reports of major insurance companies.

Current Price

The volume measure is derived by using deflating the current price estimates with all group CPI.

4.23.1. Real estate

Constant Price

Water meter index is used as a proxy indicator for the number of dwellings to extrapolate the constant price estimates.

Current Price

Estimates are measured by reflatting the constant price estimates on the basis of CPI housing index.

4.23.2. Owner occupied dwellings

Constant Price

Population index is used as an indicator to extrapolate the constant price.

Current Price

Current price value is estimated by reflatting the constant price by CPI housing index.

4.24. PROFESSIONAL SCIENTIFIC AND TECHNICAL ACTIVITIES

This industry is categorized in ISIC rev.4, section M - Professional, scientific and technical activities. This industry includes the provision of specialized professional, scientific and technical services such as legal services, auditing, marketing, architecture, etc.

Constant Price

Estimates are measured by using the change in total merchandise imports .

Current Price

The Total CPI is used as the deflator to derive the constant prices.

4.25. TRAVEL AGENCIES AND SUPPORT SERVICES

This industry is categorized as 79- Travel agency, tour operator, reservation service and related activities under section N - Administrative and support service activities, in ISIC rev.4

This industry includes the activity of selling travel, tour, transportation and accommodation services to the general public and commercial clients and the activity of arranging and assembling tours that are sold through travel agencies or directly by agents such as tour operators, as well as other travel-related services including reservation services provided by head offices.

Constant Price

Since the major activity covered in this sector consists of travel agencies, total number of international passengers (into the country) is used as an indicator to measure the volume estimates.

Current Price

Current price estimates are calculated by reflatting the constant price estimates by PPI resorts and hotels.

4.26. PUBLIC ADMINISTRATION AND DEFENCE

This industry is categorized in ISIC rev.4, section O - Public administration and defence; compulsory social security.

Activities of a governmental nature are normally carried out by the public administration. This 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 defence, public order and safety, immigration services, foreign affairs and the administration of government programmes. Compulsory social security activities are also included in this sector.

Constant Price

Current price estimates are directly measured using the total government wage.

Current Price

Estimates are measured by deflating current price estimates using government wage index.

4.27. EDUCATION

This industry comes under section P-Education of ISIC rev 4. This industry includes education at any level or for any profession, oral or written as well as by radio and television or other means of communication. It includes education by the different institutions in the regular school system at its different levels as well as adult education, literacy programmes etc. The sector includes education services provided by the government as well as the private sector.

Constant Price

Since the provision of education by the government is a non-market service, offered without charge, the value added is measured as on cost basis. Thus the sum of wages of government for education services, measures the value added of the government segment of this sector.

Due to lack of data, value added by the provision of education services by the private sector is assumed to grow proportionally to the government education services.

Current Price

The volume estimates for the provision of education by the government is estimated by deflating the GVA at current price by Education wage index. For the volume estimate of provision of education by the private institutes is estimated by deflating the GVA at current price by PPI education.

4.28. HEALTH AND SOCIAL WORK

This industry is categorised in ISIC rev.4, section Q- Human health and social work activities.

This industry includes the provision of health and social work activities. Activities include a wide range of 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. Industry production consists of the public and private hospitals, clinics, and other services related to medical purposes.

Constant Price

Sum of wages of government for health services, measures the value added of the government segment of this sector.

Due to lack of data, value added by the provision of health services by the private sector is assumed to grow proportionally to the government health services.

Current Price

The volume estimates of for the provision of health by the government is estimated by deflating the GVA at current price by Health wage index derived using total government wages for health services. For the volume estimate of provision of health by the private institutes is estimated by deflating the GVA at current price by PPI health.

4.29. ENTERTAINMENT, RECREATION AND OTHER SERVICE ACTIVITIES

This industry is a combination of ISIC rev.4 section R - Arts, entertainment and recreation and S - Other service activities. This industry includes a wide range of activities to meet cultural, entertainment and recreational interests, including live performances, operation of museum sites, sports and recreation activities. Industry also includes community services such as waste management services provided by the government.

Constant Price

Number of resort bed nights is used as an indicator to measure the estimates for the provision of community and recreational services provided by private sector. And the growth rate of the private sector is used to measure the services provided by government.

Current Price

The value added of the private sector is estimated by reflating the constant price estimate with the PPI resort index. And the estimates for government sector is measured by reflating the constant price estimate with the Social wage index of government.

5. GDP AT MARKET PRICE

In order to derive GDP at market prices, it is necessary to add import duties and taxes on products and deduct subsidies on products from GDP in basic prices.

5.1. IMPORT DUTIES

Constant Price

Import duty is actual figures reported as in the government interim budget.

Current Price

The deflated imports value based on unit-value index is used to estimate import duties in volume terms.

5.2. TAXES ON PRODUCTS

Constant Price

The taxes is actual figures reported as in the government interim budget.

Current Price

The deflated imports value based on unit-value index is used to estimate import duties in volume terms.

5.3. SUBSIDIES ON PRODUCTS

Constant Price

The subsidies on food, water, preschool and electricity are taken directly from the government interim budget

Current Price

The constant price is derived using volume of staple food imports, water production, school enrolment and electricity production.

ANNEX: ISIC REVISION 4

International Standard Industrial Classification of All Economic Activities, Rev.4

A - Agriculture, forestry and fishing

- o 01 - Crop and animal production, hunting and related service activities
- o 02 - Forestry and logging
- o 03 - Fishing and aquaculture

B - Mining and quarrying

- o 05 - Mining of coal and lignite
- o 06 - Extraction of crude petroleum and natural gas
- o 07 - Mining of metal ores
- o 08 - Other mining and quarrying
- o 09 - Mining support service activities

C - Manufacturing

- o 10 - Manufacture of food products
- o 11 - Manufacture of beverages
- o 12 - Manufacture of tobacco products
- o 13 - Manufacture of textiles
- o 14 - Manufacture of wearing apparel
- o 15 - Manufacture of leather and related products
- o 16 - Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
- o 17 - Manufacture of paper and paper products
- o 18 - Printing and reproduction of recorded media
- o 19 - Manufacture of coke and refined petroleum products
- o 20 - Manufacture of chemicals and chemical products
- o 21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations
- o 22 - Manufacture of rubber and plastics products
- o 23 - Manufacture of other non-metallic mineral products
- o 24 - Manufacture of basic metals
- o 25 - Manufacture of fabricated metal products, except machinery and equipment
- o 26 - Manufacture of computer, electronic and optical products
- o 27 - Manufacture of electrical equipment
- o 28 - Manufacture of machinery and equipment n.e.c.
- o 29 - Manufacture of motor vehicles, trailers and semi-trailers
- o 30 - Manufacture of other transport equipment
- o 31 - Manufacture of furniture

- o 32 - Other manufacturing
- o 33 - Repair and installation of machinery and equipment
- D - Electricity, gas, steam and air conditioning supply
 - o 35 - Electricity, gas, steam and air conditioning supply
- E - Water supply; sewerage, waste management and remediation activities
 - o 36 - Water collection, treatment and supply
 - o 37 - Sewerage
 - o 38 - Waste collection, treatment and disposal activities; materials recovery
 - o 39 - Remediation activities and other waste management services
- F - Construction
 - o 41 - Construction of buildings
 - o 42 - Civil engineering
 - o 43 - Specialized construction activities
- G - Wholesale and retail trade; repair of motor vehicles and motorcycles
 - o 45 - Wholesale and retail trade and repair of motor vehicles and motorcycles
 - o 46 - Wholesale trade, except of motor vehicles and motorcycles
 - o 47 - Retail trade, except of motor vehicles and motorcycles
- H - Transportation and storage
 - o 49 - Land transport and transport via pipelines
 - o 50 - Water transport
 - o 51 - Air transport
 - o 52 - Warehousing and support activities for transportation
 - o 53 - Postal and courier activities
- I - Accommodation and food service activities
 - o 55 - Accommodation
 - o 56 - Food and beverage service activities
- J - Information and communication
 - o 58 - Publishing activities
 - o 59 - Motion picture, video and television programme production, sound recording and music publishing activities
 - o 60 - Programming and broadcasting activities
 - o 61 - Telecommunications
 - o 62 - Computer programming, consultancy and related activities
 - o 63 - Information service activities

K - Financial and insurance activities

- o 64 - Financial service activities, except insurance and pension funding
- o 65 - Insurance, reinsurance and pension funding, except compulsory social security
- o 66 - Activities auxiliary to financial service and insurance activities

L - Real estate activities

- o 68 - Real estate activities

M - Professional, scientific and technical activities

- o 69 - Legal and accounting activities
- o 70 - Activities of head offices; management consultancy activities
- o 71 - Architectural and engineering activities; technical testing and analysis
- o 72 - Scientific research and development
- o 73 - Advertising and market research
- o 74 - Other professional, scientific and technical activities
- o 75 - Veterinary activities

N - Administrative and support service activities

- o 77 - Rental and leasing activities
- o 78 - Employment activities
- o 79 - Travel agency, tour operator, reservation service and related activities
- o 80 - Security and investigation activities
- o 81 - Services to buildings and landscape activities
- o 82 - Office administrative, office support and other business support activities

O - Public administration and defence; compulsory social security

- o 84 - Public administration and defence; compulsory social security

P - Education

- o 85 - Education

Q - Human health and social work activities

- o 86 - Human health activities
- o 87 - Residential care activities
- o 88 - Social work activities without accommodation

R - Arts, entertainment and recreation

- o 90 - Creative, arts and entertainment activities
- o 91 - Libraries, archives, museums and other cultural activities
- o 92 - Gambling and betting activities
- o 93 - Sports activities and amusement and recreation activities

S - Other service activities

- o 94 - Activities of membership organizations
- o 95 - Repair of computers and personal and household goods
- o 96 - Other personal service activities

T - Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use

- o 97 - Activities of households as employers of domestic personnel
- o 98 - Undifferentiated goods- and services-producing activities of private households for own use

U - Activities of extraterritorial organizations and bodies

- o 99 - Activities of extraterritorial organizations and bodies

GLOSSARY

Gross Value Added- Gross value added is the value of output less the value of intermediate consumption; it is a measure of the contribution to GDP made by an individual producer, industry or sector; gross value added is the source from which the primary incomes of the SNA are generated and is therefore carried forward into the primary distribution of income account. (SNA 93, 1.6)

System of National Accounts - The System of National Accounts (SNA) consists of a coherent, consistent and integrated set of macroeconomic accounts; balance sheets and tables based on a set of internationally agreed concepts, definitions, classifications and accounting rules. (SNA 93, 1.1)

GDP by Expenditure Approach - total final expenditures at purchasers' prices (including the f.o.b. value of exports of goods and services), less the f.o.b. value of imports of goods and services. (SNA 93, 6.235)

GDP by income approach - compensation of employees, plus taxes less subsidies on production and imports, plus gross mixed income, plus gross operating surplus. (SNA 93, 2.222)

GDP by Production approach - is the sum of the gross values added of all resident producers at basic prices, plus all taxes less subsidies on products (SNA 93, 6.237)

Constant prices - are obtained by directly factoring changes over time in the values of flows or stocks of goods and services into two components reflecting changes in the prices of the goods and services concerned and changes in their volumes (i.e. changes in "constant price terms"); the term "at constant prices" commonly refers to series which use a fixed-base Laspeyres formula. (SNA 93, 16.2)

Gross capital formation - is measured by the total value of the gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables for a unit or sector. (SNA 93, 10.27)

Household final consumption expenditure- consists of the expenditure, including imputed expenditure, incurred by resident households on individual consumption goods and services, including those sold at prices that are not economically significant. (SNA 93, 9.45)

Government final consumption expenditure- consists of expenditure, including imputed

expenditure, incurred by general government on both individual consumption goods and services and collective consumption services. (SNA 93, 9.45)

Commodity Flow Approach-Method used to estimate purchases of a commodity by intermediate or final users. The method generally begins with an estimate of the total supply of a commodity available for domestic uses; it then either attributes a fixed percentage of supply to an intermediate or final use, or it adjusts for intermediate purchases and attributes the residual to final uses (Bureau of Economic Analysis, U.S Department of Commerce)

Consumer Price Index-The consumer price index (CPI) measures changes over time in the general level of prices of goods and services that a reference population acquires, uses or pays for consumption. A consumer price index is estimated as a series of summary measures of the period-to-period proportional change in the prices of a fixed set of consumer goods and services of constant quantity and characteristics, acquired, used or paid for by the reference population. Each summary measure is constructed as a weighted average of a large number of elementary aggregate indices.(ILO,1987)

Consumption of Fixed Capital- is the decline, during the course of the accounting period, in the current value of the stock of fixed assets owned and used by a producer as a result of physical deterioration, normal obsolescence or normal accidental damage.(SNA 93, 10.27)

Enterprise - An enterprise is an institutional unit in its capacity as a producer of goods and services; an enterprise may be a corporation, a quasi- corporation, a non-profit institution, or an unincorporated enterprise. (SNA 93 , 5.17)

Establishments-An establishment is an enterprise, or part of an enterprise, that is situated in a single location and in which only a single productive activity is carried out or in which the principal productive activity accounts for most of the value added.(SNA 93 , 5.21)

FISIM- Financial intermediation services indirectly measured (FISIM) is the difference between the rate paid to banks by borrowers and the reference rate plus the difference between the reference rate and the rate actually paid to depositors represent charges for financial intermediation services indirectly. (SNA 2008, 6.163)

Imputed rent of owner occupied housing- Owner occupied housing are dwellings owned by the households that live in them. The dwellings are fixed assets that their owners use to produce housing services for their own consumption. The imputed rents of these housing

services should be valued at the estimated rent that a tenant pays for a dwelling of the same size and quality in a comparable location with similar neighbourhood amenities. (ILO , 2004)

NPISH – legal entities which are principally engaged in the production of non-market services for households and whose main resources are voluntary contributions by households. (SNA 93 , 2.20)

Other non-market output- Other non-market output consists of goods and individual or collective services produced by non- profit institutions serving households (NPISHs) or government that are supplied free, or at prices that are not economically significant, to other institutional units or the community as a whole.(SNA 93, 6.49)

Principal activities- The principal activity of a producer unit is the activity whose value added exceeds that of any other activity (SNA 2008, 5.8)

Secondary activities- A secondary activity is an activity carried out within a single producer unit in addition to the principal activity and whose output, like that of the principal activity, must be suitable for delivery outside the producer unit. (SNA 2008, 5.10)

Ancillary activities- an ancillary activity is incidental to the main activity of an enterprise. It facilitates the efficient running of the enterprise but does not normally result in goods and services that can be marketed. (SNA 2008, 5.9)

Producer Price Index- A measure of the change in the prices of goods and services either as they leave their place of production or as they enter the production process. A measure of the change in the prices received by domestic producers for their outputs or of the change in the prices paid by domestic producers for their intermediate inputs. (IMF , 2004)

Trade Margin- A trade margin is the difference between the actual or imputed price realised on a good purchased for resale (either wholesale or retail) and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed of. (SNA 93, 6.110)

Unit Value Index- A unit value index is a “price” index which measures the change in the average value of units that are not homogeneous and which may therefore be affected by changes in the mix of items as well as by changes in their prices. (SNA 93, 16.13).

Wage Index- An index of wages calculated by setting the base year wage rate equal to 100. The index treats changes in wages and salary payments that arise from the hiring of additional staff, changes in the mix of staff grades and the annual increments as volume changes and only measures the changes in the general levels of wages and salaries. (MPND, 2001)

GDP at basic price- Gross domestic product (GDP) at basic price is equal to the sum of the gross value added of all the institutional units resident in a territory engaged in production. (SNA 2008, A4.24)

GDP at market price - Gross domestic product (GDP) at market prices is equal to the sum of the gross value added of all resident enterprises plus those taxes, less subsidies, on products that are not payable on the values of the outputs of those enterprises, that is, taxes or subsidies on imports plus non-deductible VAT when output is valued at producers' prices, and all taxes or subsidies on products when output is valued at basic prices. (SNA 2008, 7.10)

Double deflation - gross value added measured in real terms by subtracting intermediate consumption in volume terms from output in volume terms is called "double deflation" method. (SNA 2008, 15.2)

Back casting - Reverse-forecasting technique which starts with a specific future outcome and then works backwards to the present conditions. (<http://www.businessdictionary.com>)

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