Economic Statistics

Philip Turnbull, Matthew Powell, Vinayak Uppal and Albert Pijuan

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Preface/acknowledgements

This is one of a series of topic guides commissioned by the UK Department for International Development (DFID). It has been prepared by Philip Turnbull, Matthew Powell, Vinayak Uppal, and Albert Pijuan of Oxford Policy Management Ltd, under the guidance of Matthew Johnson-Idan of DFID.

It is aimed at providing general guidance on key official economic statistics for DFID economics and other users. Extensive references and links are provided for further reading and for obtaining international data on the various statistics covered by this guide.

This guide is primarily concerned with "official" economics statistics. By "official statistics", that is statistics compiled and published by the National Statistics Office (NSO) of a country or by Ministries or official agencies, including the Central Bank, which are part of the wider National Statistical System of a country. Statistics compiled and collected by the private sector, NGOs, or directly by international agencies, for their own purposes, are excluded from this definition, even though some of them may be important and relevant for economic analysis. A distinguishing feature of official statistics is that, although they are available to all users, the main user is government itself.

Any errors or omissions from this handbook are the responsibility of the Authors and not DFID.

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Abbreviations

What do those initials mean?

ADB	Asian Development Bank
AFD	Agence Française de Développement
AfDB	African Development Bank
AITRS	Arab Institute for Training & Research In Statistics
ASEAN	Association of South East Asian Nations
BEC	Classification by Broad Economic Categories
BIS	Bank for International Settlements
BOP	Balance of Payments
CIF	Cost Insurance and Freight – Usual price basis for imports of goods
COFOG	Classification of Functions of Government
COLI	Cost of Living Index
CPC	Central Product Classification
CPI	Consumer Price index
DFID	(UK) Department for International Development
DQAF	(IMF) Data Quality Assessment Framework
EBOPS	The Extended Balance of Payments Services Classification
ESS	European Statistical System
EU	European Union
EUROSTAT	Statistical Office of the European Communities
FAO	Food and Agriculture Organisation of the UN
FATS	Foreign Affiliates Statistics
FDI	Foreign Direct Investment
FOB	Free on Board – Usual price basis for exports of goods
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDDS	(IMF) General Data Dissemination System
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GFS	Government Finance Statistics
GFSM	Government Finance Statistics Manual
GNI	Gross National Income
GSBPM	(UN) Generic Statistics Business Process Model
GVA	Gross Value Added
HS	Harmonized Commodity Description and Coding System
IDA	International Development Association – The World Bank fund for the poorest countries.
IIP	International Investment Position
ILO	International Labour Organisation
IMF	International Monetary Fund
IMTS	International Merchandise Trade Statistics

ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification of all Economic Activities
LFS	Labour Force survey
MDGs	Millennium Development Goals
MFS	Monetary and Financial Statistics
MFSM	Monetary and financial Statistics Manual
MMF	Money Market Fund
NPI	Non-Profit Institutions
NPISH	Non-Profit Institutions Serving Households
NSDS	National Strategy for the Development of Statistics
NSO	National Statistical Office, sometimes also referred to as the National Statistical Institute (NSI).
OECD	Organisation of Economic Cooperation and Development
OPM	Oxford Policy Management
PIM	Perpetual Inventory Methods
PPI	Producer Price Index
PPP	Purchasing Power Parity.
ROSC	(IMF) Reports on Observance of Standards and Codes
ROW	Rest of the World
SAD	Single Administrative (Customs) Document
SDDS	(IMF) Special Data Dissemination Standards
SHaSA	Strategy for the Harmonization of Statistics in Africa
SIDA	Swedish International Development Cooperation Agency
SITC	Standard International Trade Classification
SITS	Statistics on International Trade in Services
SNA	System of National Accounts
SUT	Supply and Use Table
TA	Technical Assistance
UN	United Nations
UN ECA	UN Economic commission for Africa
UN ECE	UN Economic Commission for Europe
UN ESCAP	UN Economic Commission for Asia and the Pacific
UN SIAP	UN Statistical Institute for Asia and the Pacific
UNCTAD	UN Conference on Trade and Development
UNDP	UN Development Programme
UNSD	UN Statistics Division
VSS	(WB) Virtual Statistical System
WB	World Bank
WCO	World Customs Organisation
WTO	World Trade Organisation

Introduction

Why should you read this document?

The aim of this publication is to provide an overview of the most important regularly produced economic statistics and the relevant international standards for each of them. It will enable readers to be made aware of most important issues, and thus know what questions to ask to enable the available economic statistics in a developing country to be used for analysis and to inform decisions.

The guide is a reference document and has been drafted so that readers can move straight to the section that interests them and not necessarily read it all. *Technical terms are highlighted in italics* with hyperlinks to the glossary at the end of this guide. Hyperlinks are also provided to reference documents for further reading on a specific topic.

Part 1 of this guide covers the most important and most common statistical topics and separate sections of this guide cover statistics on: prices, labour, business, trade, balance of payments, government accounts, financial sector and national accounts. There are some very important economic statistics not covered; for example agriculture, energy, tourism and environmental statistics. However including too many topics would make this guide too long and over detailed. Furthermore official statistics on some of these topics are not always available in many developing countries. Part 2 of this guide covers other important issues such as measuring quality, policy use, capacity building. A glossary of technical terms is also provided.

Why is this guide important for users of economic statistics? Why should busy advisors bother to read or consult it? Firstly, users are reliant on these data sets to make decisions. Secondly, there are significant reasons to be worried about quality in many developing countries; and this guide will help users to judge the quality of data and know how much confidence they can have in analysis based on these data.

Generally speaking the range and quality of official statistics in Africa and in much of Asia is quite limited and needs considerable improvement. Table 1 below gives some World Bank assessments. As another example, a 2011 Blog on the World Bank website by Shanta Devarajan said *"today, only 35 percent of Africa's population lives in countries that use the 1993 UN System of National Accounts; the others use earlier systems, some dating back to the 1960s."* A 2006 report from AfDB and other African organisations (ref 1) said about the poor quality of statistics *"This is due to a number of constraints, including inadequate resources being allocated to statistical activities, a lack of institutional capacity, the low profile of statistics on the continent, inadequate coordination of statistical activities, and minimal consideration of African specificities in setting up international standards"*.

Table 1: World Bank Statistical Capacity Indicator (score 0-100)

	All countries		IDA countries Sub-Saharan Africa		IDA countries non-Sub-Saharan Africa	
Year	1999	2009	1999	2009	1999	2009
Overall	52	65	47	53	48	68
Methodology	45	56	35	37	40	58
Source data	53	63	46	47	50	67
Periodicity	59	77	61	76	54	78

Source: World Bank. http://data.worldbank.org/indicator/IQ.SCI.MTHD

This is a situation that DFID, international agencies and many others have sought to improve over the years. Considerable progress has been made; for example the 2011 Busan Action Plan for Statistics (ref 67) says:

Much progress has been made. Out of the 79 low-income IDA countries, only eight countries do not have a national strategy for the development of statistics (NSDS) and are not planning to prepare one. Implementing these strategies is well underway in many countries. After the 2010 census round concludes, 98 percent of the world's population will have been counted. Since donors began reporting support for statistical capacity development in 2008, financial commitments to statistics have increased by 60 percent to $1.6 billion over the period 2008-10. Over 55 developing countries have improved their practices in data collection, management, and dissemination of household surveys. The Interagency and Expert Group on the MDGs has conducted a series of regional workshops aimed at improving the monitoring of the MDGs and has reported annually on progress. Over this period, the quality of statistics as measured by the World Bank's statistical capacity indicator has improved from its benchmark level of 52 in 1999 to 68 in 2009. And there has been progress in developing results-oriented monitoring and evaluation frameworks.
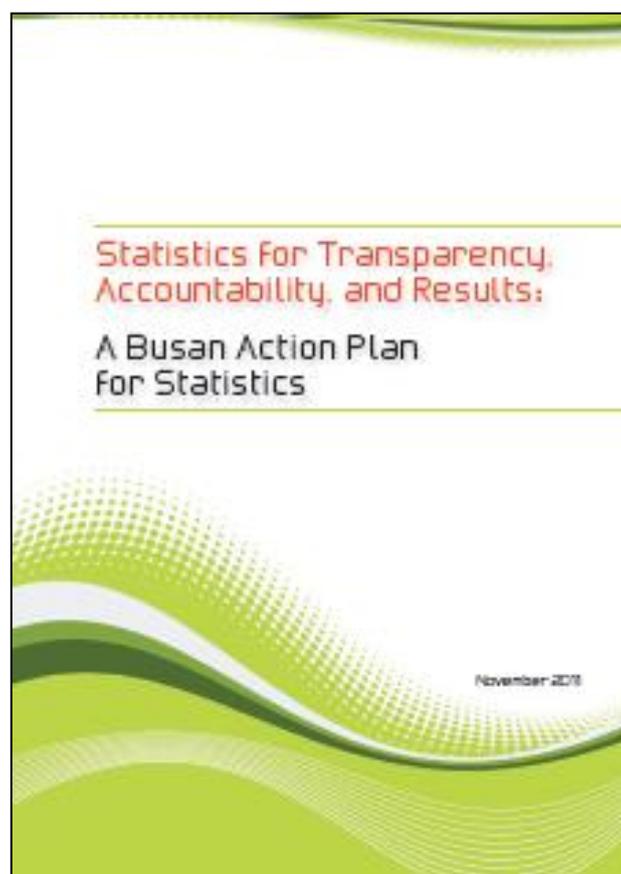
However much more needs to be done as evidenced by the need for the Busan Action Plan in the first place.

1   Guide to key economic statistics

What can I find in Part 1 of this guide?

Part 1 of this Guide identifies the main issues that users need to be aware of, and the most important questions that they need to ask before drawing conclusions. It covers eight key topics in economic statistics. The first four topics are statistical series on prices, labour markets, businesses, and overseas trade; while the last four describe the main accounting frameworks which are compiled using these and other economic statistics, culminating in the National Accounts.

1.1   Statistical series – Prices

How and why do statisticians measure changes in prices?

1.1.1   Introduction

Published price statistics represent only a very small subset of the possible indices that could be calculated, so it is extremely unlikely that any analyst will ever find an index exactly suited to their particular problem. This section explains some of the most commonly published indices in order to help analysts to choose the most appropriate, or least inappropriate, to their needs and understand some of the limitations of each index.

A *Price index* attempts to measure the effect of changes in prices by aggregating a selection of *Price quotes* using *Weights* and *Aggregation Formulae* appropriate to the indices' intended purpose. There are many different ways of selecting and aggregating quotes and discussion of their merits has generated both voluminous international handbooks for the guidance of price statisticians, and a rich academic literature that combines practical measurement issues with some of the deepest questions in economics, or indeed philosophy.

The objective is always to measure the effects of pure price changes as opposed to changes in the price quote to allow for changes to the volume, financing terms, place, or method by which the goods or services are offered for sale or the quality of the goods or services offered. It follows that official price indices should be adjusted to exclude quality improvements, although this is not always done in practice.

1.1.2   Consumer price indices

Consumer Price Indices (CPI) are perhaps the most commonly produced official statistics. These indices are intended to measure the general or average rate of price changes for consumer goods and services sold to the public at retail outlets – often briefly summarised as the price of purchasing a fixed basket of goods and services. They are frequently used as a general measure of price inflation in the economy. They may not always be ideal for this purpose, but have the advantage of being frequent and readily available.

Prices of a standard set of goods and services are collected regularly[1] from shops, markets and other outlets serving consumers. Price changes from one period to the next or from the current period to a base period are aggregated without weights to give an indication of change at a low level known as an *Elementary aggregate* (e.g. all bread prices). These elementary aggregates are then aggregated further using weights based on consumer expenditure patterns in a recent base year (e.g. if bread expenditure were 5 percent of all consumer expenditure then the weight for bread would be 0.05 or 50 per 1000).

Table 2: Illustrative data: world consumer price trends

Consumer prices, all items
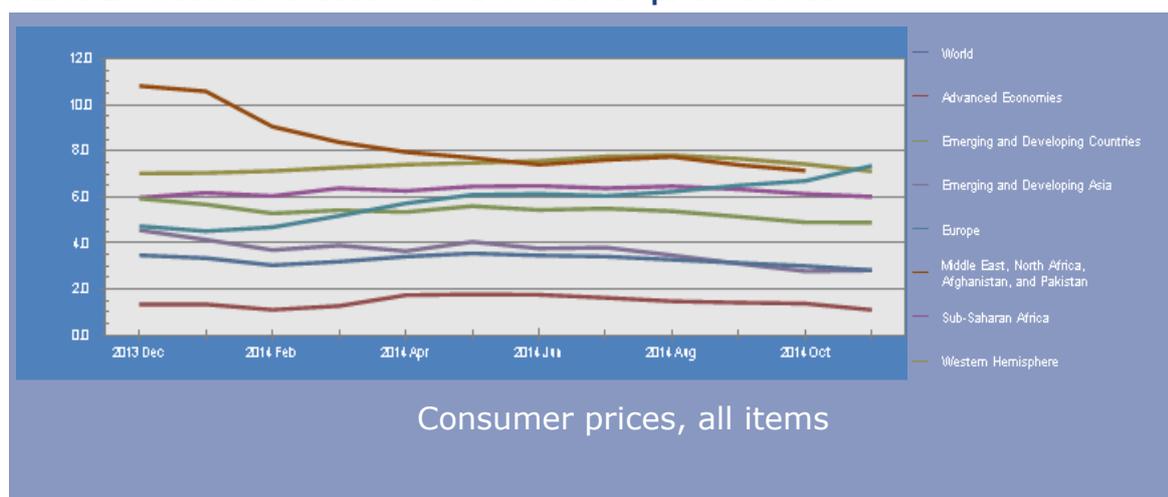
% change over corresponding period of previous year

	2010	2011	2012	2013	2013 Q4	2014 Q1	2014 Q2	2014 Q3
World	3.6	4.8	3.8	3.6	3.5	3.2	3.5	3.3
Advanced economies	1.5	2.7	1.9	1.3	1.2	1.2	1.8	1.5
Emerging and developing countries	6.1	7.4	6.0	6.3	6.3	5.5	5.5	5.4
Emerging and developing Asia	5.6	6.4	4.5	4.9	5.1	3.9	3.8	3.4
Europe	6.4	7.8	6.1	5.2	4.7	4.8	6.0	6.3
Middle East, North Africa, Afghanistan and Pakistan	7.0	9.8	10.9	13.2	12.2	9.9	8.2	8.0
Sub-Saharan Africa	7.0	10.8	7.8	5.7	6.0	6.2	6.2	...
Western Hemisphere	5.5	6.2	5.5	6.4	6.9	7.2	7.5	7.8

Data Source: International Financial Statistics (IFS)
Data extracted from IMF Data warehouse on: 11/4/2014

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[1] Prices are usually collected every month. In some countries volatile prices such as fresh local food are collected weekly, and then averaged over a month. In some other countries such as Australia the CPI is collected on a quarterly cycle.

Traditionally and most commonly, weights are derived from a benchmark household expenditure survey. But in more recent years many developed countries, including those in the EU have switched to using household consumption data from the national accounts.

Sometimes average actual prices may also be published by the NSO, but in other cases the sample of price quotes is considered to be unsuitable for this purpose, as it may not have been designed to measure average prices, only to measure changes in prices over time.

Traditionally the CPI is not revised once it has been published. Such a "non-revision" policy has attractions for those using the index for wage or other contractual reasons, but it also means that any errors detected after publication are implicitly included in the next period percentage change.

The process of updating the base period and weights of an index is known as Rebasing. When the index is rebased the usual practice is to link the old to the new in such a way that the overall percentage changes remain the same.[2]

A common indicator used by central banks and external analysts is so called "underlying or core inflation". This is not a statistical concept and no international standards for it exist. Usually it is defined as CPI excluding certain erratic prices items such as fresh produce and sometimes also administered or controlled prices.

1.1.3   Producer price indices

Producer Price Indices (PPI) measure the change in prices charged by domestic producers of goods and services to their customers who are often wholesalers, retailers or exporters. These prices are traditionally referred to as *Factory gate prices*, and focus on manufacturing and the production sector (including utilities and construction). In recent years PPIs have often been expended to cover selected services, which are not sold directly to the public (e.g. transport, and business services). They are used to deflate or reflate output statistics from a particular industry in order to move from current prices to constant prices (or volume) and visa-versa. They are also used (together with import and export prices) as an indication of price pressures which may influence CPI at a later date.

Prices are usually collected monthly or quarterly from a panel of large producers who report prices for a sample of their most common *Products* (e.g. a clay brick or metal pipe of a certain size and specification). The individual changes in price for individual products are then weighted up to a product group (and/or an industry group) using *Base period or* base year weights based on the value of production. Note that two stages of weights are required, weights for particular products within a producers total output, and weights for a producers total output within a product or industry group.

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[2] This constraint on the overall price changes means that the old rebased series will not be additive (the weighted total price change from its components will not be the same as the published price change).

1.1.4   Purchasing power parities

Purchasing Power Parities are world-wide indices that compare the price levels in various countries; i.e. how much more could you buy for 1 US$ in a country where the prices are generally lower than in the USA?   They are used to produce more meaningful comparisons between countries than those produced using currency exchange rates. They are often used to compare international poverty lines.

Most PPPs for developing countries are produced through the *International Comparison Program*(ICP). This is a global statistical initiative led by the World Bank and established in 1970 to produce internationally comparable price and expenditure levels to facilitate cross-country comparisons of Gross Domestic Product (GDP) and its sub-aggregates (Household Consumption, Government Consumption, Capital Formation, and net exports) that is free of price and exchange rate distortions (see ref 101). Comparisons of final expenditure on GDP have been completed for 1970, 1973, 1975, 1980, 1985, 1993, 2005, and 2011. They covered 10, 16, 34, 60, 64, 117, 146, and 199 countries respectively. Data collection and processing is overseen by a global secretariat (http://icp.worldbank.org/), but operates through nine regional organisations. Since the 2005 ICP round, the Program is managed at the African Regional level by the African Development Bank (AfDB).

Both the data requirements and the aggregation requirements for inter spatial price comparisons like the PPPs differ from those required for normal inter temporal price comparisons. The data required is different because it is vital to measure the price of the same item in different countries. With a CPI it does not matter if the shirt priced in one price collection location is slightly different from that priced in another location as long as the shirt priced in each location this month is comparable to that priced in the same location in the previous month. For a PPP comparison it does matter so the ICP programme has put a lot of effort into developing much tighter specifications of the items to collect prices for, usually including pictures. The corollary is that it is much harder for the collectors to find those items and that when they do find them they are much less likely to be typical of the items consumed in any given location. PPP price quotes will therefore not always be suitable for a CPI even if it is possible to collect them in every CPI location.

The aggregation requirements for a PPP differ from those required for a CPI because *Transitivity* is much more important for a PPP[3]. Simple combinations of bilateral price comparisons between sets of prices collected in one place and/or time and those collected in other places/times are not, in general, transitive or reversible. However this is not a serious problem for compiling CPIs because there is an obvious way to order inter temporal price collections (t1, t2 etc) and in any case the weights, and therefore the aggregation effects, are unlikely to vary greatly between neighbouring collections. With PPPs on the other hand there is no way of knowing if a user will want to compare Ghana and the US, Ghana with India, or all three together. The ICP and other providers of PPPs have therefore developed special aggregation methods to create a transitive price index out of a set of bilateral price comparisons. One of the features of these

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[3] Transitivity is the requirement that if country B has a higher price level than country A and country C has a higher price level than country B, then country C should also have a higher price level than country A. In practice it is also desirable that the price difference between country A and country C can be measured by combining the price differences between A and B with that between B and C and that the price difference going from A to C is the same as the price difference going from C to A.

methods is that the value of the index for countries B and C compared to country A often depends on whether or not country D (or a price collection for country A at a previous time) was included when the index was constructed. It is therefore usually wrong to combine price indices from a given PPP publication with those from another PPP publication or with inter temporal price indices in the same analysis.

Both the data collection and aggregation difficulties described above become more acute the more the countries being compared vary. The ICP deals with this problem using its regional structure. Each region sets its own detailed classification of items to price (within the higher level global classifications referred to as "Basic Headings") and collects quotes to construct bilateral indices at the Basic Heading level which are aggregated to make regional comparisons. For certain countries in each region, referred to as "ring countries", bilateral indices with countries in other regions are also calculated and these are used to stitch together the whole set of price comparisons.

Note that the stated purpose of the ICP is to produce internationally comparable estimates of national GDP levels. This has led many to question whether these price indices are suitable for comparing poverty lines, which is a common use of PPPs by DFID and other international agencies. In principle it would be necessary to measure at national level the consumption patterns of the poor to use as weights. Deaton and Dupriez (2011 ref 6) have gone a long way towards developing conventions to deal with that problem but hardly any progress has been made on the more fundamental question of whether the price quotes that the ICP collects represent the prices that the poor actually face.

1.1.5   National Accounts deflators

As explained later in the national accounts section, current and constant price or chained volume indicators are related by national accounts price deflators. These deflators may be derived from independent estimates of volume and value or specially generated from other sources by the national accounts team for the purposes of *Deflation* (or Reflation).

In the latter case, they will typically be weighted components of the CPI to deflate consumer expenditure at market prices or components of the PPI at basic prices to deflate output. Other prices indices or wage indices will also be used where appropriate (e.g. capital goods prices and construction/housing price indices).[4]

The most commonly used overall national accounts deflator is the GDP *Expenditure Deflator* at market prices. In principle this is a better and more wide ranging measure of general price inflation in the economy than the CPI as it covers final expenditures of all sectors of the economy including government, whereas the CPI is concerned with household consumption only. However the value of the GDP expenditure deflator for this purpose depends on its quality and frequency (quarterly or annual).

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[4] The volume measures in national accounts are meant to be base year weighted (or previous year for chained volumes). Mathematically this requires current year weighted price indices to be used, but this level of sophistication is usually ignored in developing countries.

1.1.6 Other common price indices

Many other prices indices may be produced in a particular country. The most common ones are summarised below.

Import and export price indices – preferably based on actual reported prices from a sample of importers and exporters, but often constructed using proxy prices called "unit values" from Customs data on imports and exports of goods. Unit values are the total value divided by the total volume of imports or exports (e.g. total value of cars imported divided by the total number). No quality adjustment is involved and indeed quality changes are implicitly included in the unit value. The quality of price indices derived from unit values depends very much on the quality of the volume information collected by customs and also the level of disaggregation of the items (the more the better). One of the advantages of such indices is that they allow a sub-division to be made between prices for capital and consumer goods.

Agricultural prices and indices – These are similar in concept to PPIs. *Farm gate prices* (equivalent to factory gate prices) and local market prices are often collected separately by the Agriculture department and may overlap to a certain extent with CPI prices of fresh produce at local markets. Average prices are often published as well as a price index.

Construction Price indices - The most common form of index is an *Input price* index measuring the prices of construction materials and preferably also wage rates. Such an index measures the costs to construction companies, but not necessarily the cost of construction to purchases of the services of construction companies.

A better indicator, but one that is not often produced in developing countries, is a Construction *Output price* . Typically this will price the cost of constructing a range of specific standard construction projects such as an individual house, block of apartments, office building or infrastructure such as roads or bridges. It will include all chargeable overheads including profit to the construction contractor.

House prices and associated indices – These are produced in some countries based on official land registry data, data on housing loans from financial institutions or sometimes sales data from estate agents. Any resulting price index should be adjusted for the mix by type and size of housing so as to approximate a constant quality index. A relevant sub-set of the construction price index may also be used as a proxy for housing prices, but these actually measure the costs of construction, which is not necessarily the same as the sale price.

1.1.7 Quality issues for price indices

Some key issues users should consider when assessing the quality of price indices in developing countries are:

- Is the coverage adequate? – The CPI for example would rarely include remote villages, but might include a sample of small and medium sized towns and major shopping outlets such as local markets and shopping malls. However, the number of different locations for which CPI prices are collected will also depend on the resources

of the statistics office. The PPI should cover all or a sample of major producers in all production industries and preferably also some service industries.

- Are procedures for choosing new products to price and replacing them where necessary adequate? Are staff applying these procedures correctly? If not then the price index may overestimate inflation by implicitly including some quality improvements as price effects.

- Is the sample of enterprises large enough and representative, and are numbers of price quotes collected large enough?

- When were the weights last updated? – This should be no more than every 5 years as expenditure patterns change (weights) and new products come on to the market. Any index with a base year more than 10 years old should be regarded with considerable scepticism.

- Are the international standards applied? including the classification by industries and products. If not then the subcategories of the index will not be comparable with those in other countries.

- Was the coverage and quality of the benchmark year data survey adequate? e.g. last household expenditure survey used for the CPI weights.

- Do the CPI weights cover actual expenditures only or do they also include imputed expenditures such as own production of agricultural products and imputed rent for households owning their own home? – Knowing this effects the interpretation of the results and also any international comparisons.

- Are there significant discontinuities in the published time series? For example were the old and the new series spliced together, or are they simply presented side by side.

Common issues to be aware of in assessing the quality of national accounts deflators include:

- Are appropriate deflators used throughout the accounts?   Often the CPI is used excessively instead of price indicators appropriate to the specific aggregate?

- Are the price deflators at basic (output) prices or market prices including overheads and tax?

- Large Revisions - Users should note that in all countries the overall GDP deflator may be subject to relatively large revisions unlike the CPI.

1.1.8   References for further reading

CPI – The ILO manual on Consumer Price Indices (was first published in 1987 and subsequently extensively undated in 2004 (ref 22). It contains all the relevant theoretical underpinning of CPI as well as the standards and alternatives to the preferred approach. It was developed and agreed by a consortium of international organisations including the International Monetary Fund (IMF); the Organisation for Economic Co-operation and Development (OECD); the Statistical Office of the European Communities (Eurostat); the United Nations; Economic Commission for Europe (UNECE); and the World Bank.

PPI - The Producer Price Index Manual (ref 30) was published in 2004 by the IMF. It was produced and agreed by a consortium of international organisations including ILO,

IMF, OECD, UNECE, and World Bank, The Manual is endorsed by these organisations as good practice for statistical agencies in conducting a PPI program. However it notes that because of practical constraints, some of the recommendations may not be immediately attainable by all statistical offices and, should serve as guideposts for agencies as they revise and improve their PPI programs. Construction prices indices are covered as well as service price indices.

Other – Key reference documents for other price indices include the IMF import and export price index manual (ref 24); the OECD/Eurostat handbook on sources and methods for construction price indices (ref 62); the Eurostat handbook on price and volume measures in national accounts(ref 10), and the International Price Comparison Programme for Purchasing Power Parities (http://icp.worldbank.org/).

1.2 Statistical series – Labour

Labour statistics are important economic as well as social indicators

1.2.1 Introduction

Labour statistics describe the size, structure, characteristics, outputs and contributions of the participants in the *Labour Force* and how these change over time. These statistics are essential to analyse, evaluate and monitor the way the economy is performing and the effectiveness of current and longer term economic policies. They are also important from a social perspective, through policies and programmes for job creation, training and retraining schemes, and assistance for vulnerable groups, including the young, the aged, women, etc., in finding and securing employment.

Table 3: Illustrative data: urban unemployment in Ethiopia

Sex	Age	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total (sex)	15+ (youth, adults)	23.1		17			20.5	19.2	18.2	17.8
Total (sex)	15-64 (youth, adults)	23.4		17.2			20.6	19.4	18.3	17.9
Total (sex)	15-24 (youth, adults)	35		24.9			29	27.1	27.5	26.3
Total (sex)	25+ (youth, adults)	17.6		13.3			17	16.2	14.5	14.4
Male (sex)	15+ (youth, adults)	15.8		11.8			12.1	11.2	11.4	11.4
Male (sex)	15-64 (youth, adults)	15.9		11.6			12	11.2	11.4	11.4
Male (sex)	15-24 (youth, adults)	28.2		19.5			21.2	20.2	21.5	21.2

Male (sex)	25+ (youth, adults)	11.2	8.7		9.1	8.4	8.3	8.2
Female (sex)	15+ (youth, adults)	31.2	22.6		29.9	28	25.7	24.7
Female (sex)	15-64 (youth, adults)	31.5	22.9		30.1	28.1	25.9	25
Female (sex)	15-24 (youth, adults)	40.5	29.4		35.5	32.7	32.4	30.4
Female (sex)	25+ (youth, adults)	25.8	18.8		27.1	25.7	22.4	22

The most important labour statistics concern the size and structure of the labour force otherwise known as the *Economically Active Population*. This includes:

- The *Employed Population* and its subgroups, including the *Underemployed* population, those working in the *Informal economy*, child workers, migrant workers, etc;
- The Unemployed population.

These two groups comprise the *Economically Active Population* which, together with the *Economically Inactive Population*, make up the three mutually exclusive and exhaustive groups of the total population in a country.

Statistics are often presented in terms of the adult population (usually defined as the post compulsory school leaving age). However in countries where child and youth labour is significant then younger age groups might also be covered.

Among the *Economically Inactive Population*, two population groups are increasingly acknowledged to be important. One consists of persons who produce services for the consumption of their households which at present are not accounted for in national production statistics and therefore are not considered as employed. The other group consists of persons who would like to work and are available to do so, but who do not look actively for work for various reasons (*Discouraged workers* - see next section).

Statistics on the various characteristics of the labour force are also regularly produced including: income (average earnings); wages (earnings rates for an equivalent workers at different times) ; working time; status in employment; educational achievement; employment by occupation, industry and institutional sector ; labour costs, productivity and training.

Gender is one of the topics where labour statistics often has a particular strength in terms of the level of detail available on jobs, and earnings. Most of the available statistics can be used to illustrate and analyse the comparative position of women and men.

Manuals on labour statistics give precise technical definitions for many terms that are also used more casually by economic and social analysts. Two stand out in particular, the ILO defines;

> *"Persons in own-use production work"* as *"all those of working age who, during a short reference period, performed any activity to produce goods or provide services for own final use where: (a) "any activity" refers to work performed ……for a cumulative total of at least one hour"* and says that;

> *"Employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits (advance notice of dismissal, severance pay, paid annual or sick leave, etc.)* [5]*"*.

The first definition has led to statistics of employment much higher (and unemployment much lower) than that many analysts would accept, because it includes as employed many who have only worked one or a few hours in the week. The second definition has been adopted by national accountants to define "informal enterprises" where people are informally employed and an *Informal economy* or sector made up of informal enterprises.

Vulnerable employment is a concept used by economists but is not part of the standard statistical definitions. The World Bank defines it as "unpaid family workers and own-account workers as a percentage of total employment". However others would also include all jobs in industries where job contracts are relatively informal and often short term such as agriculture, construction and certain service sectors.

1.2.2   Labour Force Surveys

It is widely accepted that household surveys are the best source for labour market statistics. In such surveys, information is collected from people living in households through a representative sample and the surveys are based on standard methodology and procedures used internationally.

A Labour Force Survey (LFS) is a dedicated survey designed to measure most of the characteristics of the *Labour Force* mentioned above. In some countries such dedicated surveys are carried our every few years; others conduct it annually or quarterly.

Labour Force data is also usually available from the census of population and from other household surveys dedicated to poverty, health or general purpose survey vehicles. The USA and Germany have such general purpose surveys (micro-censuses) which are large enough to produce monthly data, but this is unusual even in the developed world.

In developing countries and especially in rural areas there may be many small holders and casual farm labourers for whom the traditional labour market distinctions between the employed, unemployed and not economically active may be ambiguous or have

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[5] Resolution concerning statistics of work, employment and labour underutilization Adopted by the Nineteenth International Conference of Labour Statisticians (October 2013) and Guidelines concerning a statistical definition of informal employment ILO Normative instrument | 01 November 2003 respectively.

limited meaning. These rural "workers" are sometimes excluded from an LFS; or sometimes wider concepts of discouraged or underemployment are adopted.

Discouraged workers are those who are not actively seeking employment, because they perceive that none is available. They are therefore not usually classified as "unemployed". The *Underemployed* are a subcategory of the employed population who worked or had a job during the reference week but were willing and available to work more hours than are available. It is important to identify them as they are important actors in the labour market and exert downward pressure on the wage rate.

1.2.3 Employer Based Surveys

Nearly all countries have a series of regular surveys of enterprises or employers, some of which may be dedicated to measuring employment and/or wages; while other business surveys may have different purposes (For example the annual structural business survey or a national accounts business survey), but also collect employment and/or wage data.

An important point to consider here is the difference between a count of "Jobs" which is what employer based surveys can provide and a count of "people in employment" which is what household surveys and the census of population provide. An increasing number of people hold two or more jobs at the same time and in some countries there is a large informal sector of employment not picked up by business surveys (e.g. occasional, casual, or unregistered jobs).

Labour productivity is an important concept and is usually measured at firm level by output per full time equivalent employee or output per hour worked.

1.2.4 Administrative sources for Labour Statistics

In addition to the dedicated statistical surveys covered above there are often official registers and or other government regulations from which labour statistics can be derived as a by-product. These will by definition only cover the formal sector of employment and may be produced by Ministries or agencies outside of the NSO. In developing countries these organisations often do not have a formal statistical remit or expertise and may not publish the statistics to a regular and consistent timetable.

The most important and most common of such statistics are summarised below:

- Register based unemployment statistics – These cover only those who register to seek a job or for benefits from a government agency. They are however often available on a regular basis and with care can be used as an indicator of trends in the labour market. Where a system of government supported job search is in place there may also be statistics on vacancies registered by employers.
- Regulations may require employers to report various incidents to the Labour Ministry or Agency. In some countries these reports are used to produce statistics on Strikes and lockouts, and on Occupational deaths, injuries and diseases.
- Those countries with a social security system based on compulsory contributions from employees and employers may also be able to generate an important set of Social security statistics, sometimes even including wage rates as well as numbers and contributions by industry and sector.

1.2.5   Quality issues for Labour Statistics

Some key issues that users should consider when assessing the quality of price indices in developing countries are:

- Are the published statistics a count of jobs or people? – This is an important distinction often overlooked by users.

- Is the coverage of the LFS or other household survey adequate for purpose? - Institutional households (homes for students, nurses, migrant workers etc.) are usually excluded. In some areas the whole rural population or parts of it are also excluded.

- Is the coverage of enterprise based surveys adequate? – Small and informal sector employers; agriculture and the public sector may be omitted. If so, then the users must recognise this in the context in which they use the statistics.

- Are the sample survey results presented as sample numbers or as numbers representing the total population? – The latter is common practice in developed countries and is referred to as "grossing up" the survey results. It may not be possible to do this in developing countries where a total to adjust to is not available. Percentages and growth rates for the sample are often used to overcome this problem.

- What was the response rate to the survey? As a rule of thumb a response rate below two thirds should be regarded with suspicion. In agencies without a strong statistical tradition, business surveys may be presented as if they represented the total, without any adjustment or imputation for refusals and non-contacts.

- Is the survey sample large enough and representative of the target population? - This is a difficult question for non-statisticians to answer, but users should beware business surveys with a relatively small sample, even if they cover all large employers. Household survey users should beware statistics produced from very small sub-groups of the total sample.

- Are the international standards applied, including the classification of industries and Labour market status? If not they will not be comparable to statistics produced in other countries and may not be comparable with statistics produced from other sources in the same country.

- Are there significant discontinuities in the published time series? For example, the data source may have changed in the time series being examined. The sample design and the survey size may also have changed. Problems of discontinuity are particularly common with administrative based statistics which are often subject to many changes in laws and regulations.

1.2.6   References for Further Reading

The International Labour Office (ILO) is main body responsible for setting international standards in Labour statistics. The most recent and relevant is Convention No. 160 adopted by the International Labour conference in 1985. It sets out minimum guidelines encompassing all areas of basic labour statistics. The International Labour Conference also adopted Recommendation No.170 in 1985, which provides further guidance regarding frequency of data collection, recommended disaggregation of the statistics, as well as on national statistical infrastructures (ref 21 and 20).

These are however rather high level and general documents and more detailed advice and discussion can be found in the papers for the occasional meetings of the international conference of Labour statisticians and the experts in Labour statistics (both last held in 2013)

Guidance on best practice for business surveys can be found in the Eurostat Handbook (ref 8) Useful guidelines for Labour Force and other household surveys in developing countries can be found at the website of the International Household Survey Network: http://www.ihsn.org/home/. The European Union LFS guidelines can be found at http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/EU_labour_force_surve y

1.3 Statistical Series-Business

Most enterprise surveys can only realistically cover the formal sector of the economy.

1.3.1 Introduction

Official business statistics are derived from both statistical enterprise surveys and administrative sources and sometimes also from a statistical *Business Register*. The NSO of a country will have a central role, but surveys are often also conducted by, or statistics generated from, government ministries or agencies with a key policy interest in the results (e.g. a ministry of trade or business). The purpose of such statistics is to measure the economic activity of the business sector and to describe the structure of the business sector in detail, and thus help analysts understand the drivers for growth, employment and the success or otherwise of government policies.

The international recommendations emphasise that business surveys can only realistically cover the formal sector of the economy and that estimates for the *Informal economy / sector* should normally be derived from household surveys, which can identify informal and unregistered enterprises.

Statistics on business may be based on several different types of reporting unit. For example: the company group, legal *Enterprise*; the local establishments, or the tax reporting entity. In most cases these will all be the same, but for larger businesses they will often be different.

The primary classifications of businesses are by *Industry* and by size (usually numbers of employees or turnover). The industry to which an enterprise belongs is based on the main product produced by that enterprise. Thus for example if a farm also has a processing plant to produce milk and cheese it could be classified to either agriculture or to food processing depending on which of the two has the largest turnover. Ideally it would be split into two units (*Establishment*) for reporting, but that is not always feasible.

Financial data from a company, such as the balance sheet or profits, can in most cases only be collected from the legal registered unit, as this is the lowest level required by the authorities for keeping full accounts. However data on production, employment and wages may also be collected at a lower establishment level. Note that in general data for employment or production by industry compiled on an establishment basis will differ

from the same data compiled on an enterprise basis. Also note that national changes to any business data will be driven by the birth and death of enterprises and their entry to and exit from particular industries as well as by changes to the businesses that stay in the industry all the time. Any statistics that do not take account of entry and exit will rapidly become misleading.
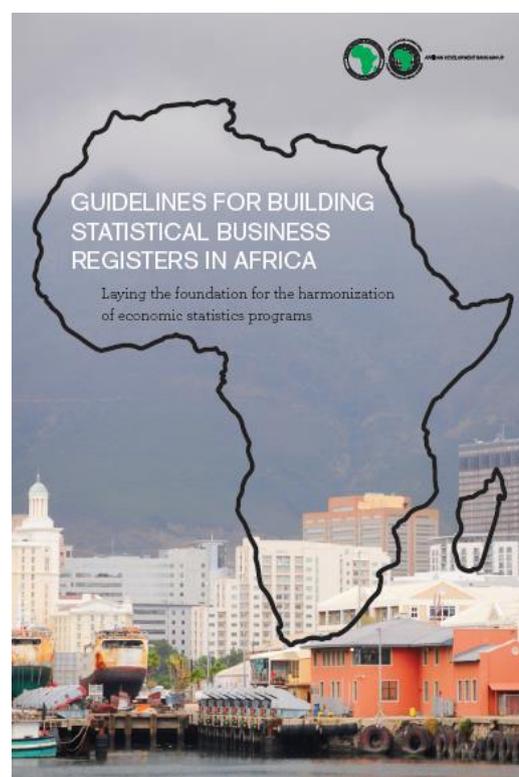
1.3.2   Business Registers

The essential and core requirement for good quality business statistics is a comprehensive statistical *Business Register* that is continuously updated. This serves are a basis for sampling and for grossing up the results and, if sufficiently up-to-date, can also be used to generate business demography statistics (births, deaths, mergers, and numbers of enterprises in the economy).

Statistical business registers are expensive to compile and maintain, and the resources devoted to them vary between countries. Most often they will be derived from administrative data sources on company registrations, company tax data, and/or payroll tax or social security contributions from employers.   In some cases ministries/agencies may maintain official administrative business registers of their own, but these are rarely entirely suitable for statistical purposes. This work is greatly facilitated and the accuracy much increased if a single unique company number is allocated to each and every registered enterprise, and used by all of government, including the NSO.

These data are often combined with information gathered by the NSO itself from statistical surveys or in some cases from special "register proving" surveys designed to establish whether a newly identified company is actually operating and its correct industry/size classification. Companies which stop operations, but remain legal entities need, where possible, to be identified on a statistical business register.

A statistical business register should consist of statistical reporting units, as appropriate for the statistical surveys upon which they are based. In the simplest cases there is one registered legal *Enterprise* with one place of business and producing one main product and thus classified to one main industry. Larger enterprises may have several places of business (known as an *Establishment*), which may or may not all produce the same main product. Several legal enterprises may be owned by a single parent company and together these form a *Company Group*. The more sophisticated statistical registers will take account and record these complex structures.

1.3.3 Statistical Surveys

In countries without an ongoing statistical business register, the tradition has been to conduct a "Business Census" every 10 years modelled on the concept of a population census. This "census" is then used as the sampling frame for annual and short term monthly/quarterly surveys for the following 10 years. Such a business census is a very large scale activity and may require advance listing of all businesses in each local area (known as "block enumeration") or may be based on administrative records which are merged specially for this purpose. Where resources are insufficient to conduct a full census, then the block enumeration approach can still be used, but based on only a sample of all possible such blocks in the country.

Most countries will conduct an annual *Structural Business Survey*, sometimes referred to as a national accounts survey. These have relatively large samples and are designed to be grossed up to produce national statistics on all formal sector businesses or sometime all large and medium enterprises only. They would typically collect financial information such as turnover, intermediate consumption, capital investment and/or profits, but may also collect production and employment data. Response rates can often be low, due to traditional distrust of government by private sector businesses. Strong legal guarantees of confidentiality and promises of use for statistical purposes only, can be important to reduce refusals.

Short term surveys every quarter or month, will usually be based on much smaller samples (often only the largest businesses) and are usually designed to estimate trends or indices of change. These may cover for example output, turnover, and employment/wages/earnings. They will usually cover both the production sector and services.

There may be several other business or enterprise surveys in any particular country. Some common ones include: Surveys of Labour Costs; Productivity, Research and Development; and business tendency (opinion based). Business surveys may also be conducted for the purposes of the balance of payments, such as *Direct investment* or *Trade in Services*.

The World Bank independently commissions a series of "enterprise surveys" in many developing countries. However these are not conducted by official agencies of government and are not regarded as "official statistics" in the countries concerned. Nevertheless they provide internationally comparable data on the structure of formal sector businesses (usually restricted to urban areas) and the constraints they face. A Business Executive Opinion Survey is conducted and published annually the World Economic Forum in their annual "Global Competitiveness Report".

The World Bank also conducts regular monitoring surveys of experts about the business regulatory environment, but these are not surveys of businesses – they are published in annual "Doing Business Reports".

1.3.4 Quality issues for Business Statistics

Some key issues that users should consider when assessing the quality of available business statistics in developing countries are:

- Don't forget the informal sector: Most business based surveys will miss informal enterprises entirely as they are best measured via household surveys.

- Does the country have a reasonably comprehensive and up-to-date business register? If not, then the survey results may not adequately cover new enterprises and may not be properly adjusted to represent the national total.

- Are there too many surveys with conflicting results? – Too much can be the enemy of the good, resulting in poorer quality, lower response rates, inconsistent data and a resulting confusion among users. It should be the job of the NSO to coordinate and control official surveys, where possible to limit the reporting burden on the business sector, and to avoid unnecessary duplication.

- Is the coverage of enterprise based surveys adequate? – Small employers; agriculture and those owned by government may be omitted. If so, then the users must recognise this in the context in which they use the statistics.

- What was the response rate? As a rule of thumb response rates below two thirds should be regarded with suspicion. In agencies without a strong statistical tradition, statistical business surveys may be presented as if they represented the total, without any adjustment or imputation for refusals and non-contacts.[6]

- Are the international standards applied, including the classification of industries and products? If not, they will not be comparable to statistics produced in other countries and may not be comparable with statistics produced from other sources in the same country.

- Are there significant discontinuities in the published time-series? For example the questions asked and the sample design and the survey size may have changed.

- Do the statistics take account of changes through entry and exit of businesses? If not they could be seriously misleading.

1.3.5   References for Further Reading

Apart from classifications produced by the UN Statistics office (ref 86and 92) there is little in terms of international standards for business statistics. European guidance on best practice for business registers (ref 15) and business surveys (ref 8) has more general applicability in developed countries. There is very little specifically produced for developing countries with the notable exception of the AfDB publication on business registers in Africa (ref 2). World Bank surveys (ref 100and 102) can be found on their website.

1.4   Statistical Series-Trade

Are the available trade statistics good enough for me to use?

1.4.1   Introduction

This section covers international *Trade in Goods* and *Trade in Services*. The balance between gross imports and gross exports of goods and services form the largest component of the current account balance of the Balance of Payments of a country. They

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[6] Some smaller scale interviewer based surveys are not designed to represent the total population of business, but rather to investigate specific issues and business opinions in greater detail.

are also important because net exports or a trade surplus adds to Gross Domestic Product (GDP) while net imports or a trade deficit reduces GDP.

More generally, they are a very important series of statistics for analysis of the economy and in the case of goods the level of detail available also makes them a very important resource for businesses to monitor their own market shares. They are also an important source for improving the quality of the national accounts via *Supply Use Balancing*.

1.4.2   International *Trade in Goods*

Statistics on the imports and exports of goods have one of the longest histories in the world of statistics. The reason is that in most countries they are taxed by governments (at least for imports) and therefore their values and details must be recorded by the Customs service.

These statistics are known in statistical circles as International Merchandise Trade Statistics (IMTS). They aim to satisfy the information needs of various user groups, ranging from international trade policymakers and commodity market analysts to compilers of balance of payments and national accounts.

Figure 1: Illustrative data: Exports of goods by ASEAN countries
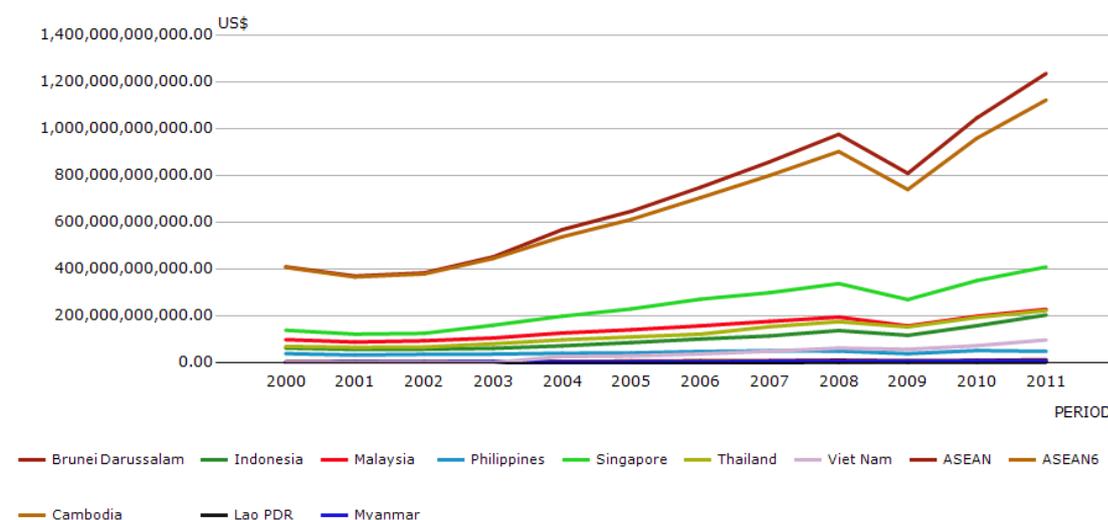
Source: ASEANstats, ASEAN Secretariat
Downloaded from http://aseanstats.asean.org/ on 4 Nov 2014

There are three related but different statistical concepts of measurement for IMTS:

- General trade basis - The recommended basis for IMTS includes all goods entering or leaving the statistical territory of a country. Usually, but not always, this will be the same as the economic or legal territory of a country.
- Special trade basis – The movement of goods across the Customs Frontier, i.e. goods entering and leaving the Customs Territory of a country. This would only count imports entering free trade areas or bonded warehouses if and when they clear Customs procedures. If they are exported again without clearing customs, then they would not be counted. This is often the basis used by Customs organisations themselves for purposes of taxation and planning.

- Macro-economic basis – Used for the BOP and national accounts, requires goods to change economic ownership between a resident and a non-resident of the economic territory of a country[7] to be classed as imports or exports. Adjustments are therefore needed to general trade statistics to include those that do not cross a customs frontier (e.g. goods and service provided in ports, ships and aircraft purchased abroad and merchanting trade); and also to remove those goods that cross borders but do not change ownership (e.g. goods sent for repair or processing abroad).

Commodity classification- Customs, taxation and statistical requirements combine to make it necessary to have a very detailed commodity or "*Products* " classification for IMTS. The Harmonized System (HS) is the international standard for Customs purposes. Each country or Customs Union will have an even more detailed *Tariff* classification based on the HS.

The HS classification is based on the nature of the commodity. However, for analytical purposes, such a division of products is not always the most appropriate. Commodity categories more suitable for economic analysis are provided by the Standard International Trade Classification (SITC) which takes into account the stage of production and other factors; and the Classification by Broad Economic Categories (BEC) which groups goods with reference to their end use.

Country classification - A major strength of IMTS is the availability of detailed country information. Although no single method of attributing partner country is ideal, attribution by origin for imports meets what is considered to be a priority application of international merchandise trade statistics, namely, matters of trade policy and related economic analysis. Consequently, the international standards recommend that: (a) In the case of imports, the Country of Origin be recorded; and (b) In the case of exports, the Country of (Last Known) Destination be recorded.

The valuation of trade statistics may or may not coincide with customs valuation. The international statistical standards require imports to be valued including the costs of insurance and freight up to the port of entry (*CIF price*); while for exports the values are as at the port of embarkation (*FOB price*). However trade data used in the national accounts and balance of payments should be on a FOB basis for both imports and exports. This is because the costs of transport and insurance for imports are part of international trade in services and not goods.

There may be some imports and exports which are not captured by the Customs systems and if significant should be included in a countries' regular trade statistics. Examples might include Oil, gas and electricity and goods shipped via the postal system (parcel post).

All Customs systems record quantity or weight as well as values for imports and exports. These potentially provide important data on volumes and prices for economic analysis. They are also essential as a means of checking for errors in the customs valuation data by examination of outliers in unit values. Unfortunately in many developing countries these data are not always reliable. There is no financial incentive for Customs to ensure

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[7] An enterprise is defined as resident if it remains in a country for a year or more. However all land is assumed to be owned by a notional resident enterprise even if no actual resident enterprise exists.

that this quantity code is correct, and its accuracy is therefore often treated as a low priority.

1.4.3   International Trade in Services

Statistics on International Trade in Services (SITS) are more difficult to measure than goods, because they are mostly not covered by customs records. As a consequence, countries will have much less detail and may miss many of these transactions from their statistical systems. Originally there were only four product categories in the BOP manual (transport, travel, government and other): but these have more recently been extended to 11.

The advent of GATS in 1995 led to a much increased demand for more and better trade in services statistics and as a result the international statistical community commenced on a major effort to establish new and extended standards and associated data collection systems. The new international standards have an expanded version of the BOP product classification (*EBOPS*) which is more closely aligned to GATS and specify production of data by country and by *Modes of services supply.*

Traditionally trade in services were measured as part of BOP statistics and were captured by transaction based reporting systems from commercial banks set up by the Central Bank. These data were usually supplemented by reports from the largest (or monopoly) international transport and communications companies and by separate surveys of travel/tourism expenditure. More recently countries have been switching to use of enterprise reporting to record imports and exports of trade in services in order to capture them more comprehensively and in more detail.

Modes of services supply is a relatively new concept for statisticians and few countries yet produce statistics on this basis. As well as the traditional cross border transactions of the BOP including expenditure by residents overseas and domestic expenditure by foreigners (GATS modes 1 and 2); it also covers imports and exports of services by *Foreign Affiliates* (GATS mode 3).

Foreign Affiliates Statistics (FATS) cover economic activities of foreign owned or controlled (over 50% foreign ownership). Inward FATS refers to companies operating in the domestic economy; while outward FATS refer to those owned or controlled by residents, but operating in the rest of the world.

1.4.4   Quality issues for Trade Statistics

Some key issues that users should consider when assessing the quality of available trade statistics in developing countries are:

- Are the published trade in goods statistics adjusted for errors and coverage? Customs data should not be used without adjustment by the statisticians for errors in the Customs declarations. Usually values are relatively accurate, but less so the partner countries and the quantities. The customs data should be enhanced by adding other data sources where non-Customs transactions are significant for the economy.
- Are the Trade statistics adjusted prior to use in the macro-economic accounts? Adjustments are required to IMTS for the different conceptual basis. In addition

where there is evidence of under-recording by the Customs system (for example due to smuggling or fraud) then the data should also be adjusted. The figures used in the national accounts and BOP should be the same.

- Are the statistics on trade in services (SITS) comprehensive? – If they are based on bank reporting systems then they need to be enhanced from other sources not picked up (or misclassified) by such systems.
- Are the relevant international standards being followed? – If not, then the figures may not be comparable with those published by other countries.
- Are there significant discontinuities in the published time-series? For example the coverage adjustments and or the data sources may have changed over time.

1.4.5   References for Further Reading

The international standards for trade in goods are set out in "International Merchandise Trade Statistics: Compilers Manual" (ref 89). This was published in 2003 by the UNSD on behalf of a consortium of international organisations including: WTO, WCO, IMF, OECD, and Eurostat. There is also a 2010 compilers manual which gives further advice and guidance and updates the 2003 manual.

A similar manual for International Trade in Services (ref 90) has also been published in 2010 by the UNSD of behalf of the same consortium of international organisations. A compilers guide is in preparation at the time of writing.

The standards are continually reviewed and advice issued by two Inter-agency Task Forces, one on trade in goods (International Merchandise Trade Statistics, TF-IMTS), and one on trade in services (Interagency Task Force on Statistics of International Trade in Services, TF-SITS). The first task force is convened by WTO and the second by OECD. Organisations represented include Eurostat, FAO, IMF, OECD, UNSD, UNCTAD, UNWTO and UN Regional Commissions.

1.5   Accounting Frameworks-Balance of Payments

The BOP and other macro-economic accounts are compilations from many sources, and are not simply statistical series.

1.5.1   Introduction

This section is concerned with statistics on the Balance of Payments (BOP); the *International Investment Position* (IIP) and related statistics dealing with international accounts. These accounts consist of financial transactions and financial balances between residents and non-residents of an economy. All transactions are recorded on an accruals/change of ownership basis and should all be at market values.

The international accounts provide an integrated framework for the analysis of an economy's international economic relationships, including its international economic performance, exchange rate policy, reserves management, and external vulnerability.

In most developing countries, these statistics are the responsibility of the Central Bank to compile and publish. In a minority of countries they may fall under the wing of the NSO. The Finance or the Trade Ministry and/or related agencies may also have an

important role in for some of the related statistics, such as *External Debt* and/or Foreign *Direct investment* (FDI).

1.5.2   Balance of Payments (BOP)

Table 4: Illustrative BOP Figures for Ghana US$ millions

	2010	2011	2012	2013
Balances				
Current Account Balance	-2,747.34	-3,503.94	-4,631.53	-5,685.10
Capital Account Balance	337.50	445.10	283.40	19.60
Financial Account Balance	-3,130.42	-3,750.05	-4,537.86	-6,324.39
Net Errors and Omissions	-720.58	-691.22	-189.73	-658.89
International Investment Position				
Net IIP	-16,388.34	-17,700.75	-18,665.61	...
Total IIP Assets	7,615.38	9,916.83	9,138.40	...
Total IIP Liabilities	24,003.71	27,617.58	27,804.01	...

Data extracted from IMF Data Warehouse on: 11/4/2014

The BOP summarises economic transactions between residents and non-residents of a country or economic territory during a specific time period, usually a calendar year, a quarter, or a month. It consists of several sub-accounts: the *Goods and Services Account*, the *Primary income account,* the *Secondary Income Account* (transfers), the *Capital Account*, and the *Financial Account*.

The first three of these together comprise what is known as the BOP *Current Account*. They represent income flows, rather than capital or financial transactions. The balance on the current account is regarded as a very important indicator of trends in the economy; since a deficit on these incomes must be financed by borrowing from abroad. Similarly a surplus on the current account would provide funds to invest abroad.

The *Capital Account* records acquisitions and disposals of non-produced non-financial assets, such as land sold to embassies and sales of leases and licenses, as well as *Capital Transfers*.

The *Financial Account* shows the net acquisition of financial assets and net incurrence of liabilities during the specified period. For historic reasons it is sometimes incorrectly referred to by users as the "capital account", meaning financial capital.

Under the conceptual double-entry accounting system that underlies the BOP, each transaction consists of two entries and the sum of all the credit entries and all the debit entries should be the same. Two examples will help to illustrate this: (i) the purchase of goods from a business bank account will show a debit in bank deposits by residents and a credit of goods of equal value flowing into the country; and (ii) purchase of a company for cash by an overseas investor will show an increase in liabilities in the financial

account (under direct investment) and an equal increase in assets of residents under bank deposits.[8]

In practice most of the BOP data come from different sources and there is usually a difference between the accounts, known as *Errors and Omissions*. This should always be published separately by the statisticians, to allow users to assess the quality of the accounts and trends.

Conceptually the BOP accounts correspond exactly to the *Rest of the World* of the national accounts. They mainly differ, in that the balance of payments is from the perspective of the resident sectors, whereas national accounts data for the rest of the world are from the perspective of non-residents. Thus a balance of payments deficit on the current accounts corresponds to a surplus on the corresponding Rest of the World accounts of the national accounts.

Although equivalent in coverage and concept, the BOP financial accounts are presented in terms of functional categories (described below) rather than in terms of the types of financial assets. In principle it ought to be possible to map each item from one to the other, but divergent data collection systems, and the different institutions responsible, often make this a difficult if not impossible task, especially in developing countries.

The functions categories of the BOP financial accounts are:

- Direct investment
- Portfolio investment
- Financial derivatives
- Other investment
- *Reserve assets*

The financial account should be presented in terms of "net acquisition of financial assets and separately for "net incurrence of liabilities". However in practice many countries still use the older credits and debit system. The sum of all these entries represents *Net lending/borrowing* (from the financial account).

1.5.3   International Investment Position

The *International Investment Position* (IIP) is a statistical statement that shows at a point in time the value of: financial assets of residents of an economy that are claims on non-residents or are gold bullion held as reserve assets; and the liabilities of residents of an economy to non-residents. Thus it represents the external balance sheet of a country and a positive net asset position would represent the *Net worth* of the economy as a whole.

The accumulation accounts in the BOP (capital account, financial account, and other changes in financial assets and liabilities accounts) show the accumulation (i.e., acquisition and disposal) of assets and liabilities, their financing, and other changes that

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[8] In practice the complexity of such international transactions will never be a simple as this, and timing differences will also result in many more entries than these. Nevertheless the principle of one transaction being matched by another still applies.

affect them. Accordingly, they explain changes between the opening and closing IIP/balance sheet.

The same classifications are used as for the BOP. Not all developing countries yet publish an IIP (it was not part of the previous standards) and very few of these will have an *"other changes" account* (or reconciliation account), which acts as a quality check on the consistency of the IIP with the BOP. For those countries that do publish an IIP, there may be difficulties in applying the required market valuation standards. Direct Investment positions are often valued at historic acquisition prices and securities may be recorded at purchase or redemption price.

1.5.4   Other related statistics

Countries may publish a range of related statistics which form component parts of the BOP and/or IIP. Statistics on trade in goods and services have been covered earlier in this guide. More detailed statistics on *Direct investment* may be published separately and indeed the OECD guide (ref 59) on this subject encourages such more detailed publication. The *External Debt* of a country (which is a part of the IIP liabilities) and are also usually published separately. The IMF publishes more detailed data on *Reserve assets* or official reserves in its reserves template. IMF guidelines exist for both these last two datasets (references 48and 28).

There are a number of important conceptual issues surrounding Foreign Direct investment (FDI) statistics which need to be highlighted. First Income and FDI investment in the BOP includes not just dividends paid to direct investors but also imputed incomes known as *Reinvested earnings*. This is the share of profits attributable to the foreign investor. That part of this share which is not paid out in dividends is then also shown as inward FDI in the financial account. Thus total inward FDI comprises both new investment, and imputed re-invested earnings less any disinvestment.

Secondly the FDI country relationships may be shown on one or both of two different bases: Country of residence of the investor is the better basis, but in some data systems, only the country of the transactor is known. Thirdly FDI statistics are presented on a directional basis (inward investment and outward investment separately) and not on an asset and liability basis like other financial account entries.

Finally the balance sheets in the stand-alone FDI statistics are on a historic valuation basis (the value at the time of the investment). In the IIP they should be on market valuation basis which for equities will be very different (in most cases much higher). This revaluation may not be carried out in practice.

1.5.5   Quality issues for the international accounts

Some key issues that users should consider when assessing the quality of the international accounts in developing countries are:

- What is the size of the errors and omissions line in the BOP accounts? – If it is too large then the trends in the key aggregates may not be very reliable. For example if the errors and omissions line is larger than the current account balance then that key indicator cannot be regarded as very reliable itself. On the other hand if the errors

and omissions item is not published at all, then it means it is being hidden from users, possibly due to embarrassment by the statistical agency.

- Are the BOP and ROW accounts consistent? – They may diverge because they are often compiled by different agencies, which may not coordinate their work sufficiently, or because of different timetables for implementing the latest international standards.

- Are other related datasets consistent with the BOP/IIP? – Any differences with external debt, reserves, FDI, Money and Banking, and GFS statistics should be explicable by definitions or valuation, if not then one of one or both of the datasets must be incorrect.

- Are the international standards being followed? – If not then the figures may not be comparable with those published by other countries.

- Are there significant discontinuities in the published time-series? For example the coverage adjustments and/or the data sources may have changed over time. Transitions to the latest international standards may not have been carried back to earlier years.

1.5.6   References for Further Reading

The international standards for BOP statistics are the responsibility of the International Monetary Fund (IMF). The latest standards are set out in the 6th edition of the Manual on Balance of Payments Statistics (BPM6) together with the companion Compilation Guide (refs 38 and 44).

Because of the important relationship between external and domestic economic developments, the Manual was revised in parallel with the update of the System of National Accounts 2008 (SNA2008). To support consistency and inter-linkages among different macroeconomic statistics, BPM6 deepens the harmonization with the System of National Accounts and the IMF's manuals on government finance and on monetary and financial statistics.

The statistics for many developing countries may still be on the older BPM5 standard, which does have some significant differences from the latest standards. BPM5 is generally consistent with the earlier national accounts standards known as SNA93.

1.6   Accounting Frameworks - Government Finance

The primary purpose of the Government Finance Statistics is to provide a comprehensive conceptual and reporting framework suitable for analysing and evaluating fiscal policy.

1.6.1   Introduction

Fiscal statistics or Government Finance Statistics (GFS) concern the finances of government and are a core concern of both government analysts and external analysts. A political stance has to be struck between balancing the books of government and providing services, social security and new infrastructure to the population. Public finance analysts use fiscal statistics to analyse the size of the public sector; its contribution to aggregate demand, investment, and saving; the impact of fiscal policy on

the economy, including resource use, monetary conditions, and national indebtedness; the tax burden; tariff protection; and the social safety net. In addition, analysts have become increasingly interested in assessing the effectiveness of spending on poverty alleviation, the sustainability of fiscal policies, net debt, net wealth, and contingent claims against government, including the obligations for social security pensions.

Responsibilities for GFS may be split between different statistical agencies of a country. The Finance ministry is always the data source for the *Budget Sector*, but may not have much interest in *General Government* as a whole. They are encouraged to use the GFS classifications and presentations by IMF, but are not obliged to do so. The NSO (or sometimes the Central Bank) may then take on the statistical role of consolidating the various parts of general government and producing statistics on a GFS basis. These GFS figures, or sometimes the raw Finance Ministry estimates, will be used as inputs into other frameworks such as the National Accounts. Many of the key aggregates and presentations used in these other frameworks differ from those used in the GFS. For instance the output of General Government in the National Accounts is quite different from government spending in the GFS. However the underlying concepts are aligned, and if the GFS manual is being followed, it is possible to map from one to the other.

1.6.2   The General Government Sector

In the GFS system, provision is made for three levels of *General Government:* Central Government, State Government (provincial, or regional), and Local Government. Depending on the administrative and legal arrangements, there may be more than one level of government within a country, and statistics should be compiled for each level. Not all countries will have all three levels.

Central Government refers to the budget or fiscal sector plus all non-market agencies of central government which carry out government functions, but which are financed entirely or partly from other sources than the budget. Similar rules apply for State and Local Government. Examples of non-budget sector agencies which are part of the government sector would include:

- A statutory "Tax and Revenue Authority" which collects tax for government, and deducts its' agreed expenditure, prior to passing on net taxes to the Ministry of Finance.
- A "National Museum or Library Trust or Authority", which receives a grant from the budget, but also has other sources of income.
- A statutory port and/or airport authority, financed by levies or taxes.
- Non-market *Non-profit institutions*that are both controlled and mainly financed by government units.[9]

However general government does not include *Public Corporations,* or other state owned enterprises, carrying our commercial activities such as a postal service, telecommunications agency, or transport operators; even if they charge subsidised rates

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[9] These are legally non-government entities, but they are considered to be part of general government because they carry out government policies. Governments may choose to use non-profit institutions rather than government agencies to carry out certain government policies because they may be seen as detached, objective, and not subject to political pressures. For example: research and development and the setting and maintenance of standards in fields such as health, safety, the environment, and education.

for their services. These entities are part of the business or corporate sector of the economy. The Central Bank is always classified outside of general government, to the financial sector.

Nevertheless statistics are sometimes also produced for the wider public sector including public corporations.

1.6.3   Government Finance Statistics (GFS)

The GFS system of accounts mirrors that of the *System of National Accounts* or SNA, general government being in fact just one of the economic sectors of the economy in the SNA. However GFS also has an important role on its own and in some cases does differ from the norm for the SNA.

One very important difference is likely to be the timing of the recording of transactions. The budget sector of government has traditionally been planned, monitored and controlled on a cash basis. Cash income is the actual money received in an accounting period excluding any taxes and fees due to government, but not yet paid. Cash expenditure is the actual bills paid out in an accounting period, excluding any payments due to others.

This contrasts with commercial accounting and the SNA, which are based on *Accrual Accounting* i.e. the time when ownership of asserts changes hands. Accrued income is money earned or taxes due during an accounting period whether or not it has yet been paid. Accrued expenditure represents goods and services acquired during an accounting period whether or not they have yet been paid for.

Some countries are moving towards accruals accounting for government and the GFS manual (GFSM) recommends this. However most countries, and nearly all developing countries remain on a cash basis. This is because cash is what matters most in terms of amount to be borrowed to finance any cash shortfall.

A second important difference is that the recommended presentation for GFS is on a *Consolidated accounts basis* to allow analysis of the overall net effect of government operations on the rest of the economy. The SNA recommends that the accounts of the separate institutional units comprising a sector should be aggregated or unconsolidated. Thus for example budget financed grants to government agencies are expenditure of the budget sector and income of the agencies, but would disappear from view when the various institutional units of central government are combined and consolidated.[10]

For the analysis of government finances, which are financed largely by taxes, it is more relevant to know the consolidated income and expenditure of general government without counting for example central government grants to local government as both expenditure and income of general government. Nevertheless it is often useful analytically to have data on both a consolidated and an unconsolidated basis.

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[10] Aggregated accounts are more useful analytically for economic sectors of independent units of account such as businesses or households where expenditure or income to or from other units in the same sector is very relevant for analysis.

Like the SNA the GFS generates summary information on the overall performance and financial position of the general government or public sector through a logical sequence of accounts. The GFS should show: (i) a revenue and expense account with a balancing item of *Net operating balance*; (ii) a capital investment account with a balancing item of *Net lending/borrowing*[11]; (iii) a financial account with a balancing item of change in *Net worth*; and (iv) a *Balance sheet* of both financial and non-financial assets and liabilities. In practice many developing countries do not produce (iii) and most do not produce all of (iv). *Government Debt* is usually published and sometimes a financial balance sheet will be produced showing financial assets and liabilities only.

Table 5: Illustrative data from Kenya General Government Accounts

	2012/13	2013/14		2014/15	2015/16	2016/17	2017/18	2018/19
	Act.	Budget	Estim	Proj	Proj	Proj	Proj	Proj
	(in billions of Kenyan Shillings, unless otherwise indicated)							
Revenues and grants	906.0	1,384.0	1,211.9	1,459.9	1,636.8	1,866.2	2,140.9	2,427.5
Central Government revenues and grants	868.2	1,106.2	994.4	1,204.8	1,363.8	1,555.8	1,785.2	2,016.4
Tax revenue	701.2	862.9	851.8	1,006.5	1,145.9	1,313.7	1,508.7	1,703.2
Nontax revenue	146.1	165.6	117.4	169.0	189.6	215.8	249.9	283.1
Grants	21.0	77.7	25.3	29.3	28.3	26.3	26.7	30.2
County revenues and grants	37.8	277.8	217.5	255.1	273.0	310.4	355.7	411.1
Local revenue (Property tax, Single Business Permits, etc...) [2]	19.7	67.8	24.1	28.5	34.0	39.0	47.9	53.5
Grants from central government	18.1	210.0	193.4	226.7	239.0	271.4	307.8	357.6
Expenditure and net lending [3]	1,154.8	1,716.9	1,450.6	1,785.9	1,987.1	2,258.0	2,543.8	2,850.9
Recurrent expenditure	843.1	1,165.0	1,135.3	1,281.4	1,413.3	1,577.7	1,790.0	2,033.3
Transfer to counties	18.1	210.0	193.4	226.7	239.0	271.4	307.8	357.6
Wages and salaries	294.3	373.9	382.3	400.6	442.6	481.2	538.7	600.0
of which: counties	19.9	110.9	93.8	97.3	104.6	112.3	122.4	131.2
Other	530.7	581.1	559.6	654.1	731.8	825.1	943.5	1075.7
of which: counties	14.9	53.5	51.6	81.3	92.0	112.8	139.5	183.1
Development and net lending	301.9	541.9	315.3	496.2	568.1	673.9	746.4	809.3
Domestically financed	201.8	196.1	214.6	336.0	371.0	441.4	519.7	562.8
of which: counties	3.0	102.8	24.0	48.0	71.0	96.4	109.7	127.8
Foreign financed	94.7	240.6	98.4	157.3	194.1	229.2	222.9	242.1
Net lending	2.4	2.4	2.3	2.9	3.0	3.4	3.8	4.3
Balance (cash basis, including grants)	-232.4	-332.9	-238.6	-326.0	-350.3	-391.9	-402.9	-423.4
Memorandum items:								
Nominal GDP	4,497.5	5,051.1	5,051.1	5,733.7	6,524.6	7,420.4	8,415.7	9,504.0
Central government balance (cash basis, including grants)	-232.4	-333.5	-286.7	-354.6	-355.7	-380.8	-387.0	-392.3
County government deposits	--	--	48.1	76.6	82.1	71.0	55.1	24.0
in months of county expenditures	--	--	3.4	4.1	3.7	2.6	1.8	0.7

Source: IMF Country report 14/302

Contingencies, such as government loan guarantees to state owned enterprises and implicit guarantees to provide social benefits when various needs arise, can have important economic influences on the general economy but do not result in transactions or other economic flows recorded in the GFS system until the event or condition referred to actually occurs. As a result, provision is made in GFS for recording contingencies as memorandum items.

All transactions, assets and liabilities in GFS should be at *Market Value*. In practice many countries use historic costs for assets they acquire and use redemption values for financial liabilities. The values of non-cash transactions such as aid in kind, should be included in the statistics. In fact the government accounts are often the best source of statistics on international aid received in developing countries, particularly if the above

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[11] A common alternative terminology for the net borrowing line is government deficit, recognising that in most countries this balance is usually negative.

non-cash transactions are included. However they exclude aid channelled directly to NGOs and NPIs, but in some countries these data may also be collected by government.

1.6.4 Classification of Functions of Government (COFOG)

"Functions of government" refers to the main purpose of government expenditure such as health, education, defence or general administration.

The allocation of expenditure to functions (*COFOG*) should be at the lowest level of recording within the government accounts and should not use whole ministries or units within ministries. This permits trends in government expenditure on particular functions or policy purposes to be examined over time and for valid international comparisons. Conventional government accounts are not usually suitable for this purpose because they reflect the organisational structures of governments. Not only might time series be distorted by organisational changes, but at a specific time some organisations may be responsible for more than one function, and responsibility for one function might be divided among several organisations.

1.6.5 Public Sector Debt statistics

Statistics on *Government Debt* provide a more detailed analysis of the debt instruments (i.e. loans and related liabilities) contained within the general government financial balance sheet. The valuation may differ from GFS, as these statistics are generally on a nominal (face) value basis, but they should otherwise be fully consistent, even if produced by a different agency of government.

These statistics should be split by: domestic and foreign; financial instrument; maturity; currency, and by type of instrument. Sometimes policy targets are set in terms of government debt as a percentage of GDP; but the users should be aware that this is a ratio of two very different financial concepts and debt is not a component or part of GDP.

The international standards also recommend that a wider concept of public sector debt statistics is produced. This would include all the debts of public corporations as well as general government and provides a more comprehensive picture of the potential liabilities of government. Publically guaranteed debt of other units should also be shown as memorandum items.

Figures on *Net Debt* should also be shown. That is gross debt less assets for each of the financial instruments included in the statistics (e.g. loans received from others less loans made to others). Net debt positions of public sector units receive added attention both in fiscal and financial market analysis, especially when ratios of gross debt to GDP are high or a large part of financial assets are set aside (implicitly or explicitly) to meet future liabilities.

Statistics on <u>debt servicing</u> are an important part of these statistics. These are the actual and future interest payments due on the debt. Debt servicing is often a very large part of a government current account deficit.

1.6.6   Quality issues for Government Finance Statistics

Some key issues that users should consider when assessing the quality of the government accounts in developing countries are:

- Are the GFS and the national accounts consistent? – They may diverge because they are compiled by different agencies, which may not coordinate their work sufficiently, or because of different timetables for implementing the latest international standards. In some cases the NSO may adjust the government accounts onto an approximate accruals basis for consistency with the other sectors of the national accounts and to meet international standards. Details of these adjustments should be made public to allow analysts to reconcile the two sets of statistics.

- Does the classification of general government follow the international standards? – In many countries some agencies of government may be omitted from the statistics. In some cases the statistics only cover the budget sector of central government.

- Are the relevant international standards being followed? – For most developing countries this will be GFS2001. If these standards are not being followed, then the figures may not be comparable with those published by other countries. In particular the GFS and the national accounts should be on the same generation of international standards (must likely SNA93 and GFS2001).

- Are there significant discontinuities in the published time-series? For example the coverage of units outside of the budget sector may have changed. Public Corporations may have been privatised or visa-versa. The new version of GFS may have been implemented without any revision to the older series.

1.6.7   References for Further Reading

The international standards for GFS statistics are the responsibility of the International Monetary Fund (IMF). The latest standards are set out in a pre-publication draft of the 2014 edition of the Government Finance statistics Manual (ref 49). This can be freely downloaded from the IMF website. Most developing countries will probably still be following the earlier 2001 standard.

Because of the important relationship between external and domestic economic developments, both Manuals are designed to be consistent with the respective national accounting standards SNA2008 and SNA93 respectively. The IMF has also published a particularly useful compilation guide for developing countries based on the 2011 standard (ref 42).

Guidance on public sector debt statistics can be found in a separate IMF manual (ref 48).

1.7   Accounting Frameworks-Monetary and Financial Statistics

Money makes the world go round, so it must be important for statistics.

1.7.1   Introduction

Monetary Statistics relate to statistics on the stock and flows of *Money* in an economy including their components and *Counterpart*. Financial statistics cover both the monetary

statistics and wider financial flows and stocks of the financial sector of the national accounts, including the Central Bank.

Money plays an important role in an economy and is a key component of the transmission mechanism from monetary policy to economic activity and inflation. Conceptually, the notion of money is linked to the formulation of monetary policy and the need for money growth to be in line with the desired real growth rate and level of inflation, given an assumption on the velocity of money. Monetary growth can also impact on asset prices in an economy. Monetary aggregates measure the money available to money-holding sectors in the economy for making purchases of goods, services, non-financial assets and financial assets, and are closely monitored by the central bank when determining decisions that affect the short-term policy interest rate and/or the level of the monetary base.

These statistics are thus an essential input to the determination and monitoring of monetary policy and of policy concerned with financial stability. As such they are in most countries the statistical responsibility of the Central Bank. However there may be some countries where responsibilities are split, not least because the financial accounts and financial balance sheets are an integral part of the national accounts which are usually a responsibility of the NSO.

The overarching framework is the *System of National Accounts* (SNA). The basic principles and concepts underlying monetary and financial statistics are consistent with those of the SNA. These links are underpinned by consistency in principles and concepts such as residence and sectoring of institutional units, classification of financial assets and liabilities, recording and valuation rules of financial and nonfinancial assets and liabilities as well as transactions and other flows, and data aggregation and consolidation.

1.7.2   Monetary Statistics

Monetary statistics are generally a better developed part of the macroeconomic statistical system of a country. Most countries compile and disseminate monetary statistics on a frequent and timely basis, usually monthly.

Monetary aggregates are derived from the balance sheets of commercial banks and sometimes other financial institutions that take deposits from the general public. The stock of money is defined as the sum of cash in circulation plus deposits of various kinds issued by the institutions covered by the definition of money (*Depository Corporations*) and held by other domestic institutions and the general public. In monetary statistics the domestic economy is thus divided into the "money issuing sectors" and the "money holding sectors".

"Narrow money" refers to notes and coin plus deposits available on demand. "Broad money" adds in longer term deposits not available for immediate use. Common terms for monetary aggregates are M0, M1, M3 with M0 as the narrowest definition and higher numbers representing progressively broader concepts of money, but national definitions are not necessarily consistent with those of other countries. The international standards for the definition of money are relatively loose and most countries with have their own national definitions which are only broadly consistent with those used in other countries.

The balance sheet of the institutions covered as issuing money can be rearranged to show the *Counterpart* (assets and other liabilities) of the stock of money. This is very important for analysing the reasons for growth in the money stock. For example is it due to lending to persons, to corporations, or the rest of the world?

As in the SNA, deposits and loans are valued at nominal value—that is the outstanding amount the debtor owes to the creditor, which comprises the outstanding amount including accrued interest (i.e., interest accrued but not yet paid). One difference from the SNA is that in monetary statistics equity on the liability side of the balance sheets are valued at book value, that is the value recorded in the business accounts; rather than market values as in the SNA. All other assets are valued at market prices.

Monetary statistics are presented as *Consolidated accounts*, that is, with all internal positions between institutional units eliminated. Thus for example inter-bank deposits and loans between commercial banks are consolidated out after aggregation of the assets and liabilities of all the reporting units.[12]

1.7.3   Other Financial Statistics

The SNA Financial Corporations sector consists of the following nine subsectors: (1) Central Bank; (2) *Depository Corporations* except the central bank; (3) *Money Market Funds* (MMFs); (4) non-MMF investment funds; (5) other *Financial intermediaries* except insurance corporations and pension funds; (6) *Financial Auxiliaries*; (7) captive financial institutions and money lenders; (8) insurance corporations; and (9) pension funds.

Most countries will have statistics on some of these categories, particularly insurance corporations and various categories of other financial institutions. Some of these statistics may be generated from returns to the financial regulators, or they may be explicitly collected by the statistical authorities for the financial and national accounts.

Statistics on total credit (loans) granted in an economy by sector and their stock equivalent (gross debt) by sector can be of analytical importance. This would be especially so, if there are significant financial institutions granting credit outside of the deposit corporations sub-sector. For example: consumer credit and financial leasing companies that do not finance their operations from deposits; non-resident lenders and/or a government backed development bank.

The *External Debt* of a country is a particular subset of total debt that is of particular analytical importance, because it is usually denominated in foreign currency, and is therefore particularly vulnerable to exchange rate changes and differences in relative inflation. Other financial statistics which are of importance and readily available in most countries include: foreign exchange rates; interest rates by sector and instrument; and indices or prices of securities traded on financial exchanges.

1.7.4   Financial Accounts and Flow of Funds

The full accounting system for the financial accounts consists of, for each accounting period, an opening *financial balance sheet* and a closing financial balance sheet. The

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[12] In some cases (where permitted in a legal contract) positions for individual customers with multiple accounts will be netted against each other in the banking and monetary statistics.

overall change in balance sheets are then decomposed into three flow accounts (1) transactions (called the *Financial Account*); (2) valuation changes; and (3) other changes in the volume of assets and liabilities.

These accounts should be produced showing flows and stocks for each economic sector of the economy and each financial instrument. In practice few developing countries will have this full accounting framework and at best they may publish financial transactions (called the financial account for short) and the financial balance sheets.

Financial accounts are increasingly used for analytical purposes. The information highlights the role of financial corporations in financial intermediation. For instance, it can illustrate how the relative importance of various types of financing between sectors/subsectors is changing over time. Macro prudential analysis is another type of analysis, where financial statistics are useful.

From a statistical compilation point of view, financial accounts often reveal inconsistencies in the underlying data across institutional sectors and can be used to identify the reasons for these discrepancies. In particular, the balancing item *Net lending/borrowing* is independently measured by financial accounts. The difference between this and the same concept measured from the income and expenditure accounts for each sector is known as *Errors and Omissions.* These discrepancies can be used to inform on the quality of the national accounts as a whole and minimising such discrepancies improves the coherence and consistency of all the macro-economic accounts.

In general financial accounts are presented net. That is, they show the net transactions in and stock of financial assets for each instrument and each sector. More comprehensive flow and stock accounts called *Flow of Funds* show "whom-to-whom" transactions and stocks. That is they show the transactions in and stocks of a particular financial instrument, issued by a particular sector vis-a-vis each of the other sectors of an economy.

Very few developed countries have such statistics (the USA being the main one) and at the time of writing no developing economies have them. However some partial "whom-to-whom" information is available in particular for the government and external sectors of an economy. They also provide an important conceptual framework for countries to move towards.

1.7.5   Quality Issues for Monetary and Financial Statistics

Some key issues that users should consider when assessing the quality of the monetary statistics in developing countries are:

- Are the Monetary statistics and the national financial accounts consistent? – They may diverge because they are compiled by different agencies, or because of different sector definitions. However it ought to be possible to reconcile them.

- Is the coverage of monetary statistics broad enough for monetary policy? – Sometimes they are confined to commercial banks. This would be acceptable, only if other deposit taking corporations are of relatively minor importance. In countries where currencies other than the domestic currency freely circulate without

restriction, then deposits denominated in this "parallel currency" may need to be included in broad money.

- Are there significant discontinuities in the published time-series? For example the coverage of reporting units, or the definition of money. Best practice should be for the statisticians to estimate a historic time-series on the new basis, when such a change is made.
- Does the country produce a comprehensive financial account and financial balance sheet covering all sectors? – Without this, it is not possible to reconcile the national accounts and other specific sector statistics such as MFS.

1.7.6   References for Further Reading

The international standards for Monetary and Financial Statistics are the responsibility of the International Monetary Fund (IMF). The standards are set out in the Monetary and Financial Statistics Manual (MFSM). The latest 2014 edition (ref 50) was still in draft at the time of writing. However, most developing countries will still be following the 2001 version (ref 29). A compilation guide has also been produced by the IMF (ref 37).

Because of the important relationship between external and domestic economic developments, both Manuals are designed to be consistent with the respective national accounting standards SNA2008 and SNA93 respectively.

1.8   Accounting Frameworks - National Accounts

A comprehensive overarching framework for integrating all other economic statistics and ensuring coherence and consistency.

1.8.1   Introduction

This final sub-section is concerned with the compilation of key economic aggregates within the national accounting framework. The international standards known as the *System of National Accounts (SNA)* provide a comprehensive overarching framework for integrating all other economic statistics and ensuring coherence and consistency across all these systems. The accounting framework of the SNA allows economic data to be compiled and presented in a format that is designed for purposes of economic analysis, decision-taking and policy-making.

The SNA groups institutions into economic sectors corresponding to parts of the other frameworks. Thus the *Rest of the World* (ROW) in national accounts corresponds to the Balance of Payments (BOP); the *General Government* sector corresponds to government finance statistics; and the financial sector corresponds to monetary and financial statistics.

In principle the national accounts team, which is usually located in the NSO, should not collect any data themselves. Their job is to pull together all the data from all relevant sources, reconcile conflicting figures, adjust for known missing elements or bias, and produce a balanced set of accounts which are their best estimates of all the key economic aggregates of an economy.

Compiling national accounts is the most complex and difficult task that an NSO is involved in and requires a high level of conceptual economic understanding and expertise, and adequate resources, to be done properly.

1.8.2   SNA Accounting Framework

The sequence of accounts and their balancing items is shown in the table below:

Table 6: The SNA Sequence of Accounts

Name of account	Balancing item to the account
Production account	*Value Added*/domestic product and the external balance of goods and services
Generation of income account	*Operating surplus*, mixed income
Allocation of *Primary income account*	Primary incomes/national income
Entrepreneurial income account	Entrepreneurial income
Allocation of other primary income account	Balance of primary incomes/national income
Secondary distribution of income	Disposable income
Redistribution of income in kind account	Adjusted disposable income
Use of disposable income account	Saving and current external balance
Capital Account	Net lending (+)/net borrowing (-)
Change in net worth owing to saving and capital transfers	*Financial Account*, Net lending (+)/net borrowing (-)
Other change in the volume of assets account	Changes in net worth owing to other changes in volume of assets
Revaluation account	Changes in net worth owing to nominal holding gains/losses
Balance sheet	*Net worth*

The system can be thought of as a two dimensional matrix of accounts. The rows of this matrix are the sequence of accounts as in the table, with balancing items as the bottom line, carried forward the next account. The columns are the *Economic Sectors* of an economy together with a Rest of the World sector, which closes the system.

 Each account or cell of this matrix is presented in a format known as "T-accounts". Resources for transactions which add to the amount of economic value of a unit or a sector are presented on the right side of the account; while uses for transactions that reduce the amount of economic value of a unit or sector are shown on the left side of the current account.

In practice most developing countries do not have this full framework of accounts and sectors. Generally the priority is to have in place these elements of the framework which provide components of GDP. A "production account" leading to a production based estimate of GDP is likely to be in place in all countries. Other countries will also have GDP by expenditure, and perhaps an income based estimate of GDP. They may carry out occasional benchmark supply-use reconciliations and they will have some of the sector accounts such as government, and the BOP/ROW.

1.8.3 Gross Domestic Product (GDP)

As shown in the box, GDP can be measured in three different ways. All of these are conceptually equal, but if estimated from independent sources will differ, unless they are reconciled or balanced in some way by a process of adjustments to their basic building blocks.

1.8.4 Gross Domestic Product (GDP)

The output method is the most common approach across the world. In developing countries it may be the only estimate available on a regular basis due to data limitations for the other methods.

Value added is the difference between gross output and intermediate consumption for all producing units in an economy. *Operating surplus* (profit) is the balancing item in the production account, so *Value Added* can also be expressed as wages (compensation of employees) plus *Profits*.

> **Box 1: Three ways of Calculating GDP**
>
> 1. Sum of values added at basic prices of all producers + Taxes on products - Subsidies on products
> =GDP (output based, market prices)
>
> 2. Sum of Final consumption expenditure + Gross fixed capital formation + Changes in inventories + Exports of goods & services - Imports of goods & services
> =GDP (expenditure based, market prices)
>
> 3. Sum of Compensation of employees + Taxes on production and imports - Subsidies on production + operating surplus / mixed income
> =GDP (income based, market prices)

Generally the output method is derived from an annual enterprise survey, supplemented by other sources for other producers. For the purposes of measuring production, institutional units are generally grouped into industries based on the main product. However for more detailed purposes statistics may be required at a lower level of unit known as an *Establishment* or Kind of Activity Unit. The production account should include both formal and informal sector output, even if the latter is only a rough estimate.

The aggregate value of GDP is often produced on different price basis depending on context. Output measures are often at *Basic Prices*; while expenditure and income measures are at *Purchaser Prices*. The relationship between these price levels is shown in the box opposite.

Gross National Income (GNI) measures the incomes remaining in a particular economy after taking account of cross border income flows of various kinds. GDP measures the value added of all producers in an economy. The income measure of GDP is equally the sum of incomes generated in an economy. However some of these incomes will accrue to non-residents and some incomes earned in another economy will be received by residents.

> **Box 2: Price Bases for National Accounts**
>
> BASIC PRICE
> + Taxes on products excluding invoiced VAT
> - Subsidies on products
> = PRODUCER'S PRICE
>
> + VAT not deductible by the purchaser
> + Separately invoiced transport charges
> + Wholesalers' and retailers' margins
> = PURCHASER'S PRICE

<u>Volume measures</u> enable the analysis of real growth over time to be made: 'How much higher was GDP this year in comparison to previous years? In order to do this, the value changes for economic aggregates need to be split between those changes arising solely from changes in price and those from volume changes. Volume measures of GDP are often referred to as constant price or <u>real GDP</u>[13]".

The standard approach to producing a volume measures in National Accounts is to start from the current price and deflate the value by a suitable price index at the most detailed level possible. This process is meaningful for the expenditure approach and the output approach to GDP, but not for the income approach.

Some derived aggregates such as value added do not have a meaningful split between volume and price. In some countries price indicators of gross output are used to deflate value added, but if sufficient information is available, it is usually better to deflate gross output and intermediate consumption using separate price indices and then calculate constant price value added. This process is known as *Double Deflation*.[14]

Many developing countries have a process of making 5 yearly benchmark estimates of GDP at current prices, projecting these forward at constant prices using indicators of the volume of gross output for each industry, and reflating to get current price estimates. The quality of such estimates depends on the level of disaggregation at which the calculations are made and the coherence between the price indices used to generate the volume measures and those used in reflation. Unfortunately many countries lack disaggregated data and are forced to make calculations using industry classifications almost as aggregated as those used for final publication.

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[13] Strictly speaking real GDP is no longer a National Accounts concept but the term is widely used by economists
[14] The exceptions are industries where intermediate inputs form an extremely high proportion of Gross Output with Value Added only being a small residual. In such cases double deflation can introduce volatility and inaccuracy

1.8.5   Sector Accounts

Institutional units are grouped together into institutional sectors on the basis of their principal functions, behaviour and objectives. The 2008 SNA includes five main domestic institutional sectors: *1. Non-Financial Corporations; 2. Financial Corporations; 3. General Government; 4. Households; 5. Non-profit institutions serving households (NPISHs).* The system is closed by the *Rest of the World Account*, which accounts for all transactions and financial relationships between *Residents* and *Non-Residents* of an economy.

Like business accounts, the SNA individual sector accounts use a double entry book-keeping convention: each transaction should be recorded twice, as a resource (or a change in liabilities) and as a use (or a change in assets). This is the so-called 'vertical' double–entry. Thus, the total of the transactions recorded as resources (or changes in liabilities) and the total of the transactions recorded as uses (or changes in assets) should be equal.

However the national accounts also have what is known as horizontal double entry recording. If an institutional unit (or sector) provides something to another institution's unit (or sector), the accounts of both units (and sectors) will show the transaction: as a resource in the accounts of one unit and as a use in the accounts of the other. As for example, the compensation of employees paid by different economic units should be equal to the sum received by employees.

This quadruple entry system is one of the greatest strengths of the SNA accounting framework. The system is "closed" and any discrepancies vertically or horizontally are indications of errors and omissions in the accounts.

1.8.6   Selected topics in national accounting; chain indices, SUTs, PIM, and Satellite accounts

The traditional approach to volume measures of GDP and other aggregates is to use a fixed base year and measure the current values in base year prices. However *Chain index* volume measures are increasingly being used and advocated. Such volume measures are obtained by estimating one year volume indices of change for each year aggregated using the prices of the previous year and linking them together to form "chain indices". Such chain indices have a number of practical as well as theoretical advantages. For example, it is possible to obtain a much better match between products in consecutive time periods than between periods that are far apart, given that products are continually disappearing from markets to be replaced by new products, or new qualities of the same products.

Supply Use Balancing– The process of ensuring a balance for a particular product between the total supply (domestic production plus imports) and the total use (domestic consumption plus exports).

Supply Use Tables(SUTs) describe, in a collection of matrices, how supplies of different kinds of goods and services originate from domestic industries and imports and how those supplies are allocated between various intermediate or final uses, including exports. These detailed "product by industry" tables involve the compilation of a set of integrated production and generation of income accounts for industries.

The end result is a much more reliable and balanced set of national accounts, including the estimation of key aggregates. Essentially the cells of the table are adjusted so that total supply of each product is equal to total use. Where more than one figure is available for a cell a single best estimate has to be chosen to ensure consistency. Where no figure is available it allows for an informed estimate to be generated.

They are the ideal framework for the integration of the three approaches to calculating GDP: production, expenditure and income. However they also have important analytical uses by economists to understand the structure of an economy and in generating what are known as *Input-output tables*.

In developing countries SUTs will only be produced on an occasional basis, possibly as part of a benchmark estimate of GDP. In the EU, however they are produced annually as part of the annual balancing process of national accounts.

Perpetual Inventory Methods (PIM) are used by national accountants to estimate the current replacement value of stocks of fixed capital and the estimates of *Consumption of Fixed Capital*. These "depreciation" figures are required to move from GDP to Net Domestic Product. In some countries the values of stocks of fixed assets and depreciation is derived directly from business accounts. However the valuation in business account is on a historic cost basis; while the valuation in national accounts is on a current replacement value basis.

The basic concept of PIM is that for each class of asset, this year's stock can be derived as last year's stock adjusted for price changes, plus net new investment, and minus consumption of fixed capital. If this calculation is projected far enough back into the past then any inaccuracies in the starting stock have a negligible estimate on the value of the current stock.

By utilising _satellite accounts_ the relevance of national accounts is increased without affecting the comparability of the central framework. Satellite accounts provide a framework, linked to the central accounts, that pays greater attention to a certain field or aspect of economic and social life. Common examples are satellite accounts for the environment, tourism, health, household production, or human capital accounts. These accounts sometimes incorporate changes to the *Production Boundary,* which generate alternative measures of GDP such as *Green GDP* that lead in turn to alternative measures of growth.

Some of the most common uses of national accounts aggregates are in the calculation of national income per person or per capita, GDP and GNI per capita. GNI per capita is the most common person-centred measure of average income and informs some aid allocation decisions by donors. Two important caveats must be made about such measures: First the conversion to a common currency should not use exchange rates but should use Purchasing Power Parities (see prices section); and secondly the value of national production and national incomes per capita is only a very imperfect measure of national welfare.

Alternative direct measures of poverty such as the numbers of people living on less than $1 or $2 per day may be preferable for some purposes. Data on poverty and wider development indicators can be found on the World Bank website at http://data.worldbank.org/topic/poverty. See also ref 86.

1.8.7   Rebasing GDP

As mentioned under volume measures, Rebasing the accounts should take place at least every 5 years. This entails establishing a new benchmark value for GDP at current prices and using the new value added weights by industry, which represent the new economic structure at that point in time, to weight the volume indices. Relatively large revisions to GDP tend to take place at the point of rebasing. International guidelines recommend chain linking or at a minimum rebasing every five years, but many developing countries rebase far less frequently and the jumps associated with rebasing in developing countries can become very large. The problems are exacerbated by the nature of developing countries and their statistical systems. Most importantly, in developing countries rebasing often coincides with the construction, after many years, of a new Supply Use Table, which will typically use data sources that are quite different from those available to trend forward the yearly constant and current estimates. These may include comprehensive business and consumption surveys. All too frequently trending forward will have been done by inflating constant price estimates rather than deflating current prices, causing more drift in the current price levels; and finally developing countries are, we hope, growing and changing faster than the developed. Three recent examples relating to rebasing of countries in Africa provide an example of the sort of effects that can be seen:

- Ghana – In 2010 Ghana changed its base year from 1993 to 2006, and added new estimates for the informal sector. This led to a jump in GDP of 60% and as a result, Ghana was upgraded from a low-income to a lower-middle-income country.[15]
- Nigeria – New figures were released in April 2014 with a new base year of 2010, 20 years after the old base year of 1990. The increase in GDP for 2010 was from $262.2 billion to $488 billion a jump of 86%, making Nigeria the biggest economy in Africa on this new basis.[16]
- Kenya - New rebased figures were released in September 2014. Changing the base year from 2001 to 2009 and including new estimates for the informal economy. GDP jumped 25 percent, in the new base year to $55.2 billion.[17]

When drawing lessons from such large jumps analysts must understand that:

- The absence of large jumps may indicate a failure to rebase and incorporate available data rather than high quality national accounts.
- Large revisions to current estimates should always be accompanied by large revisions to the economic history of growth and activity levels (which can sometimes make the authorities reluctant to make such revisions). It is this revision to the whole history that needs to be studied to draw policy implications from the new data
- Deciding on what implications, if any, the new data has for policy requires some care. For example a larger estimate of the size of the informal economy should not affect poverty estimates, which are normally survey based. Similarly a doubling of all past and present growth estimates should not change one's view about whether current macroeconomic policy is too loose or too tight.

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[15] See BBC news http://www.bbc.co.uk/news/magazine-20639775
[16] See Bloomburgs http://www.businessweek.com/articles/2014-10-09/african-countries-recalculate-gdp-find-much-higher-numbers
[17] See Financial Times: http://www.ft.com/cms/s/0/99ea0902-bfc1-11e3-b6e8-00144feabdc0.html#axzz3LOSwVesJ

Although many of the causes of large revisions could only be eliminated by radical changes to developing countries' statistical systems or even their economies, there are some relatively small measures that data users can take to improve the situation. In particular:

- They can demand and expect national accountants to make frequent small revisions to their whole data series not just to the latest periods. The perception that users hate revisions is a powerful excuse for delaying them until they become large. They should also encourage the production of chain linked estimates even where data to rebase at a very disaggregated level is lacking. A capability for an annual process is much easier to maintain than one for an occasional process.

- They can support technical work to develop methods for estimating growth series from the new datasets, especially household surveys, which are now available much more frequently. All the countries highlighted above had several household surveys during the long gaps between rebasing which could have been used to improve the growth and levels estimates in the National Accounts. However analysis was focussed so heavily on the current distribution of consumption that estimates of current and constant changes to total consumption were rarely made, (sometimes no changes were estimated at all). Even if such estimates had been available, National Accountants' existing annual processes and procedures would have struggled to use them.

## 1.8.8   Quality issues for National Accounts

Some key issues that users should consider when assessing the quality of the national accounts in developing countries are:

- When were the accounts last rebased? 5 years is the recommended maximum interval and anything more than 10 years means the industry value added weights are seriously out of date and unrepresentative of the current economy. Coverage often also tends to become out of date if the updating is not done frequently.

- Are independent expenditure and income estimates of GDP produced? If they are derived by residual, then there is limited scope for cross checking sources and estimates and annual GDP will depend on one (output) source only.

- Is the informal sector included? If not, then the level of GDP will be underestimated.

- Are the accounts balanced at least once every 5 years? Without balanced accounts via SUT or commodity balances the level of current price GDP may be suspect.

- Are there significant discontinuities in the published time-series? Best practice should be for the statisticians to estimate a consistent historic timeseries on the new basis when a major change is made.

- Does the country produce a financial account and financial balance sheet? – Without this, it is not possible to reconcile the national accounts and other specific sector statistics such as the financial, government and ROW (BOP) sectors.

- Are the 2008 or 1993 versions of SNA being followed? – If not, the figures will not be comparable to those produced by other countries.

1.8.9   References for Further Reading

The international standards for national accounts are publicised by the UN on behalf of a consortium of international organisations including Eurostat, IMF, OECD, UN, and the World Bank, The latest standards are known as SNA2008 (ref 88) since they were finalised and agreed in 2008. Most developing countries will probably still be using the earlier 1993 standards (SNA93 ref 79).

Eurostat have produced a very helpful simplified guide to the SNA written especially for developing countries (Essential SNA: Building the basics, ref 18).
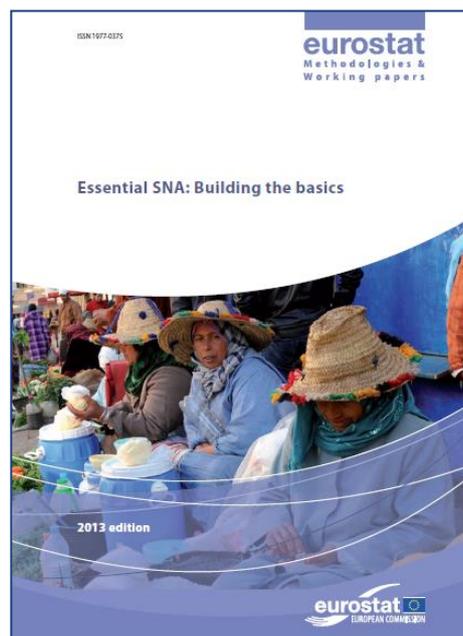
2 Guide to selected issues in economic statistics

2.1 Quality of official statistics

Can statistical quality be measured?

2.1.1 Introduction

In the context of developing countries the most prominent deficiencies in quality are: a lack of availability of the full range of economic statistics; lack of source data to compile these statistics; poor timeliness; lack of complete coverage; not meeting the latest international standards on methodology;[18] and also often not meeting public dissemination standards. Many recent studies have commented on some of the problems (see for example references 52, 1, 66 and 67). Underlying all of this is weak capacity in national statistical systems and inadequate funding (both domestic and donor).

However judging the quality of any set of economic statistics is an art not a science. Although numerical indicators such as the size of revisions to GDP and the discrepancy between GDP estimates made using different methods provide some information, they are always ambiguous. For example small revisions may indicate a robust National Accounts system with little need to revise its estimates or a poor National Accounts system with little capability to do so.

Statisticians have always realised that assessing the quality of economic statistics, or indeed of any statistical system, is more like auditing than calculating standard errors. International statistical organisations, and many individual countries, have developed quality frameworks against which they or outside users can assess regular or new statistical series. Most of these have many elements in common and in fact most originate with the original framework known as the UN Fundamental Principles of Official Statistics (Box 3).

This chapter reviews some of these frameworks and explains their importance to users of official statistics. Most, if not all, can be used as a basis for a country's own reviews and assessments of statistical quality.

2.1.2 UN Quality Frameworks

The starting point for most quality frameworks are the *UN Fundamental Principles of Official Statistics* - reprinted in the box below (ref 80). The origins of this document, was the need for advice to transition economies after the collapse of the Soviet Union. However it subsequently became a standard reference document for all, and an essential guide on agreed best practice.

The UNSD have also published an influential handbook on statistical organisations (ref 83). This builds on the Fundamental Principles by giving advice on best practice

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[18] Sometimes the international standards are not considered to not be fully applicable to the circumstances of developing countries; but they should still be followed with supplementary indicators added to cover the special circumstances (e.g. a different treatment of unpaid family workers).

concerning, staffing, management, and constitution. It includes a draft statistics law and also chapters on the role of the "Chief statistician" of a country; The National statistical system; and the role of a "Statistics Council". The users of official statistics, especially those outside of government, are given a prominent role in this model of best practice. Setting up an NSO along these lines would go a long way towards building in essential elements of statistical quality in the work of the national statistical system as a whole.

Box 3: UN Fundamental Principals of Official Statistics

1. *Official statistics provide an indispensable element in the information system of democratic society, serving the government, the economy, and the public with data about the economic, demographic, social, and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.*

2. *To retain trust in official statistics, the statistical agencies need to decide according to strictly professional consideration, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage, and presentation of statistical data.*

3. *To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods, and procedures of the statistics.*

4. *The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.*

5. *Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs, and the burden on respondents.*

6. *Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.*

7. *The laws, regulations, and measures under which the statistical systems operate are to be made public.*

8. *Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.*

9. *The use by statistical agencies in each country of international concepts, classifications, and methods promotes the consistency and efficiency of statistical systems at all official levels.*

10. *Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.*

Another influential document from the UN has been their Generic Statistics Business Process Model (GSBPM). This model is an explicit quality framework for assessing specific statistical series. It is written from a systems perspective of a complete cycle of data collection from start to finish, with explicit feedback into the next round of the loop.

The nine stages examined are: 1 Specify Needs; 2 Design; 3 Build; 4 Collect; 5 Process; 6 Analyse; 7 Disseminate; 8 Archive; and 9 Evaluate.

Although the model is rather IT orientated and based around statistical surveys; it has been found to be valuable in a wider perspective of assessing all regular statistics production systems, including these based on administrative data. The UN and Eurostat have also published an "International Statistical Processes Assessment Checklist" (ref 13), which is designed to assist in this process of self-assessment.

2.1.3   IMF Quality Frameworks

In 1996 the IMF introduced two parallel initiatives to improve the dissemination of official statistics: **The Special Data Dissemination Standards (SDDS)** and the **General Data Dissemination System (GDDS).** The latest versions of these were published in 2013.   The IMF explanation for the SDDS is shown in the box opposite.

The SDDS is a set of standards to be met by all participating countries. However the GDDS is different. Participating countries commit to moving towards the GDDS requirements, but do not have to meet them to join. It was designed mainly for developing countries and also for those countries wishing to move towards the SDDS.

> ## Box 4: IMF SDDS
>
> The need for data standards was highlighted by the financial crises of the mid-1990s, in which information deficiencies were seen to play a role.
>
> Under the data standards initiatives, the IMF established the Special Data Dissemination Standard (SDDS) in 1996 to provide guidance to countries that have or seek access to capital markets to disseminate key data so that users in general, and financial market participants in particular, have adequate information to assess the economic situations of individual countries.
>
> The SDDS not only prescribes that subscribers disseminate certain data categories but also prescribes that subscribers disseminate the relevant metadata to promote public knowledge and understanding of their compilation practices with respect to the required data categories.

The GDDS framework comprises four dimensions (1) coverage, periodicity, and timeliness of data; (2) access by the public; (3) integrity of the disseminated data; and (4) quality of the disseminated data. For each of these dimensions, the GDDS describes good practices to serve as objectives in the development of national systems of data production and dissemination.

A range of key statistics and their frequency are specified in each of five statistical domains:

- Real Sector: GDP, production, prices, labour etc.
- Fiscal Sector: government accounts and debt
- Financial Sector: commercial banks and central bank
- External Sector: BOP, trade, IIP, debt etc.
- Household sector: Population, Education, Health, poverty all based on MDGs.

Each country must publish metadata as well as the data themselves together with plans for meeting the full range of data requirements and improving quality. The GDDS has provided a valuable framework for technical assistance from the IMF, World Bank and

others, although one failing has been a lack of leverage to ensure that the published improvement plans are actually implemented.

In 2001 the IMF supplemented these initiatives with an explicit **Data Quality Assessment Framework** (DQAF ref 43) for statistics. This framework and its variants for specific topic areas is used by IMF statisticians as part of a series of assessments of countries in meeting various IMF standards and codes. These published reports are known as ROSCs (Reports on Standards and Codes).

The first two levels of dimensions and quality indicators in the DQAF are as follows:

0. Prerequisites of quality

> 0.1 Legal and institutional environment
> 0.2 Resources
> 0.3 Relevance
> 0.4 Other quality management

1. Assurances of integrity

> 1.1 Institutional Integrity
> 1.2 Transparency
> 1.3 Ethical standards

2. Methodological soundness

> 2.1 Concepts and definitions
> 2.2 Scope
> 2.3 Classification/sectorisation
> 2.4 Basis for recording

3. Accuracy and reliability

> 3.1 Source data
> 3.2 Assessment of source data
> 3.3 Statistical techniques
> 3.4 Assessment and validation of intermediate data and statistical outputs
> 3.5 Revision studies

4. Serviceability

> 4.1 Periodicity and timeliness
> 4.2 Consistency
> 4.3 Revision policy and practice

5. Accessibility

> 5.1 Data accessibility
> 5.2 Metadata accessibility
> 5.3 Assistance to users

2.1.4 European Quality Frameworks

The European Union have developed and adopted a code of practice in 2005 and updated it in 2012. The EU code has 15 basic principles, which like other quality codes are themselves based on the original UN Fundamental Principles:

1. Professional independence
2. Mandate for Data Collection
3. Adequacy of Resources
4. Commitment to Quality
5. Statistical Confidentiality
6. Impartiality and Objectivity
7. Sound Methodology
8. Appropriate Statistical Procedures
9. Non-excessive Burden on Respondents
10. Cost Effectiveness
11. Relevance
12. Accuracy and Reliability
13. Timeliness and Punctuality
14. Coherence and Comparability
15. Accessibility and Clarity

Principles 11 to 15 comprise the dimensions of quality for assessing specific series of official statistics; while principles 1 to 10 wider institutional issues. Eurostat have also published a series of supporting documents to this quality framework (see references 12,13,16 and 17).

A number of European countries have also published similar national codes themselves (see for example the UK and Netherlands codes at references 73 and 69). The UK code is of particular interest since it is backed by legislation. This requires the UK Statistics Authority to establish the code and then to systematically assess all national statistics against the standards in that code. Statistical series not meeting these standards are not permitted to be described as "national statistics".

2.1.5 African and Asian Quality Frameworks

In Asia the ASEAN community have adopted a code of practice again based on the UN principles (ref 4). In Africa, Statistics South Africa has adopted a Data Quality Policy and a South African Statistical Quality Assessment Framework; together with a set of Operational Standards and Guidelines (references 70, 71 and 72).

2.1.6 World Bank Bulletin Board on Statistical Capacity

Despite the well understood difficulties of developing numerical indicators of statistical capacity some analysts may find it indispensable to be able to present one. The World Bank has developed a Bulletin Board on Statistical Capacity (BBSC) for such users. This page on the World-Bank website displays a country level indicator of statistical capacity based on three assessment areas: methodology; data sources; and periodicity and timeliness. Countries are scored against specific criteria in these areas, using information

provided by countries and/or publicly available. A composite score for each assessment area and an overall score combining all three areas are derived for each country on a scale of 0-100. A score of 100 indicates that the country meets all the criteria. Note however that the indices are designed to assess overall statistical capacity rather than capacity in economic statistics and that they should always be used with caution.

2.2   Use of Economic Statistics in Policy Making

Are statistics used to help formulate policy or just to back up policies already decided?

As the preceding section showed quality in economic statistics is a multifaceted concept. This section examines the way economic statistics are used in policy making in order to understand what aspects of quality are most relevant to what type of user.

Economic statistics are aimed at one broad purpose—to serve decision makers. Three particularly relevant groups are:

- Officials charged with planning, formulating, and monitoring a country's economic and budgetary policy;
- Analysts seeking to evaluate a country's economic performance and make cross-country and multilateral comparisons; and
- Market participants, public sector managers, and individuals trying to make better decisions for **managing** their own businesses, **projects and programmes**, and households.

2.2.1   Macroeconomic Management (including Financial Programming)

Broadly speaking there are three different time horizons for macroeconomic policy

- Short term monetary and exchange rate policy – usually the responsibility of central banks.
- Medium term budgetary policy – invariably the responsibility of finance ministries.
- Medium to longer term planning – often involving a planning commission or similar body.

2.2.2   Short term monetary and exchange rate policy

In general, countries with their own currency attempt to maintain a stable price level while meeting their wider objectives by intervening in the money markets in various ways. The published minutes or summaries from the monthly meetings of the Bank of England's Monetary Policy Committee; The ECB Governing Council; and the Federal Reserve Open Market Committee[19] provide the best documented examples. Although these discussions will involve all suitable data available, the focus is on measures of inflation. In order to be useful any data must be:

- High frequency in order to gauge the impact of decisions made monthly or quarterly.

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[19] http://www.bankofengland.co.uk/monetarypolicy/Pages/overview.aspx
http://www.ecb.europa.eu/mopo/decisions/html/index.en.html; and
http://www.federalreserve.gov/monetarypolicy/fomccalendars.htm

- Timely, ideally with a lag of no more than one period.
- Consistent over time or past behaviour cannot be used as a guide for the future.

Other variables that meet these criteria besides the CPI include; exchange rates, money and banking statistics, cash estimates for central government revenue and expenditure, labour market indicators, and goods imports and exports. Any formal models used will attempt to identify behavioural relationships between aggregate time series so consistency over time is vital but small incoherencies between say the averaging methods used in producing monthly average exchange rates and monthly average interest rates are not important. Consistency over time from month to month or quarter to quarter is the most important criteria and indeed any consistent error such as underestimating imports by a constant fraction, though regrettable, will have little impact on a data series' usefulness for this type of analysis.

Although formal analytical methods will rely on aggregate series the value of these series can and should be enhanced by providing extra details as well as anecdotal details gathered during data collection that help in understanding the causes of aggregate movements. While most developing country statistical offices provide CPI changes by component this can be misleading as components weights vary a great deal so a component with a large change can have little impact on the overall index and vice versa. A weighted "contributions analysis" that shows the effect of price changes in components or even individual items on the overall index requires no extra information and is quite simple to calculate (see Statistics South Africa Statistical release P0141 Tables C and D for an example) but many developing countries fail to produce it.

2.2.3 Budgets and Medium Term Fiscal Policy

Almost every country has an annual budget process for allocating spending limits to the various ministries, departments, and agencies. These days most governments produce this document as part of a medium term expenditure framework designed to ensure that a government's tax and spending plans are prudent and affordable given their country's resources (see for example ref 96). These frameworks must be underpinned by data and projections, also organised into frameworks. The IMF refers to the exercise where analysts evaluate the linkages between the main macroeconomic accounts of an economy to assess the impact of exogenous shocks and to formulate appropriate policy responses to achieve specified goals (stabilization, growth, and so forth), including by preparing alternative prospective scenarios for the medium term as financial programming (FP).[20] The exercise consists of taking the integrated macroeconomic accounting frameworks described in Part 1 of this guide and projecting them forward so the quality of the accounting frameworks is crucial, which makes FP the most important use of the accounting frameworks and justifies discussing it in more detail.

The International Monetary Fund's Financial Programming Framework

A Financial Programming (FP) framework consists in practise of a simple Excel workbook containing worksheets with consistent accounts for the real, fiscal, monetary, and

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[20] More recently FP has been supplemented by the balance sheet approach (BSA) to macroeconomic analysis which uses information from sectoral and national balance sheets to examine the countries' vulnerabilities (especially vis-à-vis non-residents).

external sectors of the economy (ref 25).[21] FP is called an economic framework rather than a model because it lacks behavioural equations attempting to predict the change and interaction between different sectors of the economy.

Despite the lack of behavioural relationships, FP is a consistent and transparent way of allowing the effect of changes in assumptions (including revised historical data, new projections of variables determined outside the framework, and changes in programme objectives) to be determined rapidly and efficiently and as such is a good start towards macroeconomic policy making/ forecasting in countries with limited capacity. It allows governments to forecast some key economic aggregates, including estimates of revenue and expenditure on a "current policy" basis, and provides a tool to establish a Medium Term Fiscal Framework (with aggregate deficit and debt targets over the medium term). Scenarios can easily be built to, for example, analyse the potential impact of new oil and gas revenues.

Table 7: Structure of a Financial Programming framework

To	FISCAL	REAL	BOP	MONEY	DEBT
Account	2.6 GFS	2.8 National Accts	2.5 BOP	2.7 Money & Finance	
Linkages from sectors on left to sectors along the top					
FISCAL		Government spending	External grants Disbursements on external debt		Net disbursements on domestic debt Disbursements on external debt
REAL	GDP (for revenue projections)			GDP (for broad money projections)	
BOP		Imports exports		Change in official reserve assets	Exchange rate
MONEY					
DEBT	Interest payments Principal repayments on external debt		Interest on external debt Principal repayments on external debt	Debt stock (for net domestic assets)	
Identities and residuals for each sector					
Identity	Total revenue - Total expenditure = Net borrowing	GDP = Consumption (public + private) + Investment + Exports - Imports	**Current account = Savings - Investment**	Net foreign assets + Net domestic assets = Broad money	
Residual	None (government deficit and net borrowing must be matched manually)	Private consumption	**Change in official reserve assets (specifically the foreign currency reserve)**	Net claims of scheduled banks on other sectors (a component of net domestic assets)	

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[21] Most applications follow a pattern originally developed using data for El Salvador but a generic blank template is not publicly available. Instead practitioners tailor the framework to each country on the basis of the Salvadoran Excel workbook or subsequent adaptations. The Fund provides formal training in financial programming through the IMF Institute for Capacity Development.

Consistency within and across sectors is achieved in two ways. First, individual accounting identities are met by assuming a "residual" item. For example, if a user has determined GDP, investment, imports and exports, then there can only be one value for consumption that is consistent with the accounting identity for the REAL sector (Consumption = GDP – Investment – Exports + Imports). In this case, the residual is consumption. Secondly, wherever a variable features in more than one sector, the forecasts for that variable are the same in both sectors. For example, imports features in both the REAL sector (as a component of GDP) and the EXTERNAL sector (as a component of the current account). Whatever values are used for imports in the EXTERNAL sector are also used in the REAL sector. The table below shows the main links created from the sheet listed on the left hand side to the sheet list along the top of the table (e.g. imports estimates from the BOP are transferred to the REAL sheet.) To avoid confusion, only the most important linkages are shown.

Note that the REAL Sector Scenario links to revenue projections that produces a top-down resource envelope which can be reconciled with the bottom-up forward estimates of expenditure and used to produce medium term budget ceilings for Line Ministries and Agencies. The full framework also provides a consistent set of standard IMF performance criteria such as tax/GDP and debt /GDP ratios.

Statistical Issues for Financial Programming

As explained in part 1 of this guide, the full sequence of Sector Accounts of the System of National Accounts includes government and external sector accounts that correspond to the GFS and BoP accounts and Financial Accounts and Balance Sheets that contain many of the items in Money and Banking statistics. However hardly any developing country will compile the full sequence of accounts, and in any case there are strong reasons for retaining numbers that the Ministry of Finance and Central Bank supply. Analysts undertaking FP will therefore have to fit together data from the statistics office (NSO), Ministry of Finance (GFS & Debt) and Central Bank (BoP and Money and Banking). Consistency across the different datasets is therefore the aspect of statistical quality that is most important for FP. Note that observed discrepancies will be a mixture of genuine differences in concepts (such as recording on a cash vs accrual basis) and mistakes or errors. Distinguishing the two is difficult and time consuming. Completing the dataset for FP is a very similar task to compiling Sector accounts for the System of National Accounts. There will often be a strong advantage in co-opting the country's National Accountants into this process.

2.2.4   Medium term planning including PRSPs

Medium term plans of governments differ from budgetary frameworks, not only in their time horizon, typically five years or longer, but in that they usually deal explicitly with social as well as economic goals. Indeed in developing countries such plans are most often referred to as Poverty Reduction Strategy Papers (PRSP). The PRSP approach, which was initiated by the World Bank and IMF in 1999, is now well entrenched across the developing world, with 126 full PRSP submitted so far to the Fund's Executive Board, as well as 59 preliminary, or "interim", PRSP (ref 51). They are meant to focus on measurable objectives, goals, and targets and contain an evidence basis for the assessment of constraints that the country faces. While each PRSP follows a marginally

different format, they all include detailed statistical annexes or tables that outline the key economic indicators.[22]

The main reference for PRSP is the 2002 World Bank Sourcebook (ref 94). Chapters with special relevance to statistics include those on; poverty monitoring, M&E, strengthening statistical systems, public spending and macroeconomic issues. The table below summarises a table from the sourcebook preface that describes the major "building blocks" for building a PRSP and the data sources required for each block.

Table 8: Data Needs for PRSP Building Blocks[23]

PRSP Building Block	Data Needs
Who are the poor and why?	Multi topic surveys, Administrative data, User surveys Census, data
What policies are needed to support more rapid growth?	National accounts data **1.8** Revenue data and projections **1.6** Data on business conditions **1.3** Corruption surveys
What are the major obstacles to the poor's participation in more rapid growth?	National accounts **1.8** Data on income, expenditure, assets, and employment sources from household surveys (by gender, region, and age)
How can governance arrangements be made more effective?	Disaggregated expenditures **1.6** Expenditure tracking surveys
How can broad-based participation in dialogue and decision making be enabled?	Data gathered during program monitoring, Data on actual expenditures by economic classification **1.6**
Are key sectoral policies and programs—e.g., health, education, rural development, and infrastructure—working to reduce poverty? What is needed?	Administrative expenditure data **1.6 partial** Household consumption and income data **1.8 partial** User surveys (by sector and level of service)
Can we measure progress in poverty reduction and the impact of policies and programs?	Data on consumption, income, and employment from household surveys **1.8 partial** Data on educational attainment and health service utilization from administrative records National accounts data **1.8** Administrative Data

PRSP and Statistics

As the table above and the longer version in Annex B make clear, the PRSP process is much more data-hungry than Short term economic management or fiscal planning. In particular PRSP guidelines request;

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[22] A complete library of PRSPs by country is available at http://www.imf.org/external/np/prsp/prsp.aspx

[23] A Fuller version of this table is shown in Annexe A. Links to Part 1 of this guide subsections are shown in **bold**

- The disaggregation of standard economic datasets (e.g. spending by region and social group, regional economic accounts).

- "Social" variables such as poverty statistics and their associated income and expenditure data that use many of the same sources as economic statistics and should therefore, in theory, be coherent with them.

- Much closer integration of statistics on "real" variables (both economic and social) with nominal or cash variables and price indices than is needed for Budget Frameworks (which are ultimately about nominal expenditure ceilings) or short term monetary policy (which is about the behavioural relationships between aggregate time series).

Unsurprisingly evaluations of the PRSP approach often highlight a weak analytical base, particularly with regard to the macroeconomic framework and policies to promote growth (see IMF working paper at ref 36 and also references 31, 34 and 95). According to the World Bank Sourcebook "It is hoped that the PRS approach will foster the development of reliable fiscal, macroeconomic, and poverty data systems over the long run." But the IMF working paper, which included a survey of 22 PRSP eligible countries, found that nearly every country had inadequate resources to adequately collect and compile economic statistics. The message for analysts compiling PRSPs is that many of the data requirements for a PRSP are elaborations on a set of core economic statistics that are, themselves extremely fragile and starved of resources.

2.2.5   Cross Country and Multilateral Comparisons

Many of the most active and vociferous users of economic statistics are not principally interested in policy for one country but in comparing one country with another country. Obviously their main requirement from any dataset is international comparability. However users must be aware that there is a trade-off between this requirement for comparability across countries and for consistency over time and between datasets within countries. It is also possible for national governments to publish data before they are made available to the international organisations that compile multinational databases and for those multinational agencies to make changes to the indicators provided by national governments. See, for example this note from the Metadata on the MDG indicator "Growth rate of GDP per person employed" posted on the mdg.un.org website by the International Labour Organisation:[24]
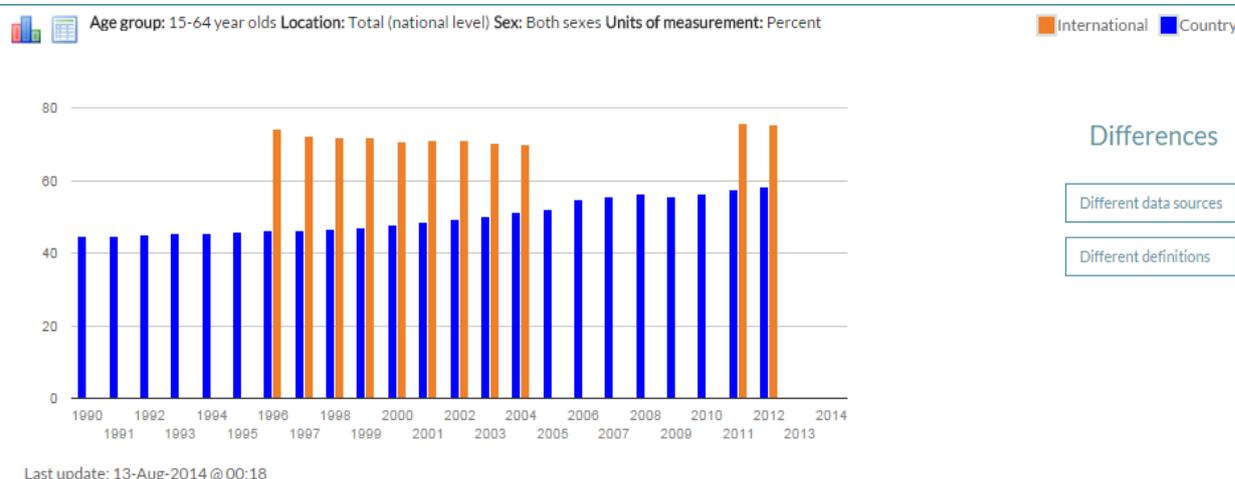
> "The labour force data are harmonized to account for differences in national data and scope of coverage, collection and tabulation methodologies as well as for other country specific factors such as military service requirements. Furthermore, nationally reported data are utilized only when these meet strict criteria in terms of international comparability and geographic coverage. Model estimates are used where national data are not available or satisfactory."

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[24] accessed 10th October 2014

The figure below shows the sort of differences that can be produced:

Figure 2: National and International data on Employment- to- Population ratio in Vietnam

Age group: 15-64 year olds **Location:** Total (national level) **Sex:** Both sexes **Units of measurement:** Percent

International ■ Country

Differences

Different data sources

Different definitions

Last update: 13-Aug-2014 @ 00:18

Why is there a difference?

The international agency (ILO) reports data for this indicator to include unpaid family workers who work at least one hour, whilst the country excludes this type of worker from their figures for this indicator. The country also reports data each year from 2000 onwards from a regular Labour and Employment survey as well as Population and Housing Census when available. The international agency reports until 2004 from a Labour Force Surveys and again in 2011.

Source: data.un.org/countryData/Data/Show/VNM accessed 10th October 2014

The messages for analysts are; that they should expect international and national data to differ; that cross country comparisons will normally require an international dataset that has been harmonised, and that conclusions drawn for a particular country will always require a check to ensure that the conclusions are robust against the differences between that country's national and international data.

2.2.6   Project and Programme Management

This section deals with the information needs of public investment or development projects and also programme management decision making. As well as using economic statistics such projects and programmes may also generate important statistics themselves.

However many of those wishing to use economic statistics to assist with management decisions may not have either economics or statistical training and may not even be sure where to obtain the data they need. The most important dimension of statistical quality for this group is therefore accessibility. Some indicators of accessibility have improved markedly in recent years just because it is usually possible for anyone to find some data in the area they are interested in using a search engine. However this places an even greater premium on the other elements of accessibility such as; presentation in a way that facilitates proper interpretation, the publication of contact points for users, and above all the dissemination of metadata at a level of detail adapted to the needs of the audience (See Annex A for the elements of Accessibility).

Although there is a wide range of metadata that might be useful to this user group, in practise most either want to understand the "real value" of a current or future sum of

money or to learn more about the market in which they operate. The single most important sort of metadata for most users is therefore the documentation around price indices. As section 2.1 says it is extremely unlikely that any published price index will exactly answer the question which any particular analysts is posing and it is important that users understand that the change in the cost of for example, replacing a car, or living in the middle of a large city, may vary a lot from the change in the consumer price index. However many users may also benefit from more basic assistance such as series that express the current value of a monetary amount in a base period. After price indices the area of economic statistics most requested by the general public is probably detailed data on imports and exports to enable businesses to understand their competition. Data in the levels of detail they require are often not available online even today so for this group it is the easy and helpful access for ordinary users, as opposed to privileged groups like donors or other government officials, that is most important.

2.3   Statistical Capacity Building

Improving the quality of economic statistics requires a holistic focus on statistical capacity building covering advocacy, infrastructure, staffing and resources.

2.3.1   Introduction

The purpose of this section is to provide some background information on capacity building in Africa and Asia; and also on available sources of grant funding and technical assistance. Efforts tend to fall into two groups; large long term multi topic projects in single countries, and those focussed on providing specific advice, training and solutions in a particular topic area of statistics in many countries. This section examines both the institutions providing the assistance and the various modes that such assistance can take and also provide some examples of specific projects in Africa and Asia, where there are some general lessons to be learnt.

One of the characteristics of economic statistics is that they are highly dependent on a country's administrative infrastructure in general and its statistical infrastructure in particular. It is obvious that the quality of Government Finance Statistics is almost entirely dependent on the quality of a country's Government Accounting, that trade in goods depends on customs administration, and that money and banking statistics depend on the rigour of banking supervision. Slightly less obviously, all surveys measuring the output, employment, investment, or services of formal private businesses rely on having a well organised, comprehensive, and regularly maintained register of those businesses and collection of economic data in OECD countries still relies heavily on the functioning postal system, and indeed the legal system.

Developing the infrastructure for good economic statistics presents serious challenges for statistical capacity development through technical assistance. Many of the most important elements lie outside the realm of "statistics". Systems like business registers that are part of statistics require many months if not years of costly and difficult development before they can have an impact on published data, and because they decay so rapidly it is only when capacity is embedded in local institutions, that these impacts can be obtained. Economic statistics are also highly interdependent. A good measurement of real economic growth for example requires, in addition to good surveys

of short run changes in output, a solid estimate of the level and distribution of economic activity from a Supply and Use table which requires a structural business survey which requires a business register. Even the smoothest and most problem free development programme would require 6-10 years to deliver the whole sequence. Such a programme would also require consistent and intelligent political support from within a country, particularly when new data radically changed recent economic history, and parallel developments in institutional strengthening and IT system (See ref 64 for a discussion of the prerequisites of successful statistical capacity building).

Improving the quality of economic statistics therefore requires a much wider holistic focus on statistical capacity building more generally covering advocacy, infrastructure, staffing and resources. National Strategies for the Development of Statistics (NSDS) as advocated by Paris 21 (ref 65) are one key mechanism for the national authorities to do this.

Successful economic statistics TA thus requires a sustained, and comprehensive effort, often reaching beyond a narrow focus on "statistics" to address wider questions of

economic and financial management, or a more focussed input in a situation where– either through good luck or good targeting- most of the preconditions of success are already be in place. Unsurprisingly it is much more common in areas such as Consumer Price Indices that are far less reliant on a wider infrastructure.

2.3.2   Statistical Capacity Building Initiatives

Traditional TA in statistics has been concerned with specific advice, training and solutions in a particular topic area of statistics. For example funding and running a specific one-off internationally sponsored household survey, or implementing the latest international standards in national accounts.

Increasingly both the national and the international statistical community have come to realise that such TA is not always effective on its own and needs to be supplemented with and integrated within wider initiatives. Even where it is effective in the short term, it does not necessarily lead to a long term sustainable outcome.

In 1999 the international statistical organisations, backed by DFID, established a new initiative based in the OECD secretariat and known as "*Paris21*" (The Partnership in Statistics for Development in the 21st Century). It is a forum and network to promote, influence and facilitate statistical capacity development and the better use of statistics.

One of its key and most influential products has been a set of guidelines for countries to develop a National Strategy for the Development of Statistics (NSDS). First published in 2004, the concept is a comprehensive multi-year plan covering all statistical producers in a country and endorsed by the top in government. This then provides a structured and country owned plan within which special TA can be conducted and assistance coordinated across donor agencies. In some cases the plan also provides for a specific central development fund for statistics.

With backing from DFID and others, the World Bank set up a large scale TA programme (known as TFSCB/ STATCAP) to help implement these plans. The NSDS framework, or

variants of it, has now been adopted in nearly all African countries and also in many other regions of the world.

Internationally there have also been many related initiatives to ensure a broad based action plan to improve statistical capacity, the most notable being the 2004 Marrakech Action Plan and the subsequent 2011 Bussan Action Plan (ref 66 and 67). In Africa there has been the Reference Strategic Framework and the SHaSA (ref 1 and 3).

It is also important to remember that development partners also sponsor a lot of statistical work outside formal statistical projects such as health and education management information systems. They also often run their own surveys to monitor their own projects and programmes, but these are not regarded as TA and they can have a negative impact on official statistics, diverting resources and sometimes even poaching some of the best national statisticians.

2.3.3   The IMF

The lead international organisation in terms of economic statistics is the IMF. As well as contributing to methodological research in statistics on a global level their Statistics Bureau provides technical assistance in terms of missions from their head office or from their various regional TA centres. Sometimes they will allocate a member of IMF staff full time for a year or more to work with a central bank or (less often) an NSO. They also provide training via their regional training centres but in general do not provide grants or other forms of financial assistance.

One context in which IMF assistance is often given is as a follow up to programmes or to their Article IV missions, which assess a country's fiscal and economic policies. The statistical annex to the staff report from these Article IV missions will often identify serious weaknesses in the statistics available for these assessments and prompt a statistical ROSC report (see section 2.1).

The IMF also run a worldwide network of *regional technical assistance centres*[25] funded by various consortia of international organisations and there are usually one or more statistical advisors located in each of these centres. They maintain contact with their respective countries and will carry out a series of TA missions in the areas of responsibility of IMF statistics (real sector, fiscal, financial and external sectors). This regional mode of delivery has often proved successful and, after an evaluation report in 2010, has been rapidly expanded. The advantages are that the IMF advisors based in these centres can get to know their countries and can follow up on earlier TA. They tend to have more general statistical skills and knowledge than the more specialist statistical staff from Washington, and can also work in cooperation with advisors in other topic areas such as fiscal policy and central banking which can be enormously useful in getting countries to accept any revisions they make to the data. The multi-agency funding of these centres has also, on occasion, facilitated coordination and joint working.

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[25] There are nine regional technical assistance centres in the Pacific (Fiji), the Caribbean (Barbados), Africa (Tanzania , Cote D'Ivoire, Ghana, Mauritius and Gabon), the Middle East (Lebanon), and Central America (Guatemala) help countries strengthen human and institutional capacity to design and implement policies that promote growth and reduce poverty.

The GDDS and SDDS initiatives (see section 2.1) have been backed up by IMF training and TA to countries, often via the regional centres. In particular there has been the DFID-funded "Enhanced Data Dissemination Initiative (EDDI). The IMF also runs a range of regular statistical training courses via their Institute for Capacity Development.

There are also some lessons from the EDDI med-term review. Two positive lessons were that long term TA was effective and that the modular approach of EDDI was successful. On the down side was that the lack of source data in many countries limited the impact of the TA. EDDI did not include any funds for the collection and improvement of source data – such as surveys of households and enterprises; or funds for improvement of administrative data such as business registers or tax returns (see
 http://devtracker.dfid.gov.uk/projects/GB-1-200829/documents/).

2.3.4   Other International Agencies

The various UN agencies provide extensive TA and sometimes grant funding. In terms of economic statistics the most active have been UNCTAD and WTO on trade, ILO for labour statistics and FAO for agriculture statistics. There are also various regional UN agencies including the UN ECA and UN ESCAP, the latter also runs a statistical training institute known as SIAP. In many developing countries the local UN office run by UNDP is usually the coordinator for TA from all UN agencies. However ILO and FAO tend to work independently.

UN ESCAP has a Regional Programme for the Improvement of Economic Statistics which provides a platform for coordinating support for economic statistics. The AsDB collaborates with UNESCAP and provides technical assistance e.g. to improve business registers as well as statistical data exchange. UNECA have set up (with AfDB and the AU) an African Group on National Accounts which supports the implementation of SNA2008.

In contrast to the IMF, the UN agencies tend to contract out their technical assistance to independent consultants, sometimes linked to a larger project including funds for equipment and perhaps survey costs.

The World Bank group also provide extensive TA and sometimes grants or loans. The World Bank has strongly supported NSDS initiatives and also has a programme of enterprise surveys in developing countries, sometimes run independently of the NSO. They also host the international secretariat for the ICP (see section 2.1.4). Note that the ICP programme collects current price National Accounts and Household Expenditure data as well as prices and could theoretically be used to strengthen these systems, although this opportunity remains largely unexploited.

Another statistical initiative of the World Bank has been its *Virtual Statistical System* (VSS) which provides self-teaching materials for statistical staff in developing countries, who might not have access to national material or training facilities.

The African Development Bank (AfDB) has been taking the lead on implementing the International comparison Project in Africa (to generate Purchasing power parities). French speaking countries in Africa are also assisted in their statistical work by AFRISTAT which is based in Mali.

2.3.5   Bilateral Assistance

DFID have long been one of the largest providers of TA, at least in the English speaking world. In the past, this was mainly provided by DFID statisticians on secondment to national governments, sometimes in line management roles and sometimes as advisors. Much of DFID's statistical funds are now channelled via other agencies such as Paris21, the IMF and the World Bank. In recent years, DFID direct statistical support, has been more often in the form of direct financial support to a statistics office. This has often been in the context of implementing an NSDS. These programmes tend to be run by the local DFID office and not from head office in the UK.

DFID's Africa Regional Department provides funding to the IMF Africa regional TA centres, part of which will be spent on supporting countries to improve economic statistics. In addition, they also support UNECA's regional programme on national accounts.

A number of DFID country offices are supporting countries to implement their NSDS (e.g. Zimbabwe, Tanzania, Rwanda) which will contribute to improving economic statistics or have supported specific surveys/data collections (e.g. Mozambique, Tajikistan and Ghana) that are vital for national accounts and consumer price index. In addition, some tax projects in country offices have components to improve collation of tax data e.g. Bangladesh, Pakistan. DFID support to censuses also contributes to improving the availability of source data for national accounts e.g. in Zambia, Sierra Leone, Myanmar.

The EU aid programme (EuropAid) also has a long history of support for statistical projects. In general these tend to be large scale projects over several years and conducted by a consultancy company after a competitive tender. They also often have a regional dimension covering several neighbouring countries. The EU statistics office is not usually directly involved in such projects. The local office of the European Commission, known as the EC Delegation, is responsible for directly funded projects. As with DFID, considerable funds are channelled via other donors, for example, Europaid is one of the major contributors to the IMF Regional Technical Assistance Centres.

Other countries providing significant bilateral aid for statistical work include the USA (USAID), Sweden (SIDA), and France (AFD). There are also various international private foundations which sometimes provide funding for surveys or technical assistance.

2.3.6   Lessons learned and Examples of Good Practice

Too much support for economic stats has been focussed on providing bilateral TA or training.

This section reviews lessons learned over the years for successful statistical capacity building and also gives some specific examples of successful statistical development projects. These are a selection based on the knowledge and experience of the authors of this guide.

Generally various studies (refs 5 and 66) have found the following common themes for success: country ownership, donor alignment around an NSDS, harmonisation, assessing & using existing capacity, longer term support. Too much support for economic stats has

been focussed on providing bilateral TA or training, without ensuring the staff involved, have the opportunity and the capacity to absorb the TA or training. To be effective this needs to be backed up with national funding for source data and for staff development more generally.

Turning to our examples of good practice in capacity building assistance, two common indicators of success were: first they are all multi-year projects, allowing time to build up relationships and trust with local statisticians and for the consultants to follow through their recommendations over a period of time. Secondly they have all provided a degree of flexibility in terms of priorities and methods of working, allowing the consultants to tailor their activities to the needs and circumstances of the countries concerned.

UGANDA BUREAU OF STATISTICS

Uganda Bureau of Statistics - DFID provided substantial and ongoing support over more than 10 years to assist the Bureau, both immediately after its formation, and subsequently. For a period this also included a resident statistical advisor. The result has been a confident and competent organisation able to act as a model of an independent statistical agency for many other countries in Africa.

WB STATCAP and Trust Fund for Statistical Capacity Building - A multi-country Program designed to make it easier for clients to access regular World Bank financing for improving statistical capacity. Projects normally finance the implementation of National Strategies for the Development of Statistics (NSDS) or a similar comprehensive mid-term action plan (such plans are sometimes referred to as a Statistical Master Plan). These plans have now been prepared in nearly all the countries of Africa.

Paris21 – This is essentially an ongoing coordination secretariat, it is funded by a very wide range of aid donors and supported by various international organisations. It has achieved remarkable success in raising the profile of official statistics around the world, and helping individual countries via its advocacy and NSDS agendas.

IMF Regional Technical Assistance Centres – Again an ongoing initiative funded by many donor agencies. This has delivered a new localised model of international TA, which is preferred by the recipient countries and more effective because mission recommendations can be followed up by the same experts.

National Statistics Institute of Rwanda   - This was a 4 year project funded by the government of Rwanda and implemented by OPM. The project supported the Institute during its transformation from a department of the Ministry of Economic Development and Finance to a semi-autonomous body. OPM delivered a comprehensive programme of capacity building support including management, training and statistical governance advice. The team also provided technical assistance to support the preparation of national accounts, the Consumer Price Index and the second Living Conditions

Monitoring Survey. Partly as a result of the project support, Rwanda now has the statistical capacity and skills it needs. The Institute's progress was recently recognised in by the World Bank which ranked it second in its 2013 assessment of statistical systems in Sub-Saharan Africa.

ASEAN Statistical System – This 4 year project was funded by EuropAID and implemented by a consortium of consultancy companies' lead by GOPA. The consultancy team worked with the staff of the ASEAN statistics office and of the national statistical authorities of the 10 member states to develop statistical capacity and databases in 4 key areas: Statistical infrastructure; trade in goods, trade in services, and Foreign Direct Investment. The objective was to achieve improved harmonisation across all 10 member states and improved availability of statistics to meet the policy needed for creating a single market and economic area.

Statistical Quality in South Africa - This project was funded by the World Bank Trust Fund for Capacity Development and implemented by OPM. It the supported the adoption of statistical quality standards in South Africa and informed the strategic development of the country's National Statistical Service. Over a period spanning more than six years, the OPM team developed a data quality assessment framework based on extensive audits of selected statistics, established coordinating mechanisms, built staff capacity for system mapping and statistical coordination and developed a road map for the National Statistical Development Strategy (NSDS). Lessons learnt from this project are now being applied more widely to strengthen statistical services across the region and beyond.

Glossary and definitions[26]

What do you mean by that?

Accrual Accounting - Flows are recorded at the time economic value is created, transformed, exchanged, transferred, or extinguished. In other words, the effects of economic events are recorded in the period in which they occur, irrespective of whether cash was received or paid or was due to be received or paid.

Activity - An economic activity is said to take place when resources such as equipment, labour, manufacturing techniques, information networks or products are combined, leading to the creation of specific goods or services. An activity is characterised by an input of products (goods or services), a production process and an output of products. The principal activity of a statistical unit is the activity which contributes most to the total value added of that unit. A secondary activity is any other activity of the unit, whose outputs are goods or services are suitable for delivery to third parties.

Aggregation Formulae - The formulae used to aggregate price quotes and weights into an index. There will usually be several stages of aggregation with different formulae at each stage. Commonly used formulae include weighted or unweighted arithmetic, geometric, and harmonic means but there are many others.

Ancillary activities - Ancillary activities are those that exist solely to support the principal or secondary economic activities of a unit, by providing goods or services for the use of that unit only. For example accounting, transportation, storage, purchasing, sales promotion, repair and maintenance, etc. They are not sold to third parties.

Balance sheet - A statement of the stocks of financial and non-financial **assets** owned, the stock of claims of other units against the owners of those assets in the form of **liabilities**, and the sector's net worth, equal to the total value of all assets less the total value of all liabilities. A financial balance sheet covers financial assets only.

Balancing item - An accounting construct obtained by subtracting the total value of the entries on one side of an account (resources or changes in liabilities) from the total value of the entries on the other side (uses or changes in assets). It cannot be measured independently of the entries in the accounts.

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[26] Definitions in this section are edited from those in the various manuals of international standards.

Base period or Base year - The period or year with which all the other periods are compared. The term may however have different meanings in different contexts. Three types of base period may be distinguished:

> The *price reference period* – the period that provides the prices to which the prices in other periods are compared. The prices of the price reference period appear in the denominators of the price relatives, or price ratios, used to calculate the index.

> The *weight reference period* – the period, usually one or more years, of which the expenditures serve as weights for the index.

> The *index reference period* – the period for which the value of the index is set equal to 100. It should be noted that, in practice, the duration of the weight reference period is typically a year, whereas the price index is calculated monthly or quarterly.

Basic Prices - The amounts received by the producer from the purchaser for a unit of good or service produced as output. It includes subsidies on products and other taxes on production. It excludes taxes on products, other subsidies on production, suppliers' retail and wholesale margins, and separately invoiced transport and insurance charges. Basic prices are the prices most relevant for decision making by suppliers.

Basket - A specified set of quantities of goods and services. In a CPI context, the set may comprise the actual quantities of consumption goods or services acquired or used by households in some period, or may be made up of hypothetical quantities.

Book value – The price of an asset as recorded in the books of the reporting entity.

Budget Sector – That part of central government's revenue and expense which are normally regulated and controlled by a ministry of finance, or its functional equivalent, by means of a budget approved by the legislature.

Business Register – A listing of all enterprises or businesses in a country.

Capital Account - Acquisitions and disposals of non-produced non-financial assets, as well as capital transfers, that is, the provision of resources for capital purposes by one party without anything of economic value being supplied as a direct return to that party. Financial transactions are recorded under the financial account, which is sometimes incorrectly referred to as the "capital" account.

Capital Transfers - The provision of resources for capital purposes by one party without anything of economic value being supplied as a direct return to that party.

Cash Accounting - Flows are recorded when cash is received or disbursed. Although non-monetary flows can be recorded, most accounting systems using the cash basis do not record non-monetary flows because the focus is on cash management rather than resource flows.

Central Product Classification (CPC) - An internationally agreed classification of goods and services based on the physical characteristics of goods or on the nature of the services rendered.

Chain index - An index number series obtained by linking together shorter series covering either shorter time periods or geographical units that are "closer" in some way. EU guidance recommends that European Consumer Price Indices use annual chaining. For example an annual chain index of CPI might link percentage changes for the current year (at year t-1 prices and weights) with similar percentages for the previous year (at year t-2 prices and weights). Chained price indices more accurately reflect current expenditure patterns than base period/year price indices.

CIF price - Cost, Insurance, and Freight price - The price of a good delivered at the customs frontier of the importing country, or the price of a service delivered to a resident. It includes any insurance and freight charges incurred to that point. It excludes any import duties or other taxes on imports and trade and transport margins within the importing country.

Classification of Functions of Government (COFOG) - A detailed classification of the functions, or socioeconomic objectives, that general government units aim to achieve through various kinds of expenditure.

Company Group - An association of enterprises bound together by legal and/or financial links.

Compensation of employees - The total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done during the accounting period – wider than 'earnings'

Consolidated accounts - The elimination of all transactions and debtor-creditor relationships that occur among the units being consolidated. In other words, a transaction of one unit is paired with the same transaction as recorded for the second unit and both transactions are eliminated from the consolidated accounts.

Consumption of Fixed Capital - 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. Similar to the commercial accounting concept of "depreciation".

Contingencies – In financial balance sheets - potential liabilities which are not recognised on the balance sheet itself e.g. loan guarantees from government to a state enterprise.

Contributing family workers – Those who hold self-employment jobs in an establishment operated by a related person, (paid or unpaid).

Corporation - A legal entity, created for the purpose of producing goods or services for the market. It may be a source of profit or other financial gain to its owner(s); it is collectively owned by shareholders who have the authority to appoint directors responsible for its general management.

Cost of living index (COLI) - An index that measures the change between two periods in the minimum expenditures that would be incurred by a utility-maximizing consumer, whose preferences or tastes remain unchanged, in order to maintain a given level of utility (or standard of living or welfare). As consumers may be expected to change the quantities they consume in response to changes in relative prices (known as substitution), the CPI is not a COLI, but may aspire to approximate to one.

Counterparts (of broad money) - Assets held by the money issuing sector and all liabilities that are not part of broad money. Analysis the counterparts (e.g. lending) by sector is of particular analytical importance.

Counterpart (sector) – The economic sector in which the "counterpart" transaction is made for a specific transaction in another sector.

Current Account - Flows of goods, services, primary income, and secondary income between residents and non-residents.

Current prices - The actual prices prevailing in the period in question.

Current value - The actual value of some aggregate in the period in question: the quantities in the period multiplied by the prices of the same period.

Debtor/creditor principle: There are two principles that may serve as the basis for geographic allocation of direct investment financial flows: the debtor/creditor principle and the transactor principle. Under the debtor/creditor principle, transactions resulting from changes in financial claims of the compiling economy are allocated to the country or residence of the non-resident debtor, and transactions resulting in changes in financial liabilities are allocated to the country of residence of the non-resident creditor, even if the amounts are paid to or received from a different country.

Deflation - The division of the current value of some aggregate by a price index (described as a deflator) in order to revalue its quantities at the prices of the price reference period. The reverse process is known as "reflation".

Depository Corporations - Comprise the central bank, deposit taking corporations (commercial banks and similar) except the central bank, and money market funds (MMFs).

Deposits - Standard, non-negotiable contracts open to the public at large that allow the placements of variable amounts of funds and the later withdrawal.

Direct investment - Cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy (taken as owning 10% or more of the equity). As well as the equity that gives rise to control or influence, direct investment also includes investment associated with that relationship, including investment in indirectly influenced or controlled enterprises investment in fellow enterprises debt and reverse investment (i.e. withdrawal of investments). Also referred to as Foreign Direct investment (FDI).

Direct Investment enterprise - An enterprise resident in one economy wherein an investor resident in another economy owns, either directly or indirectly, 10 per cent or more of its voting power if it is incorporated or the equivalent for an unincorporated enterprise.

Directional principle - Unlike other financial investments, direct investment is not recorded in the balance of payments on a strict asset/liability basis. Direct investments are recorded on a directional basis (that is, as resident direct investment abroad, or non-resident direct investment in the reporting economy). Funds invested by the direct investment enterprise in its direct investor (reverse investment) are regarded as an offset to funds invested in the direct investment enterprise by a direct investor and its related enterprises.

Discouraged workers - Persons who would like to work and are available to do so, but who are not actively looking for work for various reasons.

Distributive Transactions - Transactions by which the value added generated by production is distributed to labour, capital and government and transactions involving the redistribution of income and wealth (taxes on income and wealth and other transfers).

Double Deflation – The process of deflating gross output and intermediate consumption using separate price indices and then calculating constant price value added by subtraction.

Earnings - The pay that employers provide directly to their employees on a regular basis during a specified reference period. It includes basic pay for time worked or work done as well as for time not worked, such as vacation, holidays and sickness time. In addition, it also includes other payments granted by the employer for various reasons such as: overtime work, unsocial hours or schedules, difficult work, regular bonuses and fringe benefits such as family allowances. Earnings are recorded gross of social security contributions or tax deductions.

Economic Sectors – A subdivision of all institutional units in an economy according to their main functions. The SNA groups resident units of the economy into the following mutually exclusive institutional sectors: (1) non-financial corporations; (2) financial corporations; (3) general government; (4) households; and (5) non-profit institutions serving households. There are also subdivisions of these sectors.

Economic territory – The territory of a country over which the central government exercises authority and common taxes and laws apply. This is the basis for macro-economic accounts of a country and in most cases this will coincide with the legal definition of a country.

Economically Active Population- The sum of the Employed population and the Unemployed population. It is also often known as the "Labour Force".

Economically Inactive Population – Those who are not economically active.

Elementary aggregate - The smallest aggregate for which expenditure data are available and used for price index purposes. The values of the elementary aggregates are used to weight the price indices for elementary aggregates to obtain higher-level indices. Elementary aggregates also serve as strata for the sampling of prices.

Elementary price index - An elementary index is a price index for an elementary aggregate. Expenditure weights cannot usually be assigned to the price relatives for the sampled products within an elementary aggregate, although other kinds of weighting may be explicitly or implicitly introduced into the calculation of elementary indices.

Employed Population – The sum of employees and employers*.*

Enterprise - The smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations but usually consists of just one legal unit.

Equity - Instruments and records acknowledging claims on the residual value of a corporation or quasi-corporation after the claims of all creditors have been met. Equity is treated as a liability of the issuing institutional unit.

Errors and Omissions - Net errors and omissions represents the extent to which the accounts do not balance due to errors or miss-recording. They can be derived from the financial account minus the same item derived from the current and capital accounts.

Establishment - 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.

Expenditure Deflator – The current price of aggregate consumers' expenditure divided by the equivalent constant price aggregate. One of the most commonly used national accounts deflators.

Expense - All transactions that decrease the net worth of the general government sector are classified as expense. The purchase of a non-financial asset is not an expense because it has no effect on net worth. Rather, it changes the composition of the balance sheet by exchanging one asset (the non-financial asset) for another or a liability (the payment for the asset). The major types of expense are compensation of employees, use of goods and services, consumption of fixed capital, interest, subsidies, grants, and social benefits.

External Debt – The total value of loans granted to residents by non-residents.

Factory gate prices - A basic price with the "factory gate" as the pricing point, that is, the price of the product available at the factory, excluding any separately billed transport or delivery charge.

Farm gate prices - A basic price with the "farm gate" as the pricing point, that is, the price of the product available at the farm, excluding any separately billed transport or delivery charge.

Final consumption expenditure of general government –This consists of (a) The value of non-market goods and services produced by government other than own-account capital formation and sales; and (b) Purchases by general government of goods and services produced by market producers that are supplied, without any transformation, to households as social transfers in kind. Final consumption expenditure consists of both individual and collective consumption, whose value is measured by convention as the sum of costs.

Final consumption expenditure of households - Goods and services purchased plus consumption of household production for own final use, such as consumption of goods produced within households for the households' own consumption, the services of owner-occupied dwellings, and goods or services received as income in kind.

Financial Account – Shows the net acquisition of financial assets and net incurrence of liabilities for each financial asset of a sector or the economy during the specified period.

Financial Asset/Claim – An asset that typically entitles the creditor to receive funds or other resources from the debtor under the terms of a liability. Financial assets are unconditional creditor claims that give rise to corresponding liabilities of debtors. An exception is gold bullion held by monetary authorities as reserve asset (monetary gold), which does not have a counterpart liability and is a financial asset by convention.

Financial Auxiliaries – Institutional units serving financial markets, but which do not take ownership of the financial assets and liabilities they handle; and do not take the risks associated with holding financial assets.

Financial Corporations - Resident corporations principally engaged in providing financial services, including insurance and pension fund services, to other institutional units.

Financial derivatives - A financial instrument that is linked to another specific financial instrument, indicator, or commodity, and through which specific financial risks (e.g., interest rate risk, foreign exchange risk, equity and commodity price risk, credit risk) can be traded in their own right in financial markets.

Financial Instrument – A specific type of financial asset.

Financial intermediaries – Institutional units that incur liabilities on their own account for the purpose of acquiring financial assets by engaging in financial transactions on the market. Some characteristics of financial intermediation include: (1) incurrence of liabilities to raise funds for lending; (2) transformation of financial instruments with respect to maturity, interest rate, currency of denomination, etc.; and (3) acquisition of credit and financial risks.

Financial stability – The policies of government or the central bank to avoid excessive turbulence and risk in the financial markets.

Fiscal statistics – A common terminology used for the government financial statistics, especially when directly related to questions of fiscal policy.

Fixed basket or weight indices - A time series of indices that uses the same basket or weights. In a CPI context, the fixed basket (weights) usually consists of the total quantities (expenditure shares) consumed by the designated set of households over a period of a year or more.

Flow of Funds - Comprehensive financial flow and stock accounts showing "whom-to-whom" transactions and stocks. That is, they show the transactions in, and stocks of, a particular financial instrument, issued by a particular sector vis-a-vie each of the other sectors of an economy.

FOB price - Free on board price. The price of a good delivered at the customs frontier of the exporting country. It includes the freight and insurance charges incurred to that point and any export duties or other taxes on exports levied by the exporting country.

Foreign Affiliates - Foreign direct investment enterprises controlled through majority ownership of voting power by a direct investor.

Foreign Direct Investment (FDI) – See Direct Investment.

Foreign direct investment enterprise - See "Direct Investment Enterprise".

Formal sector – Enterprises and entrepreneurs registered with official government agencies and/or paying taxes to government.

Free zone - A part of the territory of a country where any goods introduced are generally regarded, insofar as import duties and taxes are concerned, as being outside the Customs territory.

Full employment - (i) there is work for all persons who are willing to work and look for work; (ii) that such work is as productive as possible; and (iii) that they have the freedom to choose the employment and that each worker has all the possibilities to acquire the necessary skills to get the employment that most suits them and to use in this employment such skills and other qualifications that they possess.

General Government – All entities that implement public policy through the provision of primarily non market services and the redistribution of income and wealth, with both activities supported mainly by compulsory levies (taxes) on other sectors of the economy. Comprises three sub-sectors Central, State and Local government.

Goods and Services Account (In the BOP) - Total goods and services supplied as resources to the economy as output and imports (including the value of taxes less subsidies on products not already included in the valuation of output) and the use of the same goods and services as intermediate consumption, final consumption, capital formation and exports.

Government Debt – The financial liabilities of general government covering loans and similar instruments only.

Government Deficit – see net lending/borrowing.

Government units - Legal entities established by political processes. They have legislative, judicial or executive authority over other institutional units within a given area. The principal functions of government units are to assume responsibility for the provision of goods and services to the community or to individual households and to finance their provision out of taxation or other incomes, to redistribute income and wealth by means of transfers, and to engage in non-market production.

Gross Fixed Capital Formation (GFCF) - Expenditures on both tangible and intangible fixed assets.

Gross National Income (GNI) - The incomes remaining in a particular economy after taking account of cross border income flows of various kinds.

Gross output – The total value of output of goods and services by all producing units in an economy, usually measured at basic prices.

Green GDP. A GDP estimate that treats more environmental factors as economic resources than conventional GDP estimates.

Hedonic method - A regression model in which the market prices of different products are expressed as a function of their characteristics. Non-numerical characteristics are represented by dummy variables. Each regression coefficient is treated as an estimate of the marginal contribution of that characteristic to the total price. The hedonic method can be used to adjust prices for the effects of quality changes.

Holding company - A separate legal unit, which only holds assets for one enterprise. Under SNA93 these legal units are considered to carry out an ancillary activity and should be combined with the other legal units of the enterprise. Under SNA2008 they are allocated to the financial corporation sector of the economy.

Holding corporations - Corporations that control a group of subsidiary corporations and whose principal activity is owning and directing the group.

Hours of work - Any period of time spent on activities which contribute to the production of goods and services. "Normal" or "usual" hours of work are the hours that workers are expected to spend on work activities during a short reference period such as one day or one week, as stipulated in laws or regulations, collective agreements or arbitral awards, or establishments' rules or customs. "Hours actually worked" are the hours that workers spent on work activities during a specified reference period.

Households - A group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food.

Imputed price - The price assigned to an item for which the price is missing in a particular period. The term "imputed price" may also refer to the price assigned to an item that is not sold on the market, such as a good or service produced for own consumption, including housing services produced by owner occupiers, or one received as payment in kind or as a free transfer from a government or non-profit institution.

Income related to paid employment – A more comprehensive measure of the level of remuneration of workers in paid employment. In addition to earnings, it includes all irregular bonuses and payments and all social security benefits received from employers directly or from a social security scheme, if they are related to employment. These include family and education allowances as well as sickness and maternity benefits. They also include benefits received by persons who are no longer in employment, such as unemployment benefits, pensions, invalidity benefits. All these social benefits will be part of income from paid employment only insofar as workers received them as a result of their participation in work activities.

Income related to self-employment - The value of goods and services produced by the self-employed, net of operating expenses (such as salaries paid, raw materials used, depreciation of machines and instruments and taxes paid), plus any salary received and social security benefits (net of contributions). Income related to self-employment also includes benefits received by self-employed persons who are no longer in employment, such as unemployment benefits, pensions, invalidity benefits. As with income related to paid employment, all these social benefits will be part of income from self-employment only insofar as workers received them as a result of their participation in work activities.

Industry – A classification of Institutional units based on the main economic activity of the unit. An institutional unit is classified to an "industry" based on its main product. 'Industry' is often used as a synonym for 'activity', for the 'industrial sector' and for 'industrial activity'.

Informal economy /sector – That part of an economy not measured by the formal sector. Includes units not covered by government regulations and those parts of the economy which bypass the regulations and registration requirements of government. These business enterprises and entrepreneurs typically operate at a low level of organisation, with little or no division between labour and capital as factors of production and on a small scale. Labour relations - where they exist - are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees.

Input price/ input PPI - A measure of the change in the prices of goods and services bought as intermediate inputs by domestic producers. Covers both domestically produced intermediate inputs and imported intermediate inputs. Valuation is at purchasers' prices.

Input-output tables – Analytical tables showing what input products (or industries) are required to generate each output product (or industry). They are derived from supply use tables.

Institutional unit - An economic entity capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities.

Intermediate Consumption - Purchases of the goods and services by a business required for the purposes of its own production of goods and services.

International Comparison Program (ICP) - A global statistical initiative established in 1970 to produce internationally comparable price and expenditure levels.

International Investment Position (IIP) – A statistical statement that shows at a point in time the value of: financial assets of residents of an economy that are claims on non-residents or are gold bullion held as reserve assets; and the liabilities of residents of an economy to non-residents.

Inventories – Physical stocks of goods used in the process of production or goods awaiting sale.

ISIC - The international standard classification of economic activities arranged so that entities can be classified according to the activity they carry out. ISIC is often referred to as a classification of industry.

Labour costs - The actual cost to employers of employing labour. It has an earnings component and a non-earnings component. The earnings component is similar to the concept of earnings. The non-earnings component includes: payments in kind to workers (e.g. housing, canteens, day care centres); and all social security contributions and expenditures, vocational training expenses, and taxes on employment and payrolls, which are not part of earnings.

Labour Force – see Economically active population.

Laspeyres price index - A basket index in which the basket is composed of the actual quantities of goods and services in the earlier of the two periods compared, the price reference period. It can also be expressed as a weighted average of the price relatives that uses the expenditure shares in the earlier period as weights. The earlier period serves as both the weight reference period and the price reference period.

Labour productivity - Output per unit of labour input.

Linking - Splicing together two consecutive sequences of price observations, or price indices, that overlap in one or more periods. When the two sequences overlap by a single period, the usual procedure is simply to rescale one or other sequence so that the value in the overlap period is the same in both sequences and the spliced sequences form one continuous series.

Market Value – The price of an asset, at the time of valuation, if sold to an independent third party.

Merchanting - The purchase of goods by a resident of the compiling economy from a non-resident combined with the subsequent resale of the same goods to another non-resident without the goods being present or crossing the border of the compiling country.

Metadata – Information (data) about the statistical data such as definitions, sources, methods and data formats.

Modes of services supply - The GATS defines trade in services as covering four modes of supplying services, as follows: cross-border supply (Mode 1); consumption abroad (Mode 2); commercial presence (Mode 3); and presence of natural persons (Mode 4).

Monetary Gold - Gold bullion held by the monetary authorities as reserve assets.

Monetary statistics - The stocks and flows of the assets and liabilities of the resident financial corporation sectors with respect to all other resident institutional sectors and non residents.

Money – Measures of the amounts of cash and transferable deposits which can be used for payment of good, services or purchase of other financial instruments.

Money Market Funds (MMFs) - Collective investment schemes that raise funds by issuing shares or units to the public. The proceeds are invested primarily in money market instruments. For an investment fund to be recognised as an MMF, there needs to be: (1) a certain degree of capital certainty (reliable store of value); and (2) the possibility to withdraw funds immediately or on short notice.

Net Debt – Gross debt less the corresponding financial assets under each instrument category.

Net lending/borrowing – The balancing item after the income and expenditure and capital accounts. It is a summary measure of the extent to which one sector of the economy is either putting financial resources at the disposal of other sectors in the economy or utilising the financial resources generated by other sectors. For the government accounts this balancing item is commonly referred to as the government deficit. It may therefore be viewed as an indicator of the financial impact of government activity on the rest of the economy.

Net operating balance – In government accounts, the balance between revenue and current expenditure representing a summary measure of the ongoing sustainability of government operations. It is broadly comparable to the national accounting concept of "saving".

Net worth - The net worth of an institutional unit (or grouping of units) is the total value of its assets minus the total value of its liabilities.

Non-Financial Corporations - Resident corporations not engaged in providing financial services, including insurance and pension fund services, to other institutional units.

Non-monetary transactions - These include all transactions that do not involve any cash flows, such as barter, in kind transactions, and certain internal transactions. They must be assigned a monetary value for accounting purposes.

Non-profit institutions (NPI) - Legal or social entities created for the purpose of producing or distributing goods and services, but they cannot be a source of income, profit, or other financial gain for the institutional units that established, control, or finance them. An NPI may engage in market or non-market production.

Non-Residents – All economic entities and persons not classified as resident.

Operating surplus (profits) – The balance between total output and total inputs during an accounting period. For household enterprises/self-employed this is known as mixed income.

Other financial Corporations – All financial corporations other than depository corporations,

Other investment - A residual category in the BOP and IIP that includes positions and transactions other than those included in direct investment, portfolio investment, financial derivatives and employee stock options, and reserve assets. Bank and other lending, trade credit and insurance technical reserves are the main components.

Outlier - A term generally used to describe any extreme value in a set of survey data. These extreme values require further investigation to confirm if they are correct or not.

Output price / Output PPI - A measure of the change in the prices of goods and services sold as output by domestic producers. It covers both output sold on the domestic market and output sold as exports. Valuation is at basic prices.

Own-account workers - Self-employed individuals who do not engage 'employees' on a continuous basis.

Paasche price index - A basket index in which the basket is composed of the actual quantities of goods and services in the later of the two periods compared. The later period serves as the weight reference period and the earlier period as the price reference period. The Paasche index can also be expressed as a weighted average of the price relatives that uses the actual expenditure shares in the later period as weights.

Perpetual Inventory Methods (PIM) – Methodology often used by national accountants to estimate the current replacement value of stocks of fixed capital and the estimates of the consumption of fixed capital.

Portfolio investment – Cross border transactions and positions involving debt or equity securities, other than those included in direct investment or reserve assets.

Price index – An ordered set of numbers designed for aggregate comparison of prices, usually between two different time periods or between two different geographical areas.

Price quotes – The money value quoted for a given product by a given supplier at a given time. Note that only a very small fraction of the possible transactions can ever be collected as price quotes. The normal aim is to choose quotes that are "typical" of the prices faced by the relevant population but formal methods for testing this are very rare. In any case it is necessary to trade-off the requirement of typicality and that for comparability when forming price relatives (see below). The result is that a set of price quotes selected for an inter-temporal price index will rarely be suitable for an inter-country or inter-region price index and vice-versa. Note that it is very rare for statisticians to select price quotes that are typical for a particular social group such as "the poor". It is also rare for quotes for exactly the same product from exactly the same supplier to be available every month for years and years.

Price relative - The ratio of two price quotes. Price quotes used to calculate a price relative should be for products that are completely comparable in terms of the specification of the goods for sale, the location where they are sold, the terms of payment, means of delivery, and pack size. Where it is impossible to obtain quotes for sufficiently similar products a price relative cannot be calculated. In some cases however it may be possible to estimate a quality adjustment and calculate an adjusted price relative.

Primary income account - The amounts payable and receivable in return for providing temporary use to another entity of labour, financial resources, or non-produced nonfinancial assets.

Producer Price Indices (PPI) – Price indices measuring the change in producer prices. These are the amounts receivable by the producer from the purchaser for a unit of a good or service produced as output minus any value added tax (VAT), or similar deductible tax, invoiced to the purchaser. They exclude any transport charges invoiced separately by the producer.

Products – Homogenous categories of goods or services produced as part of the process of economic activity – see also CPC.

Production Boundary – The boundary between economic and non economic activities. For instance most services produced and consumed in the home, such as cooking, lie outside the production boundary in normal national accounts despite their acknowledged value.

Productivity – A ratio of a volume measure of output to a volume measure of input use (see for example labour productivity). Multi-factor productivity (of total factor productivity) is a productivity measure that relates gross output to both primary (capital and labour) and intermediate inputs (energy, other intermediate goods, services).

Profits – Operating profits in business accounts are the difference between income from operations and current expenditure on operations. Gross profits are the amount remaining after capital expenditure and Net profits the amount remaining after tax.

Purchasing Power Parities (PPPs) - World-wide indices that compare the price levels in various countries. They are used to produce more meaningful comparisons between countries for figures expressed in local currency units, than those produced using currency exchange rates.

Public Corporations – Government controlled entities, whose primary purpose is to engage in commercial activities.

Public sector - The general government sector plus government-controlled entities, known as public corporations, whose primary activity is to engage in commercial activities.

Purchaser Prices - The amounts paid by the purchaser, excluding any VAT or similar tax deductible by the purchaser, in order to take delivery of a unit of a 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.

Quality adjustment - An estimate of how much of the change in the price of a product is attributable to changes in its physical or economic characteristics. It requires an evaluation of the contributions of the differences in particular characteristics to the differences in the observed prices of two products.

Rebasing - This may have different meanings in different contexts. It may mean: changing the weights used for a series of indices; changing the price reference period used for a series of indices; or changing the index reference period for a series of indices. The weights, price reference period and index reference period may be changed separately or at the same time.

Reinvested earnings - Direct investors' shares in proportion to equity held of earnings that foreign subsidiaries and associated enterprises do not distribute as dividends, and earnings that branches and other unincorporated enterprises do not remit to direct investors.

Replacement product (substitute) - A product chosen to replace a product for which prices have been collected previously, either because the previous product has disappeared altogether or because it accounts for a diminishing share of the sales of the outlet, or the expenditures within the elementary aggregate.

Reserves / Reserve assets/ Official reserves - External assets that are readily available to and controlled by monetary authorities for meeting balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes (such as maintaining confidence in the currency and the economy, and serving as a basis for foreign borrowing.

Residents - Persons or other institutional units who maintain, or intend to maintain, a presence for one year or more in an economic territory. Students, members of the armed forces and diplomats remain residents of their home country regardless of their length of stay.

Rest of the World – Non-resident economic units involved in transactions with, or holding assets and liabilities of residents.

Rest of the World Account – The transactions of non-residents with residents of an economy. The SNA equivalent to the BOP accounts.

Revenue - All transactions that increase the net worth of the general government sector are classified as revenue. Governments receive three major types of revenue from their fiscal operations: taxes, social contributions, and other revenue. For many developing countries, the revenue from these sources is supplemented by grant income. The sale of a nonfinancial asset is not revenue because it has no effect on net worth. Rather, it changes the composition of the balance sheet by exchanging one asset (the nonfinancial asset) for another (the proceeds of the sale).

Seasonal products - Products that either are not available on the market during certain seasons or periods of the year, or are available throughout the year but with regular fluctuations in their quantities and prices that are linked to the season or time of the year.

Secondary Income Account - The redistribution of income, that is, when resources for current purposes are provided by one party without anything of economic value being supplied as a direct return to that party. Examples include taxes, personal transfers and current international assistance.

Securities - Financial claims that have the characteristic feature of negotiability (i.e. they can be bought and sold on a market). Debt securities are negotiable instruments serving as evidence of a debt that units have obligations to settle by means of providing cash, a financial instrument, or some other item of economic value. They include bills, bonds, notes, negotiable certificates of deposit, commercial paper, debentures, asset-backed securities, and similar instruments normally traded in the financial markets.

Self-employed – Those persons who own and run their own business, whether or not they have employees.

Services - The result of a production activity that changes the conditions of the consuming units, or facilitates the exchange of products or financial assets. Services cannot be traded separately from their production. By the time their production is completed, they must have been provided to the consumers.

Small and medium-sized enterprises (SMEs) - Enterprises that belong to size categories defined by employees and/or financial variables. The size criteria will vary by country and will depend on policy and or other local factors.

Social Security Funds - Institutional units devoted to the operation of social security schemes. All social security schemes are organized and operated only by government units.

Splicing - The introduction of a replacement item and attributing any price change between the replacement item in the period it is introduced and the replaced item in the period before the introduction to the change in quality.

Structural Business Survey - A survey, usually annually, covering a wide range of variables for example (i) the structure and evolution of the activities of businesses; (ii) the factors of production used and other elements allowing business activity, performance and competitiveness to be measured; (iii) specific characteristics of enterprises related to particular groupings of activities.

Subsidiary - An enterprise in which another enterprise has a "controlling" influence, usually taken in business accounting to mean 20% ownership or more. Those with less than 20% would be classified as "associates".

Supply Use Balancing – The process of ensuring a balance for a particular product between the total supply (domestic production plus imports) and the total use (domestic consumption plus exports).

Supply Use Tables (SUT) – Detailed matrix tables showing which products are required as inputs to the output of each industry; and extended to then show all elements of the output, income and expenditure approaches to measurement of GDP.

System of National Accounts (SNA) - The internationally agreed standard set of recommendations on how to compile measures of economic activity.

Tariff - The official and legal customs listing of commodities/products and their corresponding rate of import duty. These are usually a local and extended version of the HS.

Trade in Goods – Generally refers to international trade in goods, known in statistical circles as IMTS – International Merchandise Trade Statistics.

Trade in Services - Generally refers to international trade in services, known in statistical circles as SITS – Statistics on International Trade in Services.

Trade surplus/deficit – The balance between exports of goods (or goods and services); and imports of goods (or goods and services).

Transhipment - The Customs procedure under which goods are transferred under Customs control from the importing means of transport to the exporting means of transport within the area of one Customs office which is the office of both importation and exportation. The goods do not therefore cross the Customs frontier of the importing country.

Transitivity - When an index is transitive, the index that compares periods (or countries for PPPS) j and l indirectly through period k is identical with the index that compares j and l directly. Thu if $_jX_k$ denotes a particular kind of price index that measures the change between periods j and k, then: $_jX_l$ multiplied by $_kX_l = _kX_l$ where the indices $_jX_l$ and $_kX_l$ are of the same type.

Travel - In SITS and BOP, travel refers to the acquisition of goods and services in an economy by individuals who are visiting but not resident in that economy. Acquisitions of goods and services by border, seasonal, and other short-term workers in their economy of employment are also included in travel. However, travel excludes the acquisition of valuables, consumer durables, and other consumer purchases that are included in general merchandise trade.

Turnover - The totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties.

Underemployed - An employed person who has not attained their desired full employment level (see full employment).

Unemployed – Individuals without a job and actively seeking and available for employment.

Unemployment rate – The unemployed as a percentage of the Active population/Labour force.

Value – Price times quantity. The value of the expenditures on a set of homogeneous products can be factored uniquely into its price and quantity components. Similarly, the change over time in the value of a set of homogeneous products can be factored uniquely into the change in the unit value and the change in the total quantities. There are, however, many different ways of factoring the change over time in the value of a set of heterogeneous products into its price and quantity components.

Value Added - The difference between Gross Output and Intermediate Consumption.

Vulnerable employment - A concept used by economists but which is not part of the standard statistical definitions. The World Bank defines it as "unpaid family workers and own-account workers as a percentage of total employment". However others would also include all jobs in industries where job contracts are relatively informal and often short term such as agriculture, construction and certain service sectors.

Wage rates – The prices of a unit of labour, before adding any bonuses for overtime, shift work or family allowance, and before deducting contributions for social security schemes and for advanced tax payments. Wage rates can be expressed in units of time, such as an hour, a week, a month, etc., or as piece rates.

Weights - A set of numbers summing to unity that are used to calculate weighted averages. In a CPI context, the weights are generally actual or hybrid expenditure shares that sum to unity by definition. They are used to average price relatives, or elementary price indices. Quantities of different kinds of products are not commensurate and not additive. They cannot serve as weights. The quantities that make up a basket should therefore not be described as quantity weights. Most price indices claim to be base weighted. i.e. they use weights from the period or location where the index begins. These are often referred to as Lespeyres indices. Paache indices use weights from the current period or location while Ideal Indices use formulae that combine both sets of weights. Note that in practise weights must often be taken from survey results for a year rather than for a base or current month. Also that it is often relatively easy to use such surveys to look at the results of using weights that apply to different social groups.

Wholesale price index - A measure that reflects changes in the prices paid for goods at various stages of distribution up to the point of retail. It can include prices of raw materials for intermediate and final consumption, prices of intermediate or unfinished goods, and prices of finished goods. The goods are usually valued at purchasers' prices. For historical reasons some countries call their PPI a "wholesale price index" even though the index no longer measures changes in wholesale prices.

Working age population – The sum of the Active and the Inactive populations.

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Annex A: Financial programming and PRSPs

Table 9: Financial programming sector sheets, key features

Sector	Key Features
Real	The primary assumption in this sector is the forecast of growth in GDP at constant prices. This is used to extrapolate the current figure for GDP at factor cost into the coming years. Further assumptions are made for total indirect taxes and subsidies to convert GDP at factor cost into GDP at market prices. Finally, an assumption is made about the future path of the GDP deflator in order to switch between GDP at constant prices and GDP at current prices. Having determined the value of GDP in future years, it is necessary to determine its composition. Public consumption is determined by the FISCAL sheet. By making assumptions about the share of investment in GDP, it is possible to produce forecast figures for investment. Finally, Imports and Exports are taken from the Balance of Payments - BOP (EXTERNAL) sheet. Therefore, having determined the total value for GDP and all but one of its components, the residual component (Private Consumption) must be set to ensure consistency with the basic accounting identity.
Fiscal	This sector is primarily focused on the country's national budget. Firstly, tax revenue is determined (based on an assumption about its share of GDP) as well other sources of revenue, such as grants, privatisation proceeds and other non-tax revenue. Assumptions are made about the government's expenditure (excluding debt service and lending). The interest payments on debt are calculated in a separate DEBT sheet. These factors determine the government's overall deficit and hence the government's borrowing requirement. Future principal repayments on external debt are determined by the DEBT sheet, so all that remains is for the user to make assumptions about disbursements on external debt and net disbursements on domestic debt. Note that there is no residual in this sector to balance government borrowing with the overall deficit. The user is required to manually adjust either expenditure or borrowing until the budget is balanced in each forecast year. As these are key policy variables, it would not be helpful to automate one of them by choosing it as a residual.
Monetary	The monetary sector is derived by combining the balance sheet of Government with those of the scheduled banks. Net foreign assets of the Government and the scheduled banks are determined by the net flow of foreign currency into the country, which is given by the change in official reserves in the balance of payments. Net domestic assets include net claims on government and net claims on other sectors (i.e. the private sector). Net claims on government is primarily determined by the outstanding stock of central government debt, which is taken directly from the DEBT sheet. Net claims on other sectors is the residual in this sector and therefore calculated at the end. Broad money can be derived from the economic relationship between nominal GDP, broad money and the velocity of money (PY=vM). Broad money is therefore calculated by dividing nominal GDP by an assumed figure for the velocity of money. Other items (Net) is essentially a collection of line items in the accounts of Government and scheduled banks that are not already included above (e.g. share capital). Having determined everything else using the above assumptions, net claims on other sectors is the residual and is set to ensure consistency.
External	The external sector is essentially a representation of the balance of payments, which captures the flow of foreign currency into and out of the country. The current account is determined by assumptions about the import and export of goods and services, income and remittances. Also included in the current account are government interest payments on external debt (taken from the DEBT sheet) and external programme grants (taken from the FISCAL sheet). The capital account may include external project grants (taken from the FISCAL sheet). The financial account requires assumptions about foreign direct investment and portfolio investment. The only other significant components of the financial account are the disbursements and repayments of external loans to government, which are taken from the FISCAL and DEBT sheets respectively. The change in official reserve assets is used as the residual to ensure consistency in this sheet.

Table 10: Full table of Data Needs for PRSB Blocks[27]

PRSP Building Block	Data Needs
Who are the poor and why? Constructing a basic poverty profile—Who? Where? For how long?—and identifying key patterns of poverty, inequality, and vulnerability. Examining regulatory and spending policies, and institutional factors, that contribute to the lack of opportunities among the poor—based on information about their sources of income, their assets (human and physical), and access and utilization of key services. Assessing the main needs and vulnerabilities of the poor and prioritizing based on, for example, the number of people with unsatisfied needs and/or facing risks, and the magnitude of their needs/risks.	Relevant data from surveys and multi topic surveys (by region, rural and urban location, and household type) Administrative data disaggregated by gender and age User surveys Qualitative assessments Census data
What policies are needed to support more rapid growth? Determining how macro stability can be achieved and sustained—fiscal, monetary, and exchange rate policy—identifying sources of noninflationary finance. Transparency and accountability in fiscal management. Determining whether conditions for private sector growth are present: institutional and regulatory arrangements, functioning markets and access to infrastructure, public ownership role, property rights, judicial system, corruption, banking system, trade regime, tax system, infrastructure, education, and skills. Examining the extent to which the poor participate in markets, notably labour and financial (access to credit).	National accounts data **1.8** Revenue data and projections **1.6** Data on business conditions from surveys of small operators **1.3** Corruption surveys
What are the major obstacles to the poor's participation in more rapid growth? Examining the poverty focus of government spending: size of non-productive military spending, amount and effectiveness of poverty-focused spending, the regional and rural and urban spending mix. Examining the extent of formal regulations and informal corruption, and impact on microeconomic and small and medium enterprises. Level of transparency and accountability in public expenditure systems. Assessing the tax system's impact on the poor and its efficiency. Distribution of assets (education, health, land) Access to credit. Infrastructure constraints—distribution of supply and quality.	National accounts **1.8** Data by region and level of service in urban and rural areas. Data on income, expenditure, assets, and employment sources from household surveys (by gender, region, and age).
How can governance arrangements be made more effective? Ensuring transparent electoral processes and developing power-sharing arrangements to ensure stability. Reviewing effectiveness of antidiscrimination legislation and ways to enhance enforcement. Ensuring an independent judiciary and a reliable police system Identifying the main barriers to more effective public expenditure management, e.g., low real wages in the public sector; lack of unity in the budget preparation process or	Disaggregated expenditures by sector **1.6** Expenditure tracking surveys Public accounts and information dissemination **1.6**

[27] Modified from World Bank (2002) PRSP Sourcebook Table 1 (preface page ix). Cross references to Part 1 sections of this guide are shown as numbers **in bold**.

between sectoral plans; dual budgeting.

How can broad-based participation in dialogue and decision making be enabled? Assessing the current status of participation, including the representativeness and accountability of governance structures. Disseminating information on poverty diagnostics, policy options, and goals to facilitate participation Seeking involvement in strategy design at the national and local levels and consulting civil society and the private sector Analysing feedback on program implementation and budget execution.	Data gathered during program monitoring and impact evaluation (by gender, region, and locality) Data on actual expenditures by economic classification 1.6
Are key sectoral policies and programs—e.g., health, education, rural development, and infrastructure—working to reduce poverty? What is needed? Examining distributive impact of major programs—distribution of spending across households, regions, and urban and rural localities. Isolating sources of any problems, whether supply side or demand side. Assessing effectiveness and efficiency of public spending. Considering potential for private sector solutions and the need for regulatory reforms to facilitate expansion. Considering financing needs for pro-poor priorities, based on intra and inter sectoral reallocations as well as increased expenditures as appropriate. Establishing linkages between key sectoral and structural policies and programs and identifying a priority list of policies Setting intermediate and final outcome targets for poverty reduction associated with the sectoral interventions	Administrative expenditure data (by region and level of service) **1.6 partial** Household consumption and income data by region from representative household survey **1.8 partial** User surveys (by sector and level of service) Participatory assessments
Can we measure progress in poverty reduction and the impact of policies and programs? Setting measurable indicators. Ensuring relevant data are being collected, for example, national accounts, actual budget expenditures, administrative systems, surveys, and qualitative studies, and assessing the involvement of civil society. Establishing whether the relevant data on key intermediate and final outcome indicators are being analysed and the results disseminated. Are major policies and programs being evaluated? If not, identifying key candidates for evaluation. Disseminating results and getting feedback from stakeholders on policy and program design and redesign.	Data on consumption, income, and employment from household surveys **1.8 partial** Data on educational attainment and health service utilization from administrative records National accounts data **1.8** Administrative Data

Annex B: International websites links

Price statistics - CPI and PPIs can be found at the ILO and IMF data portal websites: http://laborsta.ilo.org/ and http://elibrary-data.imf.org/ respectively. PPP data can be found at http://icp.worldbank.org/

Labour statistics - data can be found at http://laborsta.ilo.org/ and http://unstats.un.org/unsd/mbs/default.aspx. A useful web page with cross links to databases is http://www.ilo.org/public/english/support/lib/resource/subject/labourstat.htm.

Business and enterprise statistics - OECD portal (http://data.oecd.org/) and also at the UN statistics office site (http://unstats.un.org/unsd/mbs/default.aspx).

Trade statistics - data on can be found at all of the following websites:

- UNCTAD   http://unctadstat.unctad.org/EN/

  OECD   http://data.oecd.org/

  UNSD   http://unstats.un.org/unsd/mbs/default.aspx

  WTO   http://www.wto.org/english/res_e/statis_e/statis_e.htm

  ASEAN   http://aseanstats.asean.org/

  AfDB   http://www.afdb.org/en/knowledge/statistics/data-portal/

International accounts - IMF website: (http://elibrary-data.imf.org/). Data on FDI can be found on the OECD portal (http://data.oecd.org/). African data on the external sector can be found at the AfDB data portal (http://www.afdb.org/en/knowledge/statistics/data-portal/) FDI statistics for ASEAN countries can be found at http://www.asean.org/resources/2012-02-10-08-47-55/asean-statistics.

GFS and government debt can be found at the IMF website: (http://elibrary-data.imf.org/). Summary indicators can also be found at the World Bank website http://data.worldbank.org/topic/public-sector.

MFS - IMF website: (http://elibrary-data.imf.org/) and in their publication "Financial statistics" also available on-line. Banking and a wide range of other financial statistics can also be downloaded from the website of the Bank for International Settlements (http://www.bis.org/statistics/index.htm).

National accounts - Data can be downloaded from the IMF website (http://elibrary-data.imf.org/) and the OECD data portal (http://data.oecd.org/). African data on Key aggregates from the national accounts can be found at the AfDB data portal (http://www.afdb.org/en/knowledge/statistics/data-portal/)

A database of input-output and supply-use tables for many countries of the world can be found on the database of the University of Groningen, Growth and Development Centre: http://www.rug.nl/research/ggdc/databases

Other useful sites:

AFRISTAT: http://www.afristat.org/

Paris21: http://www.paris21.org/

SDDS and GDDS - Country pages for the can be found on the IMF website via the following links: http://dsbb.imf.org/Pages/SDDS/CountryList.aspx and http://dsbb.imf.org/Pages/GDDS/CountryList.aspx

If you would like to discuss OPM's insights and expertise in economic statistics, please contact Matthew Powell (matthew.powell@opml.co.uk) or your nearest OPM office:

OPM Oxford Simon Hunt OPM Managing Director +44 (0)1865 207 300 admin@opml.co.uk	**OPM Dar es Salaam** **Marta Moratti** Country Manager info.tanzaniaoffice@opml.co.uk	**OPM Islamabad** **Abdur Rauf Khan** Country Director info.pakistanoffice@opml.co.uk
OPM New Delhi **Meenu Bhalla** Office Manager info.indiaoffice@opml.co.uk	**OPM Pretoria** **Stephanie Brockerhoff** Country Manager info.southafricaoffice@opml.co.uk	**OPML Jakarta** **Smita Notosusanto** Country Director info.indonesiaoffice@opml.co.uk OPML Jakarta
	OPM Dhaka **Rashid Zaman** Country Manager info.bangladeshoffice@opml.co.uk	**OPM Kathmandu** **Suresh Tiwari** Country Director info.nepaloffice@opml.co.uk