ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA (ESCWA)

STUDY ON NATIONAL ACCOUNTS IN THE ESCWA REGION
SOURCES AND METHODS

United Nations

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Preface and acknowledgement

This study, produced by the Statistics Division at the Economic and Social Commission for Western Asia (ESCWA), is a review of the sources and methods used in the compilation of National Accounts in the region. Its main aim consists in setting a baseline for the Statistic Division's plan of action to increase in the medium-long term the statistics capacities of member countries in the estimation of high-quality National Accounts data and comply with the latest international standards and recommendations of the System of National Accounts. The content of the study is mainly based on the information collected through the responses to a questionnaire designed by the ESCWA. The questionnaire passed through several sessions of assessment with member countries to better fit the region's specifications.

The publication is the result of a collaborative work effort undertaken by an ESCWA team composed by Giovanni Savio, Aloke Kar and Majed Skaini. Gratitude is extended to all the National Accounts focal points at the National Statistical Offices of the fourteen ESCWA member countries for their receptiveness and collaboration in providing the team with the information relevant for the publication. This study would not have seen the light without their cooperation and responsiveness.

CONTENTS

I. INTRODUCTION

Stimulated by the need to fortify and increase capacity building in the field of National Accounts statistics in the Western Asia region, and in line with its concern about the level of implementation of 1993 System of National Accounts (1993 SNA) in the area, ESCWA conducted a survey in 2009 to explore the underlying aspects and the main obstacles hindering its member countries from fully implementing the 1993 SNA fifteen years after its adoption.

The survey was further inspired by the need to assess the *status quo* in the implementation process at the regional level, in view of the new challenges represented by the recent adoption of the 2008 System of National Accounts (2008 SNA) and the international project launched in the Luxembourg Recommendations on Global Implementation and Outreach for the System of National Accounts in May 2008.[1]

Accordingly, a questionnaire was designed by the ESCWA Statistics Division and sent to all the fourteen member countries inquiring about the sources of their National Accounts data, the compilation practices followed and the methods and degree of 1993 SNA implementation. Detailed questions were directed targeting specific objectives such as general compliance status, classification levels implemented, scope, coverage, uses and obstacles, methods and sources and sequencing of accounts.

The survey carried out underwent two separate rounds. The first round was conducted in April 2009. The level of response was not satisfactory as, out of the twelve countries that replied, only very few answered all the questions. The quality of responses was thus low, and a lot of ambiguous replies were encountered.

The replies obtained in the first round were deeply analyzed and discussed during a regional Expert Group Meeting, jointly organized by the ESCWA and the United Nations Statistics Division (UNSD) from 12 to 14 May 2009 in Cairo, Egypt. The EGM brought together national accounts specialists from all member countries with UNSD and ESCWA and specialists from other international organizations and projects, notably the International Monetary Fund, the Statistical Office of the European Communities and the MEDSTAT II Project. During the meeting, ESCWA presented the preliminary survey findings based on the outcomes of the first round, questioning the results and highlighting the importance of providing clear, updated and reliable answers in order to build a true image of the regional status.

Successive to that, ESCWA redesigned the questionnaire in a way that provided more clarity and ease interpretation for a second round of the survey. All member countries replied fully to the revised questionnaires, and the results proved to be reliable and of a much higher quality.

This booklet on Sources and Methods provides a synthesis of the replies therein obtained and tries to shed some lights on the status of implementation of the 1993 SNA and the way forward for the future steps at the regional level.

The scheme of the booklet is as follows. The next Section contains a brief overview of the questionnaire. Section III analyzes the main results at the aggregated level and gives a broad perspective on the status of compilation of National Accounts at the level of the ESCWA region. Section IV goes into the details of the sources and methods used by the member countries in the estimation of the supply, demand and income side of Gross Domestic Product (GDP). Section V includes a panoramic overview of the main obstacles to a full implementation of the 1993 SNA and the challenges that are likely to be faced by member countries in the implementation of the new system. Section VI contains a plan of action for the future and briefly concludes. An Appendix to the publication includes the questionnaire used to collect the information.

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[1] See the recommendations emanating from the "International Conference on International Outreach and Coordination in National Accounts for Sustainable Growth and Development", jointly organized by the Statistical Office of the European Communities, Eurostat, and the United Nations Statistics Division, UNSD, from 6 to 8 May 2008, in Luxembourg.

II. THE QUESTIONNAIRE

The questionnaire was designed to address three main areas that would identify and help better assess to what extent the countries actually implement the 1993 SNA. The three areas are: (1) Compliance with the 1993 SNA; (2) Sources and methods of National Accounts estimation; and (3) Scope and coverage of the accounts.

Assessing the compliance with the 1993 SNA indicates the extent to which ESCWA member countries are implementing SNA principles, classifications, accounting rules and concepts. It also indicates the level to which each country has progressed in terms of implementation status, whether moving from SNA 1968 to SNA 1993 (and the speed of movement) or whether there is no movement at all.

A comparative analysis of the main conceptual differences that affect National Accounts aggregates, the concepts of Final Consumption and production boundary between 1968 SNA and 1993 SNA leads to a clear assessment of the level of compliance of each country with the latest standards.

In the designed questionnaire, the main National Accounts notions were listed as a list of 'yes/no' questions, included in the parts A (General Questions on National Accounts Compilation) and D (Coverage) of the questionnaire, see Appendix I. Though the list might not be exhaustive, however, it serves as a sufficient medium for measuring the relative level of compliance of each country.

It is worth mentioning that although it is not necessary for a country to be implementing all of the notions that it is questioned about in order to qualify for compliance with 1993 SNA requirements, non compliance with a significant number of them would pose a question about the practices that the country is following in the implementation process.

Part A of the questionnaire includes general questions on the System followed for compilation, classifications used, release lags and practices, revisions and rebasing policies, data users, obstacles to 1993 SNA full implementation, technical assistance received and staff. This part also includes questions on the main aggregates compiled at both current and constant prices, coverage for institutional sector accounts and specific information on borderline between sectors.

Part B and C of the questionnaire contain questions on sources and methods used for current and constant price estimation of GDP from the production, expenditure and income sides. Though some countries' replies were not extensive and elaborate, others provided extensive inputs. Overall, the information obtained forms a rich base for a valuable evaluation of the reliability and soundness of National Accounts data, and the corresponding methodologies followed. Here, in alignment with the Inter-secretariat Working Group on National Accounts recommendations, the six groups of tables of milestones has been split into a larger number of items in order to get as much information as possible from member countries on the sequence of accounts actually compiled.

Part D investigates the activity coverage of the accounts related to a number of debatable or implementation-sensitive transactions, such as production for own final use, informal production, life and non-life insurance premiums, housing services, own-account fixed capital formation, imputed rents for owner-occupied dwellings, mineral exploration and expenditures on research and development.

Finally, Part E includes 'Other' questions on specific aspects: valuation of output, methods for estimation of Non Profit Institutions Serving Households (NPISHs), consumption of fixed capital, Financial Intermediation Services Indirectly Measured (FISIM), balancing of National Accounts, Supply and Use Tables, and the level of detail used to disseminate final results.

III. MAIN RESULTS

According to the replies obtained, National Accounts statistics are mostly used for governmental budget planning, economic analysis, forecasts and drawing economic policies for decision makers.

In most of ESCWA countries, National Accounts data are used by the government as a guideline in drawing the five year development plan, generating general budget forecasts and predicting future growth rate and investment indicators. Also, and in addition to its use by Ministries of Planning, Central Banks, governmental and international organizations and economic policy makers, it is also widely used by researchers, institutions and universities for economic analysis and other academic purposes.

All member countries compile Annual National Accounts and all countries have made some progress in the implementation of 1993 SNA, except Sudan, which so far is yet to make any attempt.

Most of the countries have rebased their accounts with base year 2000 or a later year. Two countries still have their current series with base year in the eighties. However, only two countries rebase their data regularly every five years.

Most of the countries – ten out of fourteen – have a calendar of release of annual national accounts statistics and most of them – eight out of fourteen – release the preliminary estimates of national accounts within twelve months of completion of the accounting year. In fact, four of these make their first release within six months of the completion of the accounting year.

The International Standard Industrial Classification of All Economic Activities, Revision 4, is used by two countries and the Revision 3.1 by eight countries. The Central Product Classification, Revision 1.1, is followed by six countries, while the Classifications of Individual Consumption by Purpose and Functions of Government are used by ten and eight countries respectively.

The number of staff of the Departments in charge of National Accounts compilation is generally quite limited, reaching the fifteen units or more in highly populated countries (Syrian Arab Republic, Egypt, Sudan, Yemen, Iraq and the Kingdom of Saudi Arabia), while it is below ten staff members in the other countries of the region.

In effect, together with the insufficient coverage of the basic data sources, the lack of staff stands as the main impediment to the 1993 SNA implementation for nine countries, while seven countries indicated as one of the main causes the inadequate training of the staff.

A. CONCEPTUAL COMPLIANCE

Of the thirteen member countries, excluding Sudan, that have started implementing 1993 SNA, ten compile Gross Value Added and Value of Output at basic prices (table 1). Of the three that do not do the valuation at basic prices, two have conducted economic surveys that would yield estimates of output and Gross Value Added at basic prices.

However, seven of the thirteen countries do not have separate estimates of Mixed Income, though all of these have a significant weight of household sector (un-incorporated) enterprises but do not distinguish any of them as belonging to the Quasi-Corporate sector.

Only three member countries do not include cost of own-account mineral exploration in the value of output and do not consider it as capital formation. One of these, Kuwait, has large oil reserves and thus significant exploration activities.

TABLE 1. COMPLIANCE WITH 1993 SNA

| Concepts/approach | Whether adopted | | | |
	'Yes'	'No'	Not relevant	Not reported
Valuation at basic price	10	2	--	1
Mixed income	6	6	--	1
Household sector include unincorporated businesses	10	2	--	1
Quasi-corporate bodies distinguished	3	9	--	1
Own-account mineral exploration expenditure treated as value of output and capitalized	10	3	--	--
Expenditures on research and development activity – both for market and own use	7	6	--	--
Own-account fixed capital formation in Gross Fixed Capital Formation or in Gross Value Added	7	6	2	--

Only six of the member countries analyzed include own-account capital formation in their Gross Value Added and Gross Fixed Capital Formation estimates, though some of the other seven reported inclusion of the expenditures on research and development in capital formation.

B. ACTIVITY COVERAGE IN PRODUCTION-SIDE AGGREGATES

The GDP compilation in some of the member countries is at present not based on complete coverage of economic activities (table 2). In particular, the activities carried out in the informal sector are altogether excluded from GDP estimates in four countries of the region. In two of these, however, informal sector is either absent or has insignificant presence, and thus it is considered as 'not relevant'. The other two countries do not even attempt to make adjustments on the estimates based on data on the "observed" part of the economy.

The countries that cover informal economy in their GDP estimates, however, do not have a system of data collection on the informal sector. Thus, the estimates for the informal sector, or 'non-observed' economy in general, for all these countries are based results of other surveys, like the Household Income and Expenditure Survey, the Labor Force Survey (LFS), and population census.

Besides the economic activities carried out in the informal sector, the other significant exclusion from the coverage is 'Own-account production of housing services by owner-occupiers'. At present, this is not included in the GDP of three member countries.

Agricultural production for own consumption is excluded from the GDP in four cases. All these have very marginal agricultural activities, except fishing.

Only five member countries reported coverage of the 'Non-agricultural household production for own final use' in their GDP.

TABLE 2. ACTIVITY COVERAGE: PRODUCTION-SIDE AGGREGATES

| Economic activity | Whether adopted | | | |
	'Yes'	'No'	Not relevant	Not reported
Agricultural production for own consumption	9	4	--	1
Non-agricultural household production for own final use	9	5	--	--
Informal production	9	4	1	--
Own-account production of housing services by owner-occupiers	11	2	1	--
Production of domestic and personal services by employing paid domestic staff for own use	9	3	2	--
Activities resulting in own-account fixed capital formation	8	4	2	--

C. MEETING THE MINIMUM REQUIREMENTS

As for the 'minimum requirements', all member countries meet the standards set for the production-side aggregates – for both current- and constant-price estimates.

The major weakness in the compilation of National Accounts in five countries is the absence of estimates of expenditure-side aggregates at constant prices. According to our knowledge, estimates are not compiled even in those countries that have not reported in the questionnaire.
The other weakness that most of the countries suffer from is in the compilation of the Rest of the World accounts, which was reported only in five members. However, of the eight countries that have not reported, some do compile the main aggregates, including Net Lending.

D. MILESTONES FOR 1993 SNA IMPLEMENTATION

Of the thirteen member countries that have made attempts at implementing 1993 SNA, five are yet to complete Phase 1 (Basic indicators of GDP), considering that they do not compile expenditure aggregates at constant prices (table 3).

All the remaining eight member countries have completed Phase 2 (Gross National Income and other primary indicators), of which five have completed Phase 3 (Institutional Accounts: first steps) and Phase 4 (Institutional Accounts: intermediate steps) and only one country has completed Phase 5 (Institutional Accounts: last of transaction accounts) (table 4).

Ten member countries calculate employment by industry, while only five over fourteen countries estimate the Rest of the World accounts (up to net lending).

TABLE 3. MEETING THE 'MINIMUM REQUIREMENTS': PRODUCTION-
AND EXPENDITURE-SIDE AGGREGATES

	Whether adopted			
Compilation and release of:	**'Yes'**	**'No'**	**Not relevant**	**Not reported**
Value added and GDP at current prices by industry	14	--	--	--
Value added and GDP at constant prices by industry	14	--	--	--
Expenditure of the GDP at current prices				
Private Final Consumption Expenditure	14	--	--	--
Government Final Consumption Expenditure	14	--	--	--
Gross Fixed Capital Formation	14	--	--	--
Expenditure of the GDP in constant prices				
Private Final Consumption Expenditure	9	4	--	1
Government Final Consumption Expenditure	9	4	--	1
Gross Fixed Capital Formation	9	4	--	1
Value added components by industry at current prices	14	--	--	--
Employment by industry (published)	10	4	--	--
Accounts for the total economy	9	2	--	3
Rest of the World accounts (up to net lending)	5	1	--	8

E. COMPLIANCE WITH 1993 SNA RECOMMENDATIONS IN SPECIFIC
FIELDS AND OTHER PRACTICES FOLLOWED

Thirteen out of fourteen member countries calculate rents for owner-occupied dwellings. In all the cases, the estimates are based on rents actually paid for similar dwellings, sometimes in combination with owners' estimate of the rental value (in two cases) or other method (one case).

Consumption of fixed capital is not calculated in two countries (one of those has estimates for the public component). Only four of the remaining countries use the Perpetual Inventory Method, while the others base their estimates on data on reported depreciation, a combination of both methods, or other approaches.

Expenditures in mineral expolarion are treated as capital formation in ten out of fourteen member countries, while expenditures on research and development are capitalized by seven of them. Seven countries also report that own-account capital formation is included in current investment estimates.

The financial Intermediation Services Indirectly Measured are allocated to the users of the services only in six member countries.

Finally, only four member countries compile Supply and Use Tables, while eight make a cross-classification of output/value added by industries and sectors.

TABLE 4. IMPLEMENTATION MILESTONES

Milestones	'Yes'	'No'	Not relevant	Not reported
Phase 1: Basic indicators of GDP	**8**	**4**	**--**	**--**
GDP at current prices by industry and expenditure aggregates at current and constant prices	13	--	--	--
GDP at constant prices by industry and expenditure aggregates at current and constant prices	8	4	--	1
Phase 2: Gross National Income (GNI) and other primary indicators	**8**	**--**	**--**	**--**
GNI at current prices	13	--	--	--
National Disposable Income at current prices	13	--	--	--
National Savings, net lending / borrowing at current prices	13	--	--	--
Phase 3: Institutional Accounts: first steps	**5**	**7**	**--**	**--**
Production accounts for all sectors	11	2	--	--
Generation of income, allocation of primary income, secondary distribution of income, use of income, capital and financial accounts for the Government	9	4	--	--
Phase 4: Institutional Accounts: intermediate steps	**5**	**7**	**--**	**--**
Generation of income, allocation of primary income, secondary distribution of income, use of income, capital and financial accounts for all other sectors	8	5	--	--
Phase 5: Institutional Accounts: last of transaction accounts	**1**	**12**	**--**	**--**
Financial accounts for all other sectors	3	10	--	--

IV. SOURCES AND METHODS

This Section details on the sources and methods used in National Accouts compilation at both current an constant prices following the supply, demand and income approaches to total GDP. The replies obtained from the National Accounts questionnaire are integrated with information drawn from the International Monetary Fund General Data Dissemination System and the Special Data Dissemination Standard, whenever appropriate, or from other information from the national websites and ESCWA's knowledge of coutryies' practices. The information is presented separately for each ESCWA member country. In general, the information are quite detailed for sources and methods used for current price and the supply-side estimations of GDP, while they are generally incomplete for constant price data and the demand and income approaches to GDP estimation.

A. BAHRAIN

The system used for compiling annual national accounts is based principally on estimating the GDP by kind of economic activity from the production side, while independent estimates are made for the expenditure components with the change in inventories including errors and omissions being used as the balancing item between production and expenditure.

National accounts estimates at current price are compiled using a combination of benchmark survey data, regular sample survey data and administrative records. The statistics are based on establishments interviewed regularly through annual surveys. In addition, other source data from government records, trade statistics, studies such as the cost of production of agricultural output, financial statements of business (profit and loss accounts and balance sheets), and other administrative records are used.

For the production-side estimation, surveys are conducted by mail covering 2,500-3,000 enterprises. Sample frames are constructed from the Establishments Census, conducted by the Central Informatics Organization in 2001. The sample size covers more than 10 per cent of the establishments, and the selection is based on simple random sample techniques. However, the medium- and small-size enterprises across all sectors of the economy are not well covered, both in sample surveys and in poor response rates.

For agriculture and fishing, the value of production is obtained at current prices from the value of agricultural crops produced, livestock and fish landed. The value of production at constant prices is obtained by extrapolating base year estimates, using the volume indices for the products. Intermediate consumption at constant prices is calculated as a fixed ratio relative to output.

Estimates of gross output of crude oil and natural gas are compiled from data on the physical quantity and producer prices obtained from the Ministry of Oil and the National Bahrain Oil Company respectively. Intermediate consumption is estimated on the basis of data obtained from the government budget and the Bahrain Petroleum Company. The estimates at constant prices are obtained through using volume indicators of production to extrapolate base year output at current prices. Intermediate consumption is deflated by an average index of input prices. Gross output and the intermediate consumption of quarrying are compiled from survey results. The estimates at constant prices are obtained through using volume indicators of production to extrapolate output at current prices, while an index of input materials is used to deflate the intermediate consumption.

Overall values for the production and intermediate consumption of the manufacturing industry are calculated at current prices using the financial data from the surveys and the annual financial reports of some industries. The value of production at constant prices is obtained by extrapolation, using appropriate volume indices for the products. For intermediate consumption, weighted average price indices per sub-sector of industries compiled from a combination of the consumer price index, other producer prices of products, and relevant international industrial price indices for different manufacturing activities are used.

In the electricity and water sectors, gross output at current prices represents total government revenues from selling electricity and water, while intermediate consumption is estimated as the total expenditure related to the supply of electricity and water as reported in the government accounts. The value of production at constant prices is obtained by extrapolation using the volume indices, whereas intermediate consumption is taken as a fixed ratio to the output.

The estimates of gross output and intermediate consumption at current prices for the construction sector are derived from survey data. The constant price estimates are obtained through double deflation using the construction cost index (which is a combination of the construction material index and the labor cost index). The intermediate consumption is deflated using the construction material index.

For the wholesale and retail trade sector, gross output at current prices is estimated based on the trade and transport margins obtained from interviews and telephone enquiries for the locally produced commodities by type of commodity and the total trade margin for imports by type of commodity. Intermediate consumption is obtained as the cost structure from the results of interview surveys of this activity. Gross output is deflated using the world non-fuel commodity price index, while a weighted index of wholesale and retail commodities by the manufacturing sector is used for intermediate consumption.

The gross output of real estate, including imputed rent for owner occupied dwellings, at current prices is estimated form information obtained on the number of houses, owner or rented houses, average monthly rent by type of living quarters, and administrative data from estate agencies. The output at constant prices is obtained by extrapolation, using an index of the number of houses and type of dwelling. For intermediate consumption appropriate sub-indices of the consumer price index are used.

For the rest of the services sector, estimates of gross output and intermediate consumption are derived from several data sources, such as surveys, financial statement of companies, administrative data and the cost of government services. The constant price estimates of gross output are obtained through double deflation or extrapolation with appropriated volume indices such as number of passengers, kilometers of flight, number of patients and students, while intermediate consumption is deflated with appropriate sub-indices of the consumer price index or the total consumer price index.

Concerning the demand-side, estimates of final consumption expenditure by households are based on the 1995 household income and expenditure survey and extrapolation using growth in the consumer price index and population since 2005.

Final consumption expenditure by general government is compiled using annual data on general government (including extra budgetary institutions) obtained from the Ministry of Finance.

Data on gross fixed capital formation by kind of activity and by type of asset are from private and public enterprises and the general government.

Comprehensive sources, by kind of economic activity, for the measurement of the change in inventories are not available and the aggregate is derived residually.

Merchandise import and export data, both in volume and value terms, are obtained from the CIO. However, use is made of adjusted estimates of the import and export of goods (including c.i.f. and f.o.b. adjustments) and services prepared by the Central Bank of Bahrain.

B. EGYPT

Following the production approach, data for the agricultural sector come mainly from the Ministry of Agriculture and Land Reclamation (MALR). Data are collected on the area under cultivation, and average productivity for each crop. The MALR calculates the quantity of agricultural output for each crop by

multiplying the area of land under cultivation by the average productivity per acre. Multiplying the quantity estimates by the base year price derives the total real value of agricultural crop production. Estimates are also made using current year prices as published by the Sector of Economic Affairs in the Ministry of Agriculture. Subtracting the value of intermediate consumption derives value added. For crops, intermediate consumption consists of chemical fertilizers, fuel, oils, and maintenance. For livestock it is eggs, fodder, and maintenance. For fisheries it is fuel, and maintenance. For livestock, applying annual growth rates to stock data collected every two years by the MALR derives estimates. Fisheries production is based on data collected at each port on the catch and from fish farms.

The majority of the output in the mining and quarrying sector is by private sector. For the public business sector, data are based on budgets of holding companies and their subsidiaries that are authorized by the Central Agency for Accounting. Data for the private organized sector (i.e. companies that are legally required to maintain accounts) come from a variety of sources, including the Ministry of Industry, the Central Agency for Public Mobilization and Statistics (CAPMAS) surveys, the Investment Authority, the Companies Authority and the Geological Authority.

Data on oil, natural gas and petroleum come from the Companies Petroleum Authority in the Ministry of Petroleum. The authority collects data from private companies and from the General Petroleum Company.

For the electricity sector, price and quantity data, in both current and constant prices, comes from the final accounts and budgets of the Electricity Authority and electricity companies. Water data are sourced from the accounts of the economic organizations and companies responsible for water production, distribution and purification processes.

Data on gross output for the construction sector come from several sources, including the national budget, the Authority of New Urban Communities, banks specializing in real estate, CAPMAS, Egypt Union Contractors, Chamber of Commerce, and various ministries. The Ministry of Housing and Public Utilities collects data from contractors and companies on public and private housing while other ministries provide data on schools, hospitals, cinemas, etc. Intermediate purchases from input/output tables are used to derive value added. Constant value estimates are derived using separate indices of construction prices for the public and private sectors.

Data for the public sector in transportation is obtained from CAPMAS, the Ministry of Transportation, the National Railway Agency, the Civil Aeronautics Association, the Cairo Public Transport Authority and similar agencies. Data come from final accounts, statistical publications and sample surveys and studies. For the private business sector, the number of licenses for taxis, buses, boats and trucks, as well as data on sea freight and private airline passengers are used to compile the estimates.

The output of wholesalers and retailers is measured by the value of the trade margins on the goods they purchase for resale. Data come from a variety of sources, such as the Ministry of Supply, CAPMAS surveys, Chambers of Commerce reports, and the final accounts of public sector companies operating in the trade sector.

Finance output in current prices, including FISIM is derived from banking statistics and currency exchange bureaus. An index based on consumer prices and interest rates is used to generate values in constant prices. Insurance data are derived from public and private insurance companies and pension funds. Insurance industry gross output in current prices is equal to premiums plus investment revenues minus claims payments plus the change in reserves excluding interest paid to policyholders. The consumer price index is used to convert the estimates to constant prices.

For hotels and restaurants, the sources of data are the Ministry of Tourism, the Central Bank of Egypt, the Passport and Immigration Authority, and CAPMAS. Data are collected on the number of tourists, nights

and average expenditures. Gross output is the product of average expenditures per tourist (by nationality) and number of nights. Constant price estimates are calculated on base year data.

Concerning business services, real estate output is based on rent times the number of units (including owner-occupied units), calculated separately for new and existing units. Other business services are estimated based on the results from surveys conducted by the CAPMAS. For new units, rents are derived using a two-step process. First, areas are divided into classes of rents. The number of units in each area is based on the building licenses issued by local governorates. Rentals for units in each area are judgmental and based on informal surveys of real estate agencies and other sources. Constant price estimates are derived using price data in the base year times the number of units in the current year and checked from household surveys.

The output of government services is measured by its production cost. The Ministry of Finance supplies data on the number of employees and their compensation. Output in constant prices is derived extrapolating a measure of the base year compensation.

Personal, social and business services data depend on CAPMAS surveys and the household and income expenditure surveys. In general, estimates are based on quantity index and its trends for each type of service. Constant value estimates are derived using the movements in the employment data.

The methods used to estimate GDP from the demand-side are linked to the various production methods analyzed above; hence, they are not truly independent.

Final consumption expenditures by households for certain categories of goods are estimated using the household surveys. These are supplemented by monthly data from the Ministry of Supply concerning sales of strategic commodities (e.g. tea and sugar), the Nutrition Institute, and various departments in the Ministry of Economic Development. Expenditures on services are derived from projections based on household expenditure surveys. Monthly price data are obtained from CAPMAS and monthly reports from the Chambers of Commerce.

Constant price estimates for government consumption are derived by subtracting the annual cost-of-living increase from compensation and by deflating purchases using the consumer price index. The source of data is the Ministry of Finance.

Capital formation consists of constructions plus machinery and other equipment. Conversion to constant prices is based on prices of construction materials. The principal source of data for machinery and other equipment is import data since there is little domestic production of these items.

Export and import data are taken from balance of payments estimates prepared by the Central Bank. These data are based on banking records plus information from the Egyptian Petroleum Company on oil exports. The Central Bank does not make use of customs data due to their supposed unreliability and lack of timeliness.

Changes in inventories at both current and constant prices are estimated on a residual basis.

From the income-side estimation, sources for compensation of employees and taxes are the CAPMAS, the Ministry of Finance and other sources, as appropriate. Mixed income and Operating surplus are estimated on a residual basis.

Estimates are also obtained for Quarterly National Accounts from the supply-side at current and constant prices for the major activities, based on the use of indicators and the Denton's proportional approach. The coverage for quarterly estimates amounts to about 60 per cent of total GDP. For quarters for which no annual data are yet available, an extrapolation with the quarterly indicator is used.

C. Iraq

The National Accounts of Iraq are compiled and disseminated by the Central Organization of Statistics and Information Technology (COSIT), on an annual and quarterly basis. Quarterly data are available only for GDP at current and constant prices.

Concerning the supply-side, estimation are as follows. For agriculture, field crops, dates, fruits, vegetables etc. are estimated based on the agricultural censuses and the surveys of livestock. Information is also gathered from the General Authority for Veterinary and Livestock. Constant price value added data are obtained by estimating the production (given by the amount of production times the farm gate prices at the base year) and subtracting the production requirements valued at the base year prices.

For mining and quarrying, the Ministry of Oil provides the relevant information. For sulfur and phosphate, the estimation is based on the profit and loss accounts of the concerned public enterprises. Constant price data are obtained by the index of the quantity of crude oil and mining production.

Concerning manufacturing, the yearly establishment survey is the source of data. All large (30 employees or more) and medium (10-29 employees) establishments are covered, while small establishments (less than 10 employees) are sampled. However, due to the present security situation the data coverage is not complete. For constant prices, use is made of the volume index of industrial production

For electricity, gas and water supply, the sources are the reports of the Ministry of Electricity and the Water Department, as well as the household surveys for the data of the private sector (generators). Constant price estimates are obtained through the index of quantities of electricity and water produced.

For wholesale, retail trade, repairs of goods, hotel and restaurants, the consolidated accounts for trade companies of the public sector and balance of payments data prepared by the Central Bank of Iraq are used. Constant price figures are obtained using a weighted index of the relevant goods (food and beverages and tobacco, clothing, fuel, and furniture) included in the consumer price index.

The source of data for public construction is the financial statements of public establishments. Private construction activity is estimated using the number of building permits issued by the authorities. COSIT conducts a yearly survey on a sample of construction sites to measure the actual value of production. In addition, the department uses a fixed ratio to reflect the profit margin of the private sector. The methodology does not include illegal construction activities (building without permits). For construction at constant prices, the index of the cost of buildings and construction is used.

For public transport, storage and communications establishments, data are evaluated by considering financial statements. Private transport is estimated based on administrative data obtained from traffic police as well as from some studies on the revenue and cost of the vehicle. At present, the transport margin is estimated by commodity flow. There are 5 communication companies operating in Iraq. These companies do not provide data to COSIT and, therefore, are excluded from the estimates. At present, estimates are made based on the Household Budget Survey. Private establishments engaged in storage activity are not included in the estimates. Constant price data are obtained through the index of transport and communication from the consumer price index.

Financial intermediation and insurance are estimated using data obtained from the banks and the insurance companies in the public and private sectors, as well as information from the exchange offices. For constant prices, the GDP deflator (net of the oil and bank components) is used.

Real estate and business services information are gathered from the household budget surveys. Constant price data are obtained through an indirect approach using the population growth rate as an indicator.

Information for the community social and personal services is derived from the Ministry of Finance, the General Budget of the Government, and the household budget surveys. Constant prices are estimated using the index of the numbers of employees in the public sector and the consumer price index for the relevant categories, including health services.

From the demand-side estimation, private final consumption expenditure data are obtained through the household budget surveys, while government consumption from the final accounts of the government. The sources for gross fixed capital formation are the Ministry of finance (Current Budget for Investment) and the outcomes of the surveys to the private sector. Inventories are calculated on a residual basis. Exports and imports are estimated based on the balance of payments data obtained from the Central Bank. Estimation at constant prices are not currently done.

Compensation of employees is obtained through the information gathered in the statistical questionnaires. Mixed income and operating surplus are calculated as residuals, while information on taxes and subsidies are sourced through government sources on taxes on production and import, and subsidies paid by the central government to the private companies.

D. JORDAN

Current price estimates of GDP according to the production approach are compiled using essentially two main sources of data: annual establishment-based surveys conducted by the Department of Statistics (DOS) that cover all economic activities, and data for government expenditures, obtained from the Ministry of Finance and other government institutions. Large establishments (defined differently as appropriate for different activities) are fully covered, while medium and small establishments are covered on a stratified sample basis (size, geographic area). Sample frames are constructed by updating the general economic establishment census, conducted in 1999 using administrative records and registers, trade association lists, and other sources. For agriculture sector census of agricultural holdings are used to construct the sample frame.

For each of the major annual surveys (industry, construction, transportation and communication, wholesale and retail trade and hotels and restaurants, business and personal services), data are collected on revenues or sales, intermediate costs, inventory changes, employment, compensation of employees, and acquisitions and disposals of capital assets by type. In the case of agriculture, data are collected for detailed products for both crops and livestock.

Attempts are made to obtain estimations of the informal sector in some activities. Informal activities, such as the unorganized sector in construction, are included, to the extent that they can be captured through administrative sources or household surveys. Illegal activities are not included explicitly in the accounts.

Special deflators are constructed by kind of economic activity to derive constant price data. The sources are the prices of agricultural commodities, the consumer price index, the wholesale price index, the producer price index, the construction price index, and selected price or unit value indices derived from survey data.

Concerning the demand-side, there are no suitable sources for the measurement of private consumption; hence, the estimate is derived residually. Government expenditure is compiled from the budget estimates provided by the Ministry of Finance on the general budget of the government and by independent organizations, municipalities and other governmental institutions. Gross capital formation, including change in stocks, is derived from the government budget and annual reports of selected enterprises, including the agricultural sector, as well as the annual economic surveys by kind of activity. Exports and imports of goods and services are obtained from the balance of payments estimates of the Central Bank of Jordan.

On the income-side, compensation of employees is derived from the annual economic surveys of establishments and government budget estimates. Consumption of fixed capital is based on estimates using a perpetual inventory method for government and from the annual surveys; in most cases, fixed coefficients are applied to the values of the stock of fixed assets of each type. Operating surplus is derived from the annual economic surveys of establishments. Indirect taxes less subsidies are obtained from the annual economic surveys of establishments and government accounts. Net factor income from abroad is derived from balance of payments estimates from the Central Bank.

For deriving constant price estimates, the double deflation method is preferred, where possible, or a volume index for output is used to extrapolate gross value added at current prices from the base year. The compilation procedures to derive constant price estimates are as follows.

For the agricultural sector, the double deflation is used. Quantities produced for each category of crop are valued at base year annual average prices. The value of production of livestock and livestock products is deflated with selected wholesale price indices. Intermediate consumption components are revaluated or deflated with relevant prices/price indices.

For mining, the gross output deflated by relevant price indices is used as a volume index to extrapolate gross value added at current prices from the base year.

In manufacturing, the double deflation is used for the major industries (petroleum refinery, chemical, and food industries) using the industry price index to deflate the output and appropriate indices for the main inputs. The output for the other activities was deflated using relevant industry price indices, and a volume index for output is used to extrapolate gross value added at current prices from the base year.

Deflators for electricity and water are derived from rates charged for different categories of uses. Intermediate consumption is deflated using appropriate price indices for the main inputs, such as the wholesale price indices for fuel and oil.

Separate deflators for construction are derived for residential and non-residential building and engineering construction. Average component prices are collected from government tender records and aggregated. The component price index reflects the installed cost of construction materials, and thus includes labor and other costs. A volume index for output at constant prices is used to extrapolate gross value added at current prices from the base year.

For wholesale trade, the sales are deflated with the relevant wholesale or consumer price indices. The volume indices of deflated sales are used to extrapolate gross output. For restaurants, a deflator is constructed from selected food components of the consumer price index. Current price gross output for hotels is deflated with the cost of living index. A deflator for intermediate consumption is prepared from relevant price indices.

For transportation and communication, the double deflation is used. For output, the DOS constructs price indices for each mode of transport and communication using the weight of output in the base year. Appropriate price indices are used to construct deflator for intermediate consumption.

Gross output for banks, insurance and business services is deflated with the implicit price of total GDP, excluding financial services. Gross output for real estate services is deflated with the consumer price component for housing rents.

For community, social and personal services the double deflation is used through the relevant components of the consumer price index. The value added at constant prices of government services is estimated as the sum of constant price compensation of employees and constant price consumption of fixed capital. Constant price compensation of employees is estimated as the base year value extrapolated by the

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change in the total number of employees. Construction, machinery and equipment price indices are used to deflate the consumption of fixed capital, and the intermediate consumption is deflated using the relevant components of the consumer price index.

Net product tax at constant price are obtained by extrapolating from the base year the taxes/subsidies on products with detailed volume indices for the relevant transactions subject to tax/subsidy.
In the expenditure approach, private final consumption expenditure is derived residually, by deducting all other components of final expenditure from total GDP by economic activity.

For general government final consumption expenditure, gross output is equal to the sum of the value of intermediate consumption of goods and services, compensation of employees, consumption of fixed capital and indirect taxes. The data source is the Ministry of Finance (budget law of central government), the local municipalities, and other public institutions such as the government universities and others.

Concerning gross fixed capital formation, the outlays (purchases and own account production) of industries, producers of government services and the producers of private non – profit services to households on additions of new durable goods (commodities) to their stocks of fixed assets less their net sales of similar second-hand and scrapped goods. The data sources are the various annual surveys conducted by the DOS and from the annual budgets of public authorities in Jordan.

Merchandise imports and exports are estimated from the declarations to customs authorities. Imports and exports of services (which include travel services, transportation, commercial insurance and shipment, non-commercial insurance, government services) are obtained from the balance of payments compiled by the Central Bank.

The data relevant for the increase in stocks are obtained from the various annual surveys conducted by the DOS.

The DOS also compiles Quarterly National Accounts using an indirect approach based on related short-term indicators interprolating the annual data through a Denton's procedure.

E. KUWAIT

The Statistics and Census Sector (SCS) of the Ministry of Planning compiles and disseminates a limited range of annual National Accounts statistics. Constant price data are based on a number of deflators, but rely mostly on the monthly consumer price index, the wholesale price index and some quantity indices constructed to calculate constant price estimates in certain activities, like petroleum and services activities. The data focus on the expenditure and production approaches in the compilation of national accounts.
Informal sector data are collected by sample, grossed and added to formal sector data. Informal sector data are not disseminated separately.

The main data sources for government services are available from the final statement of accounts released by the government annually six months after the end of the reference year. These data are used in estimating both the production and expenditure sides of GDP.

Economic activity data are mostly based on annual field surveys conducted by the SCS on the private and public establishments in each field of economic activity. These surveys cover: (a) all entities, of an economic activity, that employ more than 9 workers; (b) all entities that employ less than 10 workers if the number of the entities in the field of economic activity is equal or less than 20 entities; and (c) the entities that employ less than 10 workers, which are surveyed on a sample basis if the number of these entities in the field of economic activity exceeds 20 entities.

Other sources of data are generally used for specific sectors. For agricultural units, production, intermediate consumption, compensation of employees, number of employees, capital formation, value added, and other payments and revenues data are provided by the Agricultural Statistics Division (ASD) of the SCS. The ASD also provides data on fish production by type of fish and prices in the wholesale market.

For financial institutions, data are provided by the Central Bank. For insurance companies, data are available from an annual survey. Government final consumption expenditures are available from financial statements of the government. Rest of the world transactions are provided by the CBK. Detailed foreign trade statistics, showing detailed imports and nonoil exports by category, are compiled monthly by the SCS from customs documents. The Ministry of Oil provides the information on exports of oil.

For the demand-side and income-side estimations, the main sources are population and price index data (private final consumption expenditures), the closing accounts of the government (government final consumption expenditures and part of the gross fixed capital formation) and annual establishment surveys (compensation of employees, changes in inventories and private gross fixed capital formation), while Mixed income are derived on a residual basis.

F. LEBANON

National accounts data have not been compiled on a regular basis. The Central Administration for Statistics (CAS) compiled the last official set of estimates for 1994/1995. Information on the methodology and data sources is not available. However, starting from 2002, a project has been launched under the auspices of the Prime Minister to develop the economic accounts of Lebanon in the Presidency of the Council of Ministers. The sources and methods used by the project are briefly described below.

For the agricultural sector, information on the output are gathered from the Ministry of Agriculture while inputs are considered to be the raw materials and intermediate goods imported, whose information is obtained through custom declarations. Farms' prices and purchaser prices are used for the double deflation of output and intermediate consumption.

For the industrial sector (including manufacturing, mining and quarrying and electricity, gas and water supply, and construction) the estimates of value added are based on customs data and information obtained from various national sources, such as the Electricity of Lebanon and the construction material index. Constant price figures are estimated by deflating the current data with the unit values of imports, the CAS consumer price index and the Chamber of Commerce, Industry and Agriculture of Beirut and Mount Lebanon (CCIAB) price index.

Concerning wholesale and retail trade, the output is estimated on the basis of trade margins, and the deflation is carried out using the unit value of imported intermediate goods (obtained from custom declarations), the CAS and the CCIAB price indices.

An indirect approach is used for the estimation of most aggregates from the demand-side at current prices. The indicators used include, for private consumption, a survey carried out by the CAS in 1997; for gross fixed capital formation, the output of the construction activities; and, for external trade, the telecommunications, business services, trade and tourist activities. The set of price used is the same as those discussed for the supply-side estimation.

The income-side estimation is not currently calculated.

G. OMAN

The national accounts estimates are produced on an annual and quarterly basis, the last being based on the application of benchmarking to the annual constraints. Unrecorded activities are mainly in handicrafts,

traditional fishing and transport. The estimates of these activities in the handicrafts industry are compiled by updating the results of the survey of handicrafts that was conducted by the Ministry of Social Affairs and Labor in 1990. The survey data are updated mainly using population growth.

Unrecorded own-consumption in traditional fishing activities of households is estimated using the data on the number of households engaged in this activity, and a fixed quantity of fish consumed by households. Similar estimates are made to account for other unrecorded activity including driving schools, taxis, minibuses, etc. Illegal activities are not large and are presently not estimated.

For agriculture, hunting and forestry the sources of data used in estimating the output include the annual survey of agricultural production for the main crops, some studies carried out by Ministry of Agriculture and Fisheries, and the periodic survey of agricultural products and livestock prices conducted by the Directorate General of Economic Statistics. The studies and researches carried by the Ministry of Agriculture and Fisheries are utilized for calculating the intermediate consumption. The estimates at constant prices are obtained through double deflation: gross output at current prices is deflated using the consumer price index for fish, and intermediate consumption is deflated using a composite index of input prices.

The estimates of the output of fishing activities is based on the periodic surveys of traditional fishermen conducted by the Ministry of Agriculture and Fisheries and also data of commercial fishing companies. As for intermediate consumption, some studies prepared by the Ministry of Agriculture and Fisheries are used in the estimation process. The estimates at constant prices are obtained through double deflation: gross output at current prices is deflated using the consumer price index, and intermediate consumption is deflated using a composite index of input prices.

Concerning mining and quarrying, crude petroleum output estimates are obtained by multiplying production quantities by average monthly price of oil plus the value of crude petroleum sales to Oman Refinery Company. The production includes estimated income of services generated by oil companies. The value added of this activity is estimated by subtracting the value of intermediate consumption (estimated on the basis detailed data analysis of current expenditure of Petroleum Development Oman and other oil companies) from the value of output. The output of services incidental to oil and gas represents the cost of drilling and exploration by the oil companies. The intermediate consumption is estimated on the basis of field surveys. Mining of non-ferrous metal ores value added is estimated based on the analysis of the balance sheets of the companies working in the field. For quarrying of stone sand and clay the estimates of production are based on the periodic survey of quantities conducted by the Ministry of Commerce and Industry. The output of the natural gas activity represents the value of the government gas consumed. The intermediate consumption is computed based on the cost of operation of the Government Gas System. It also constitutes the production of the upstream project of the government owned Oman Liquified Natural Gas Company. The intermediate consumptions are calculated according to the costs of production operations. For petroleum, natural gas extraction and oil refining, constant prices are obtained through double deflation. The output is extrapolated using a volume index of production, while for intermediate consumptions a composite index representing the major inputs of the oil and gas companies is used. The estimates of gross output and intermediate consumption in other manufacturing activities are compiled from the results of the economic survey carried out by the Directorate General of Economic Statistics and the Industrial Survey conducted by Ministry of Commerce and Industry. The estimates at constant prices are obtained through single deflation at a detailed level of classification.

The electricity value added is derived as the salaries and wages of government employees working in the field in addition to the depreciation of fixed capital and the accounts of the United Power Company. The activity of water is divided into public (government) and private production. Government production represents total government revenues from selling water. Private production equals to the value of the water consumed by households that do not use government water. In both cases, a double deflation is used. For electricity, output is deflated through a volume index, intermediate consumption with a composite price

index of inputs. For water, a water price index and an index of price for supplies are used for output and inputs respectively.

The construction activity includes all the residential and non-residential buildings construction operations, construction of roads, electricity and water projects and land preparation etc. Estimates are based on the annual survey of construction carried out by the Directorate General of Economic Statistics. A construction cost index is used to deflate the output, while the housing index is used for intermediate consumptions.

The estimate of gross output in the wholesale and retail trade is calculated from the data on the trade margins for the locally produced commodities by type of commodity and the total trade margin for imports by type of commodity. Intermediate consumption is obtained from the results of economic surveys of this activity. To obtain the estimates at constant prices the gross output in the various activities is deflated using appropriate price indices, and intermediate consumption is deflated using the overall consumer price index.

The estimates of gross output and intermediate consumption for hotels are derived from survey data. The constant price estimates are obtained through double deflation using a volume index (occupancy rate) for deflating gross output, and a composite price index (indices of electricity and rent) to deflate intermediate consumption.

The estimate of gross output in transport and communications is compiled from the data on transport margin for the total supply of goods (i.e., domestic production plus imports) in addition to the analysis of financial statements of some companies working in the transport field as well as the results of the annual economic survey. For posts, telegraphs and telephones the estimates are based on the accounts of the Ministry of Transport and Telecommunication the final accounts of the Oman Telecommunications Company. A single deflation method is used, through price and volume indices by sub-activity.

For financial intermediation, the estimates of gross value added are derived from the annual surveys of banks, insurance companies, accounts of the Muscat Securities Market, the Capital Market Authority, the Muscat Depository and the Securities Registration Company. Constant price estimates are compiled by deflating the current price data using as indicator the number of employees and selected components of the consumer price index.

For real estate, renting and business activities, the estimates of gross value added are derived differently for the various activities using employment data, average wage data, the number of houses by type and average rent. The constant price estimates are obtained through deflation using appropriate sub-indices of the consumer price index.

The value added of producers of government activities represents salaries, wages and depreciation. Estimates are based on the State's final accounts. The financial accounts are re-classified into economic accounts according to the New System of National Accounts (SNA 93) in addition to the distribution of government expenditure to sectors and the re-valuation of depreciation by using the Perpetual Inventory Method. The constant price estimates are obtained through deflation using the weighted wage index and a composite price index for intermediate consumption.

The estimates of education are compiled separately for public and private institutions. The output of the private institutions is the revenue of these institutions. The relevant data are obtained from the annual survey. The output of the government institutions is the wages and salaries in this sector plus the consumption of fixed capital and intermediate costs. The constant price estimate for the private sector is obtained through double deflation using the volume index (number of students) for output and a composite price index for supplies.

For other services (including health), gross output and intermediate consumption estimates are obtained separately for the public and private sectors. Survey and administrative data are used for the private sector, and for the public sector the estimates are compiled from the data on wages and salaries, consumption of fixed capital and intermediate costs. Constant price estimates for the government sector are obtained as in the case of education, and constant price estimates for the private sector are obtained using the appropriate volume and price indices.

The output of domestic services is estimated as the product of the number of persons engaged in the services and the average annual salaries. The constant price estimates are obtained through deflation using the wage index of domestic services.

On the expenditure side, government final consumption is derived from the government accounts as gross output less sales. Private final consumption expenditure is estimated as a residual. Data related to gross capital formation by activity are obtained from enterprises. However, the current estimates of gross fixed capital formation are compiled from the data on imports of capital goods, construction data, data on intangible assets of oil companies, livestock data and data on stock changes that are provided by specific companies. Data on changes in inventories are estimated as reported by the enterprises engaged in the cement and oil activities, and the data on livestock as reported by the Ministry of Agriculture.

H. PALESTINE

The Palestinian Central Bureau of Statistics (PCBS) conducts annual establishment surveys for all economic activities. Large establishments (defined differently as appropriate for different activities) are fully covered. Medium and small establishments are covered on a stratified sample basis (activity, size and geographic area). Sample frames are constructed from the Population, Housing, and Establishments Census 1997 and its updates, which are based on administrative records and surveys. Both annual and quarterly accounts are released, although at the higher frequency for only GDP at constant prices.

For each of the major annual surveys (industry, construction, transportation and communication, internal trade and services), data are collected on revenues or sales, intermediate consumption, inventory change, number of employees, compensation of employees, and acquisitions and disposals of capital assets by type of asset. All transactions related to registered activities are covered, including legal informal activities in construction and transport activities. Illegal activities are insignificant, which explains its exclusion.

The Ministry of Agriculture provides data for agricultural production by crop, input and intermediate consumption, while prices are obtained from the Price Department at the PCBS. In addition, the value added includes the value of olive oil that was pressed by manufacturing activities (who own operating presses and get paid from the farmers for pressing their olives) on behalf of the farmers. Agriculture data are collected according to the agricultural seasons, which are then adjusted to calendar year basis for the national accounts purposes.

For each of the major annual surveys (industry, construction, transportation and communication, internal trade and services), data are collected on revenues or sales, intermediate consumption, inventory change, number of employees, compensation of employees, and acquisitions and disposals of capital assets by type of asset.

Special deflators are constructed at the level of detail of the commodity classes to derive constant price estimates. The sources for these deflators are the Prices Department in the PCBS, the consumer price index, the wholesale price index, the producer price index, the construction price index, and the government price index. Services deflators are derived from the Israeli consumer price index.

For estimation of public administration and defense, central government budget records, local government budget (municipalities and municipality councils), extra-budgetary government agencies that have independent budget (financed partially by donors) and information from the Palestinian National Fund, which provides data for government public owned enterprises operating inside and outside Palestine, are used.

The Palestinian Expenditure and Consumption Survey is used for the estimation of unorganized manufacturing production, electricity production of households, and the household activities engaging employed persons.

The source for estimating private consumption is the Palestinian Expenditure and Consumption Survey. Government expenditure is compiled from the budget estimates provided by the Ministry of Finance and by other institutions for extra-budgetary organizations, local councils and municipalities and household expenditure and consumption survey (provides data on government current sales). Gross capital formation, including changes in inventory, is derived from economic surveys and foreign trade data on imports. Exports and imports of goods and services are obtained from the foreign trade statistics and balance of payments statistics.

Capital formation outside construction is deflated using the wholesale price index for imported goods. Meanwhile, construction output is deflated by a special index for construction costs (materials and wage rates) assembled for this purpose from information already available from wholesale and producer price indices, and labor force data.

From the income-side, the compensation of employees is derived from the annual economic surveys of establishments and government budget estimates. Taxes on production and imports less subsidies are also obtained from the annual economic surveys of establishments and government accounts. Operating surplus is derived residually.

I. QATAR

GDP by production approach is based mainly on annual surveys undertaken by the newly established Qatari Statistics Authority. The surveys cover most market economic activities. The statistical frames of these surveys are based on the Establishment Census conducted in 2004 (and previously the Economic Census of 1997). The Establishment Census is based on the business premises identified during the Housing census that was carried out simultaneously with the Population census in March 2004. These frames are updated annually using a range of information, including administrative records. All establishments with 10 persons employed or more (for construction 50 or more) are included in the survey, whereas sampling based on a somewhat simpler questionnaire is applied for smaller establishments. With only minor adjustments the survey results are fed directly into the national accounts, as they are already in National Accounts formats. Other sources, such as government revenues and expenditures and other administrative records, which are available annually or at other periodic intervals, are also used. Some other sources are used as benchmark estimates or as a basis for deriving estimation parameters for indirect estimation (e.g., in the case of inputs for agriculture activity).

Informal activities in the construction sector are included to the extent that they can be estimated. Apart from this, no adjustments are made for the non-observed and/or illegal activities. The Authority is responsible for the compilation of the annual accounts, as well as the quarterly estimates (only at current prices).

The following are the main sources used for the estimation from the supply-side. Data on the value of agricultural production (harvested products) are taken from the Agricultural Economic and Statistics Section of the Ministry of Agriculture based on field reports. Intermediate consumption of agriculture is estimated

indirectly using different available sources and coefficients. No estimates are made for natural growth of trees and livestock.

Gross output estimates for fishing are based on information provided by the Ministry of Agriculture based on quantity of local fresh fish supplied in the local market. The total output is calculated as the quantity of fish landed multiplied by the average price for each kind of fish. Intermediate consumption is estimated using various available sources and coefficients.

Information about the oil and gas production is derived from two sources. The annual information is derived from an annual survey described below. With the present time schedule for the survey, the results are, however, only available by the end of the following year. In the meantime, estimates are based on quarterly data that are supplied by Qatar Petroleum to the Planning Council.

The rent of dwellings is estimated based on the number of housing units obtained from the population and housing censuses, the two most recent ones being for 1997 and 2004, and the rent by type of dwellings, based on the Household Budget Survey 2001.

Gross output and intermediate consumption for government services and data for government consumption expenditures are based on information from the government budget and extra-budgetary activities. Exports and imports of goods and services are based on foreign trade and balance of payment statistics. Fixed capital formation is based on a mixture of sources, whereas private consumption tends to be a residual, even though changes in inventories and other categories may also be adjusted in the balancing of the expenditure side to fit the production side.

The sources for final expenditures are government finance statistics for government consumption expenditures, foreign trade and balance of payment statistics for imports and exports of goods and services, results from the surveys for changes in inventories, and for fixed capital formation a mixture of annual survey information, construction output statistics (and supplementary estimates), government expenditures for fixed capital formation and information from accounts and reports for enterprises in the oil and gas activity.

Until recently, private consumption expenditures (household plus non-profit institutions serving households) were calculated as a residual, assuming that the production side gave the correct result for total GDP. But following the 2001 Household and Budget Survey, the balancing is normally allowed to affect several categories of final expenditures (with exception of government consumption expenditure and exports and imports of goods and services) as there is an initial independent estimate for household consumption based on the survey's results, which can be extrapolated by changes in total population and consumer prices. Therefore, private final consumption and/or changes in inventories are largely calculated residually.

For agriculture, livestock, fishing, the consumer price index is used to estimate the value added at constant prices. Mining and quarrying are extrapolated using the volume index number of oil production to estimate the value added at constant prices. Manufacturing is deflated using the index number of industrial production. Buildings and constructions are deflated by the price index numbers of some building materials, as well as the residential and non-residential building indices.

With respect to transport and telecommunication, different methods are used. Constant price value added of sea transport is computed by deflating current price value added by the relevant consumer price index. Other components are extrapolated using some volume indicators such as the number of passengers, tons, telephone calls etc.

For general government services, value added is extrapolated using the weighted index number of employees. Final consumption expenditures of government and households, as well as changes in inventories, are deflated by the total consumer price index. The same is done for wholesale and retail trade,

hotels and restaurants, community, social and personal services, banks and insurance companies and other financial intermediaries' services, and imputed rents. Electricity, gas, and water are extrapolated using the volume index number of the quantity of production and the intermediate consumption is deflated using the price indicator of the important items of the inputs. For fixed capital formation, machinery and equipment are deflated by the import index number; building and construction are extrapolated using the volume indicator calculated from production and building and construction are deflated by the production index of the building activity. Exports and imports are estimated at constant prices using the volume index number of oil exports, and the price index number of imports, respectively.

The income-side estimation is carried out at current prices only, with the operating surplus obtained as a residual, while information on compensation of employees and mixed income is drawn from the economic surveys. Taxes and subsidies are directly derived from government balance sheets.

J. SAUDI ARABIA

Annual estimates of GDP are calculated from both the production and expenditure approaches, at current and constant prices. All transactions related to registered activities are covered, including legal informal activities that are estimated through the establishment and household surveys. Informal activities, such as the unorganized sector in trade, are supposed to be captured through small surveys.

Current price estimates of GDP are compiled using a combination of benchmark survey data, population, housing and establishment censuses, agriculture and households surveys, sample economic survey data and administrative records, data from the government, foreign trade statistics, and specific and sectoral studies, such as the cost of production of agricultural goods.

Estimates of the output, intermediate consumption, wages and salaries and operating surplus for agricultural crops and livestock are compiled from the survey and studies on cost of agricultural crops and farming of animals, in addition to the economic survey conducted by agricultural companies.
In fishing, estimates of the output, intermediate consumption, wages and salaries, and operating surplus are compiled from the survey and studies on cost of fishing.

The data on revenues or sales, intermediate costs of goods and services, inventory change, numbers employed, compensation of employees, and acquisitions and disposals of capital assets by type and financial assets by type are obtained from the Annual Economic Survey of the Central Department of Statistics. This surveys covers industry, construction, transport and communication, private education, private health, hotels and restaurants, finance and insurance, wholesale and retail trade and personal services. All enterprises are covered in those surveys, including all large enterprises (i.e., those with fifty or more employees), while medium and small establishments are covered on a sample basis. Sample frames are constructed from the Census of Establishments, the latest conducted in 2007. The sample frame is continuously updated using information on the specialized field survey. The samples are selected based on probability proportional to the size and economic activity.

Government sector accounts are compiled from the annual data on government provided by the Ministry of Finance.

Data related to gross capital formation by activity are obtained from the economic survey, oil companies and the government.

Imports and exports of goods data are obtained from custom declarations, while services data are drawn from the balance of payments data compiled by the Saudi Monetary Agency.

Household final consumption is estimated based on previous household budget surveys and is adjusted according to the consumer price index and the population growth.

In the case of agriculture, estimation of the output, intermediate consumption, wages and salaries and operating surplus for agricultural crops and livestock are obtained from the survey and studies on cost of agricultural crops and farming of animals, conducted by the Ministry of Agriculture. The estimates at constant prices are derived by deflating the current prices by the appropriate volume index.

For fishing, the estimations of the output, intermediate consumption, wages and salaries, and operating surplus are obtained from the survey and studies on cost of fishing conducted by the Ministry of Agriculture. The estimates at constant prices are derived by deflating the current prices by volume index of fish landed.

The estimate of gross output and intermediate consumption of activities related to extraction of crude oil and natural gas is compiled from the data provided by the Ministry of Petroleum and Mining (quantity, value of production, sales to the refinery and cost of production). The estimates at constant prices are obtained through single deflation using volume indicators of production to deflate the current prices.

The estimate of gross output and the intermediate consumption of quarrying are compiled from the results of economic surveys. The estimates at constant prices are obtained through single deflation using volume indicators of production.

For manufacturing, the estimates of gross output and intermediate consumption are derived from the annual surveys of industries. The estimates at constant prices are obtained through single deflation using the appropriate wholesale price indices for different manufacturing activities.

The estimates of gross output and intermediate consumption for electricity, water supply and gas are derived from the survey data for the companies related in production of the electricity, water and the gas company. The constant price estimates are obtained through single deflation using the appropriate volume indices.

The estimates of gross output and intermediate consumption in construction are derived from the survey data. The constant price estimates are obtained through single deflation using the wholesale index for the building material index.

The estimates of gross output (margins for the wholesale and trade, hotels and restaurants revenues) and intermediate consumption for wholesale and retail trade are derived from the survey, extra administrative data such as the value of imported goods, room occupancy rate and number of hotels' guests. The constant price estimates are obtained through single deflator using the general wholesale index.

The estimates of gross output and intermediate consumption of transport, telecommunication and storage activities are derived from the survey data. The constant price estimates are obtained through single deflation using the appropriate consumer price indices.

For financial intermediation, real estate and business activities, the estimates of gross output and intermediate consumption are derived from the survey, reports from financial fund trust and monetary agencies. For the real estate the household budget survey results is used. The constant price estimates are obtained through the GDP deflator - excluding bank services - for the banks services, while for the real estate the consumer price index is used.

The estimates of gross output and intermediate consumption of personal services are derived from the survey data and the household budget survey. Constant price estimates are derived through single deflation using the appropriate consumer price index.

The value added of producers of government services' activities is based on the government budget, appropriately re-classified. The constant price estimates are obtained through single deflation using a volume index of government employment.

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Final consumption expenditure is derived from the household income and expenditure survey, appropriately updated with population growth and inflation rates data. Gross fixed capital formation is estimated by asset-type based on the economic survey. Activities are classified only for the government sector. Changes in inventories are also drawn from the outcomes of the economic survey.

The information obtained from the Ministry of Finance and the economic survey form the basis for the estimation of compensation of employees, taxes and subsidies in the income approach. The operating surplus is obtained from the same economic survey, while mixed income is jointly estimated through the household budget and economic surveys.

K. SUDAN

The CBS of the Council of Ministers is responsible for the compilation of national accounts statistics in Sudan. The framework of the compilation of the national accounts is still based on the 1968 SNA. The main data produced and published on an annual basis are GDP at current prices and at constant 1981/82 prices, for ten industry groups and by expenditure categories. Private final consumption and expenditure of non-profit institutions serving households are calculated as residual due to the fact that the last Household Income and Expenditure Survey was last conducted in 1978/80. There is a poor reflection of the informal sector in the national accounts, while illegal activities are not measured.
The production approach is based on a variety of sources, including surveys, administrative records and indirect proxies for output.

For agriculture, crop statistics are obtained from a number of sources including administrative records of state corporations (particularly for cotton), agricultural inspectors who are responsible for reporting crop area and yield figures, Department of Agriculture enumerators who measure crop cutting, and the Department of Horticulture, which measures prices and quantities for fruits and vegetables. Livestock estimates are obtained for cattle, sheep, goats, camels and poultry from the Agency of Animal Resources based primarily on the animal tax, records of watering stations, and records of vaccination centers. The agency also provides estimates on milk and egg production. Forestry and logging covers mainly production of charcoal, fuel wood, other wood and gum and minor forest products. Charcoal and wood production are estimated by the Department of Forestry, and data on gum production are obtained from the records of the Gum Arabic Company, which has a monopoly on gum trade. Data on fishing cover inland and marine products and are obtained from the Department of Game and Fisheries.

For mining and quarrying, information is obtained from the Department of Geology and the Sudanese Mining Corporation (salt, chromite, gypsum) and the Ministry of Power (crude oil).

For manufacturing and handicrafts, the results of the industrial survey of 1981/82 served as a basis for commodities for the base year. Excise tax records, the Bank of Sudan Annual Report and Ministry of Industry data are the main sources for subsequent years.

For electricity and water, the National Electricity Corporation is the source for electricity output and the National Water Corporation is the sources of the data on piped water.

For modern construction and public works, estimates are based primarily on the market value of imported building materials, obtained from customs records, and locally produced cement. Data on traditional buildings is indirectly estimated based on the population census of 1983 and an ad hoc inquiry of 1977/78 the inputs for traditional construction. Information is also drawn from external trade statistics and companies for production of cement.

The Ministry of Commerce supplies estimates of the trade margins for commerce, based on the supply value of traded goods of imports and domestic supplies and on maximum trade margins allowed by law. Direct information on trade margins for sugar and petroleum products are also used. Estimates of hotels are

based upon sample survey of small hotels; for bigger hotels the information is collected by direct questionnaire. Estimates of restaurants are made indirectly from the household income and expenditure survey of 1978/80.

Concerning transport and communication, air transportation data about receipt and expenditure of Sudan Airways, foreign airlines and Civil Aviation Department as well as air handing and booking and travel agencies are collected directly by means of questionnaire. For road transport, data are provided by the Traffic Office Headquarters covering trucks and lorries, taxis and buses, and animal transport. For rail transport, detailed operation accounts are received annually from the Sudan Railways corporation. The required data for water transport are extracted from the detailed profit and loss account of Sudan Shipping Line. Concerning communication, the required data are furnished by the public-sector enterprises, namely the Post and Telegram Public Corporation, Sudatel (fixed line telephones), Sudanese Mobile Telephone Corporation and Sudanet (internet services).

For finance, insurance and real estate, the required information is collected directly from the concerned institutions. For housing, the estimates are prepared on the basis of the population census and the 1978/80 household income and expenditure survey. For non-residential real estate, the rent specified as part of current expenditure for the industry renting premises is used.

Government services are available from the final statement of accounts released by the central government and budgets of state governments.

For other social, community and personal services, the information obtained from sample surveys in the 1970s, the Ministry of Health, the population censuses and the Ministry of Finance are the main sources to prepare the estimates for this activity.

Coming to the expenditure approach, the main sources of data for the compilation of government transactions are the actual figures provided by the Ministry of Finance and National economy. The central government has current and development budgets. As for the state governments, no actual figures are available so budget estimates are used. The adopted economic and functional classifications of government expenditure follow the recommendations of the 1968 SNA.

Consumption of fixed capital is estimated separately for building and construction (excluding dams, roads, etc.). Capital goods used for military purposes are also excluded. The lifetime span of building and construction is supposed to be 50 years, and 10 years for other capital equipment.

The inventories are estimated for four components, namely livestock, agricultural crops, inventories held by traders and industrial units. The livestock estimates are based on the projected herd sizes and the agricultural stocks are based on the annual production estimates. For inventories of traders and manufacturers, the main source is the Tax Department with additional information from the Cotton Public Corporation and the annual reports of various enterprises.

The values and quantities of exported and imported goods (merchandise) are provided by External trade section of the Central Bureau of Statistics.

The household consumption estimate (including non profit institutions serving households) has been derived as a residual, based on GDP measured by the production method less the other directly estimated expenditure components.

The evaluations at constant prices are obtained as follows. For agricultural crops, for gross output, different crops are extrapolated with their respective quantities. Livestock, gum Arabic, charcoal and other forestry products are extrapolated with their respective quantity indices. Value added in fishing is extrapolated on the basis of quantities of fish catches, while for mining the added value is extrapolated

following the quantities of major mining outputs. In the manufacturing, for each division an extrapolation is carried out on the basis of a weighted quantity index, representing major items of production.

The gross output in electricity is deflated with a weighted index of different electricity prices.

For modern construction, the value added is deflated with a weighted average index of nine building materials and a price index for intermediate services. Traditional construction output is deflated with the cost of living index of low-income earners.

Value added in wholesale trade is extrapolated with different quantities and indices for the following types of traded goods in wholesale trade: exported goods (using quantities of exports). For imported goods, an index is used on the quantity index of trade imports. Hotels gross output is deflated with an average index of hotel rates and food prices. Restaurants' GDP is extrapolated on the basis of urban population growth.

Road transport GDP is extrapolated with different quantity indices for the following types of road transport: trucks along paved roads (using a quantity index of imports and exports transported by trucks), trucks along earth road (using the quantity index for all crops produced), local urban transport (using an average quantity index of relevant supplies), local rural mechanical transport (using the quantity index of irrigated crops excluding cotton and mechanical rain-fed crops), animal transport (using index of traditional crops), other transport such as buses, taxies, etc. using for each type the number registered. For rail transport, water transport and pipelines, GDP is extrapolated on basis of quantities transported. Air transport's GDP is deflated with an appropriate index of fares.

GDP for communication and financial institutions is extrapolated with an index of real labor cost (based on deflating compensation of employees with a weighted index of Government salaries).

GDP for the residential building is extrapolated on the basis of number of household, non-residential building deflated with the implicit price index of modern residential building.

Business services GDP is deflated with the price index of spares for depreciation and with the cost of living index of the category 'other' of high-income earners for other component of GDP.

For community, social and personal services (on a profit basis) doctors extrapolated according to number. Other services deflated with the cost of living index of the category "other" of high-income earners. Import duties are extrapolated according to implicit quantity indices import.

Private non-profit services to household are deflated with the cost of living index of the category "other" of high-income earners. Domestic services GDP are extrapolated according to urban population growth.

L. SYRIAN ARAB REPUBLIC

The source data are mainly based on the information received from the public enterprises (final balance sheets or other reports), the Ministry of Finance on government accounts, and the Central Bureau of Statistics economic survey of the private sector as well as the Household Income and Expenditure Survey. No estimates for illegal activities are made. The national accounts data do not include estimates on account of under-coverage or underreporting. The widespread custom of making gratuity payments (baksheesh) for services rendered is not taken into account.

For the production approach, a distinction is made between entities in the public and private sectors. All public sector entities are obliged to provide an annual report on their economic activities to the government. These reports are usually received by the Central Bureau through the supervising Ministry, but sometimes also directly from the enterprise.

For basic data on the private sector (except agriculture), the estimated data are based on surveys. A broad-based survey is in place for manufacturing and construction. For other economic activities, however, such surveys are still in development. Within the private sector, a distinction is sometimes made between the organized sector, which covers enterprises that practice regular bookkeeping and operate from fixed premises, and the unorganized sector.

The following summarizes the main sources by kind of activity distinguished in the national accounts.

For agriculture, fishing and forestry, data on production and output in the public and private sectors are compiled based on the progress reports and final balance sheets of the public enterprises. The Ministry of Agriculture is the main source of data on agricultural production and animal resources. Other sources include external trade statistics and the output of fertilizer industries. The values are obtained using a quantity times price approach. The amounts and values of landed sea fish are obtained from the General Fish Corporation. Production data of fish farms refer to public enterprises only. The General Fish Corporation is also the source for intermediate consumption. No appropriate basic source is available on forestry.

All necessary basic data on mining (oil, phosphate, gravels and marble, asphalt, sands, salt) are received from the Syrian Oil Corporation, the Ministry of Industry, and the Ministry of Oil. Production and intermediate consumption data is compiled broken-down into goods and services, in addition to income and the change in inventory for the public sector.

Public manufacturing enterprises report both quantities and values of output and data on intermediate consumption. The Central Bureau collects data on private manufacturing from a sample survey.

The water and electricity companies are all public and produce annual reports.

Complete information for building and construction is received from the public enterprises operating in this domain. For the private sector, a sample survey is used. There is also detailed reporting of projects carried out by the private sector on the request of the public sector (subcontracting).

Many operators of transport equipment are public. There are two enterprises engaged in communication: one public and one mixed public/private. The Central Bureau receives annually the balance sheets of public transportation companies and the public Telecommunications Company. Data concerning private travel agents and shipping companies are computed based on the annual estimated growth rate.

Information on public enterprises on wholesale and retail trade are reported by the Ministry of Economy and Trade. For private trade, a current source does not exist and fixed margins are applied on the current/constant price values of goods from domestic production and imports. All basic information on hotels and restaurants originates from the Ministry of Tourism. The data comprise both public and private enterprises.

The Central Bureau receives data from commercial banks on their final balance sheets and through a special form according to the requirements of national accounts. For private banks, a special questionnaire for banks and insurance companies has been designed to cover the sector. The public Syrian Insurance Company provides annual reports.

Providers in the category of social and personal services are largely private. In real estate services, a distinction should be made between dwellings and other buildings. The stock of dwellings is calculated from the housing census, updated with information on construction. The prices per square meter have been derived from a sample survey and intermediate consumption is taken as a fixed percentage. For buildings, the output is estimated as a fixed percentage of the building costs.

Private hospitals and other health providers are covered in the economic survey.

All data needed for the calculation of central and local government output originate from the Ministry of Finance. For deflation purposes, the consumer price index, the wage index in the public sector and, for indirect taxes, the wholesale price index are used.

On the demand-side, private final consumption expenditure are estimated based on the results of the 2004 Household Income and Expenditure Survey. The deflation is carried out using the consumer price index. General government final consumption expenditure is directly derived from the Ministry of Finance data. The deflation is carried out using the retail price index. Gross fixed capital formation is estimated using a commodity-flow approach (imports of investment goods according to the foreign trade statistics and domestic production of such goods by the public sector). For construction, the sources mentioned above for building and construction are used. The part invested by the government is reported by the State Planning Commission. No information is available for changes in inventories, which are estimated as residual. Data on imports and exports of goods are sourced from the balance of payments data compiled by the Central Bank. These are the external trade data compiled by the Central Bureau of Statistics adjusted for smuggling, procured imports, and repairs. Imports and exports of services also originate from the balance of payments. For deflation purposes, usually a weighted average of the various dollar exchange rates is used as calculated by the Central Bank, while the consumer price index is used for services. Foreign trade indices (unit values) may also be used.

M. UNITED ARAB EMIRATES

The estimates, which are compiled and disseminated by the Ministry of Economy, cover GDP from the production approach, at both current and constant prices, and GDP from the expenditure approach, but only at current prices. Estimates do not cover informal, hidden or illegal activities, with the exception of informal operations in agriculture and taxis.

GDP by production activities and expenditure categories are derived using a combination of: (i) administrative data (collected by the Federal and Emirate institutions); (ii) some survey data compiled by the same Ministry of Economy and Emirate institutions; and (iii) ad hoc data (widely used for estimating the output and intermediate consumption of most industries). Other ad hoc and administrative data, such as data on oil production from the Abu Dhabi National Oil Company, volume indicators for health and education, number of building permits, are also used.

From the production side, the value of sales and costs for agriculture, livestock and fishing, for each type of product, are available from a census conducted in 2005, which have been used to derive gross output and intermediate consumption at current prices. The estimates for later years are obtained by applying annual growth figures for each product; intermediate consumption is calculated for each product using the ratio for 2005. The value added estimates at constant prices are obtained through direct deflation using subgroups of the consumer price index.

The estimate of gross output for the extraction of crude oil is compiled using quantity data from the Abu Dhabi National Oil Company and the average annual market price based on press reports. Intermediate consumption is considered to be negligible. Quarrying activity is concentrated in just a few emirates and the data is obtained from the relevant ministries.

Concerning manufacturing, the estimates of the non-oil sector value added at current and constant prices are compiled by extrapolation using survey data collected by the Ministry of Industry. These surveys only covered large establishments in Abu Dhabi and Dubai. The estimates for the production of petroleum products are compiled in the same way as for the extraction of crude oil. The output data is estimated by using volume data from the Abu Dhabi National Oil Company and valuing it with market prices. The intermediate consumption of this sector is compiled using ratios based on some assumptions for intermediate products. The value added estimates at constant prices for petroleum products are obtained by deflation using a commodity price index.

Current price data for gross output and intermediate consumption of electricity, gas and water are obtained from the four public companies that cover these activities – one for each of the emirates Abu Dhabi, Dubai and Sharjah, and the fourth company supplying the other emirates. The constant price figures for value added are obtained by deflation using the electricity component of the consumer price index.

Construction estimates are derived from data on the floor space under construction, as specified in the building licenses in Abu Dhabi and Dubai. This is supplemented with data from the federal and emirates' government budgets. Local government departments also supply prices for the construction materials, plus staff costs. These data are used to derive the estimates at current and constant prices.

The estimates for wholesale and retail trade are derived by applying year on year growth in the imports of goods and the limited domestic production. The value added estimates at constant prices are deflated using the consumer price index.

Concerning restaurants and hotels, the estimates of gross output and intermediate consumption are derived from tourism statistics for each emirate. The constant price estimates are calculated using year on year growth in hotel occupancy figures.

Current price values for organized taxis are obtained from the operators. Air transport figures are obtained from the three airlines and airport operator. Port operators provide the sea transport data. Informal taxis are estimated from the number of vehicles in operation and their average incomes. The constant price estimates for all types of transport are derived by deflation using the transport component of the consumer price index. The current price data for communications are obtained from the government-owned company engaged in this activity. Similar data are obtained from the single private company that was set up in 2006. The constant price estimates are derived by deflation using the telecommunications component of the consumer price index.

Concerning financial intermediation, the estimates for banks are obtained from the Central Bank and are considered to be comprehensive. The Ministry of Finance collects the figures of insurance premiums less claims. Data are also obtained from the stock exchange, but a historical factor has to be used for the currency exchange offices. Constant price estimates are compiled by deflating the current price data using the implicit price index derived from all of the other industries, excluding oil extraction and business service.

The 2005 census is currently used to derive a total rent figure, that is, actual rent payments plus imputed rent for owner-occupied dwellings. Figures for later years are derived by applying the year on year increase in actual rent payments in Abu Dhabi and Dubai. Intermediate consumption is based on figures supplied for Abu Dhabi and Dubai. The constant price value added estimates are obtained by deflation using the rent component of the consumer price index. Since no data was collected for business services in the past, all that was possible was to use year on year growth in the estimates for all other industries, except for oil extraction. This methodology was used for both the current and constant price estimates.

The estimates of gross value added for government services include data on the salaries and wages of government employees and data on consumption of fixed capital. The constant price estimates for value added are obtained through deflation using the consumer price index.

Other services include the provision of private education and health. The constant price estimates are based on year on year change in the population. The current price estimates are then calculated by applying change in the consumer price index.

The constant price series for domestic services is based on the number of such works as reported by the Ministry of Labor. This series has been benchmarked to the 2005 census figure. The average wage was obtained from the 1997 Household Budget Survey. This has been updated for later years by applying the change in the total consumer price index.

Concerning the estimation for the demand-side, government final consumption is derived from the government accounts as gross output less sales. Particularly, data on government expenditure are provided by the Federal Ministry of Finance and the Departments of Finance in each emirate. Private final consumption expenditure is estimated as a residual. Gross fixed capital formation is compiled from the data on the imports of machinery and equipment, plus the production estimate for the construction industry. Data are also obtained from the enterprise survey of the Department of Planning of Abu Dhabi and the Dubai Statistics Center. Changes in inventories are compiled by applying a fixed ratio to the figures for imports. Imports and exports are taken from the Central Bank. The household final consumption estimate is then derived as the residual from GDP as measure from the production side. The expenditure estimates are not expressed at constant prices.

N. YEMEN

The Central Statistics of Yemen release GDP following the three approaches to its calculation. Adjustments are made to cover the unrecorded imports, under-coverage in food, building and construction industries. No estimates are made for the other informal activities.

The production approach to GDP is based on a variety of sources, such as censuses, annual surveys, final statement of the government and other public units, and administrative records, which are available annually or at some periodic intervals. Ad hoc data sources through surveys or special studies are also used as benchmark estimates or as basis for deriving estimation parameters for indirect estimations.
GDP by the production approach is based on government budget, sample surveys, special studies and balance of payment data.

For most of agricultural crop productions figures are based on the volume of harvest multiplied by prices and value added ratio. For other sectors (non-financial, financial and non-profit institutions) results of the surveys are available at current prices. As for the government sector, the final statement is the main source for current price data. Simple extrapolations are practiced using relevant indicators in some cases (e.g. oil industry, transportation).

A single deflation method is used for compiling constant price data, depending on the industry. For agriculture, livestock and fishing the quantity output and input are revalued by the base price. As for manufacturing, quantity indices are used to estimate the value added at constant prices. For the transport, telecommunications, and other personal entertainment and social services, constant price value added is computed by deflating current price value added by the relevant consumer price index component. For general government services, value added is deflated by the index of average salary per employee. Construction value added in constant prices is computed by deflating the current price value added by the price index of building materials. Deflation of current price value added by the consumer price index relevant components is also used for wholesale and retail trade, hotel and restaurants.

In the expenditure approach, government final consumption expenditures, gross capital formation, exports and imports, and changes in inventory are estimated from source data. Gross fixed capital formation is obtained from government data, the building and construction annual survey, and using the commodity-flow method. Change in inventories is in part a balancing item. Private consumption expenditure is estimated using the results of the multipurpose household survey carried out in 2005. The GDP by expenditure at constant prices is not yet compiled.

Compensation of employees and operating surplus are estimated based on the final accounts of the general budget of the government and the current economic surveys. Taxes and subsidies are drawn from the final accounts of the general budget of the government, while mixed income is derived as a residual. Constant price estimates are not actually carried out.

V. OVERVIEW OF THE MAIN OBSTACLES AND CHALLENGES

The analysis of the answers to the questionnaire conducted above has shown that there are a number of shortcomings and conceptual lapses in the compilation of National Accounts in the region. As a consequence, a series of actions should be undertaken in the short and medium term in order to improve the current situation and speed up the implementation of 1993 and 2008 SNA.

One of the relevant issues to be tackled is the incomplete coverage of the accounts in most member countries, which in most cases is the result of the lack of exhaustivity of the accounts themselves. In many cases, the economic activities carried out in the establishments outside the list frame are not covered in the regular economic surveys carried by the statistical offices in the region. This lack of coverage does not only relate to the informal household units, but also extends to formal activities not adequately captured by the traditional statistical survey instruments. The lack of updated business registers is a common issue to be tackled.

Another important challenge concerns the volume data. Constant price estimates of the production-side aggregates are mostly based on the use of the consumer price index, owing to the absence of a system of producer and wholesale prices, or on quantity indices of output. The expenditure- and income-side aggregates at constant prices are in many cases not compiled, and in many countries in the region the evaluation at current prices is also weak, given the absence of information on key aggregates, such as changes in inventories and the operating surplus and/or mixed income. In some cases, gross fixed capital formation is not estimated at the level of its component, but as an aggregated item. As a consequence, a true balancing process of the estimations from the different sides is seldom attempted by member countries.

From the conceptual side, a number of problematic areas have been identified from the analysis that need urgent action from member countries: 1) The household sector is sometimes not appropriately defined for the compilation of the sequence of accounts; 2) The issue of the department of Central Bank is not treated as General Government; 3) Expenditure on oil exploration not included in capital formation or even in the value of output, though the Gulf countries in the region have large oil production and reserves and thus significant exploration activities; 4) The reinvested earnings of foreign direct investments are not included in factor income from rest of the world; 5) The FISIM are in most cases not allocated to the final users; and 6) The estimates of the consumption of fixed assets are weak, generating problems in estimating gross and net values.

In general, many member countries have stressed that there is further need for capacity building actions in the field and that these actions should be supported, at the national level, with increased technology and know-how to use advanced software for compiling for example sequential accounts and Supply and Use Tables, and reduction of turnover of staff in the relevant sectors of the statistics offices.

In the light of the above considerations, there are some immediate needs for National Accounts estimation. The complete coverage of economic activities in National Accounts statistics requires the regular updating of the list frame as well as the coverage of the units not included in the list of establishments in the regular economic surveys, which in turn requires the adoption of a dual frame survey technique. In this respect, there is a need for reviewing the questionnaires of the economic surveys for the adoption of the definitions of the production and capital formation: this keeping in view the 1993 and 2008 SNA and the recommendations contained in the UNSD manuals on International Recommendations for Industrial Statistics (2008) and the International Recommendations for Distributive Trade Statistics (2008), particularly the adoption of the new classifications. There is also a need for a rational re-grouping of industry and product classifications in a way suitable for the compilation and presentation of the final estimates to users, particularly concerning the release of Supply and Use Tables.

Improving the overall availability and quality of constant-price estimates, especially on the demand and income sides, and the available data for the production-side estimates using double-deflation approaches

and other double-indicator methods is another imperative for member countries. This implies strengthening the availability of input and output prices for appropriate deflation, and in particular the availability of quality index of wholesale/producer prices, import and exports unit values, and wage-rate indices for the service sectors.

Developing a complete sequence of accounts is another major challenge in the region, given the aforementioned shortcomings. As a consequence, institutional sector accounts are largely incomplete, covering in the majority of the cases the total economy and the Rest of the World.

The estimation of the capital stock and the use of a Perpetual Inventory Method to obtain data on the consumption of fixed capital is overall particularly weak in the region, and the development of a system of core short-term economic statistics for the indirect estimation of the principal macroeconomic aggregates of Quarterly National Accounts is at the very preliminary stage.

This is perhaps a further reason for the limited use of the accounts in the decision-making process at the national and regional level, apart from the lack of timeliness with which the national statistical offices generally release the National Accounts, the absence of release calendars for data dissemination to users and the unclear revision policies followed.

VI. THE WAYS FORWARD

In order to respond to the challenge of improving the status of National Accounts and, more in general, Economic Statistics in the region, a range of intervention by various stakeholders is required. In this respect, ESCWA has proposed to the attention of the member countries during the abovementioned EGM a regional strategic plan for implementing SNA 2008 that closely resembles the organizational structure put in place for other global initiatives in statistics, such as the International Comparison Program.

In this context, it has been noted that a regional implementation strategy is needed to support sound macroeconomic management and evidence-based policy formulation through a sustained regionally and internationally consistent process of compilation and reporting of National Accounts.

The plan tackled the relevant challenges, such as financial and human resources required, as well as coordination and linkage to the overall ESCWA National Accounts and Economic Statistics activities for the forthcoming biennium work-program 2010-2011. It was agreed that the discussion and the plan should be brought to the attention of the Heads of the National Statistical Offices in the region and should be further discussed during the next meetings of the ESCWA Statistical Committee, the apex forum for statistical consultation and decision at the regional level, and/or its Bureau.

The main idea of the proposal is to establish a coordinating governance structure that would guide the development, implementation and monitoring of the action plan. The suggested governance structure could be as shown in the diagram in figure 1.

The strategy involves a series of actions at both the regional and country levels as follows. At the regional level, the ESCWA Statistical Committee, as the intergovernmental forum with responsibility for statistical matters of region-wide importance, would have ultimate ownership of the proposed regional program for the development of economic statistics. Its main role would be to provide a forum where the views of stakeholders could be expressed, to confirm or otherwise amend the mandate and accountability mechanisms of the program, and to ensure that the program has adequate resources. The Committee meets once every two years in order to discuss statistical issues and renew its bureau.

The Bureau of the Committee would be given a mandate to undertake inter-session work that would include making strategic decisions for the successful and timely implementation of the program and within the budgetary resources to be raised for this purpose.

A Regional Coordinator, namely a staff of the ESCWA Secretariat, would manage the day-to-day work of the program. The Regional Coordinator will work closely with the Bureau of the Statistical Committee and National Coordinators to ensure the successful processing of the implementation strategy. The regional coordinator would consult with the Chairperson of the Bureau, report to the Bureau and prepare the annual work program and budget for approval of the Bureau. The Regional Coordinator and the Bureau might report to each other in turn. The Committee could also establish an Advisory Group to provide guidance to the Bureau and the Secretariat on methodological and technical issues related to the development and periodic revision of the program. The Advisory Group shall consist of members with a high level of experience and, in such capacity, able of guiding and supplying member countries with relevant and substantive support. The Advisory Group would be composed of some experts from the Expert Group, in addition to experts from National Statistical Offices and regional organizations.

The structure at the country level should be as follows: within the participating countries, the regional program would be carried out by the National Statistical Offices through a National Coordinator. The National Coordinators should preferably be the Chief Statisticians in National Accounts or their representatives, given the strategic nature of the global and regional programs and their impact on the national statistical plans.

The success of the regional program would depend on the collective commitment of all potential international, regional and national partners in mobilizing adequate financial resources, providing technical assistance and overall support in terms of statistical capacity-building initiatives. The UN-ESCWA, on its side, will continue including in its regular program of work, the regular program for technical cooperation and (whenever feasible) extra-budgetary activities, initiatives oriented towards strengthening the skills of staffs in the National Statistical Offices of the region, promoting consultation, exchange of experience and sharing of best practices as the minimum requirement for the success of the program.

Figure 1. Governance and coordination structure of Regional SNA Implementation Plan in the ESCWA Region

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        │  Statistical Committee  │
        │          (SC)           │
        └───────────┬─────────────┘
                    │
                    ▼
        ┌─────────────────────────┐                    ╭───────────────╮
        │     Bureau of the SC     │◄──────────────────►│   Regional    │
        └───────────┬─────────────┘                    │  Coordinator  │
                    │                                   ╰───────────────╯
                    ▼                                          ▲
        ┌─────────────────────────┐                           │
        │   Advisory Group (AG)    │◄─────────────────────────►│
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        │  National Coordinators   │◄─────────────────────────
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              ╱            ╲
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        │   NSOs   │   │  Others  │
        ╰──────────╯   ╰──────────╯
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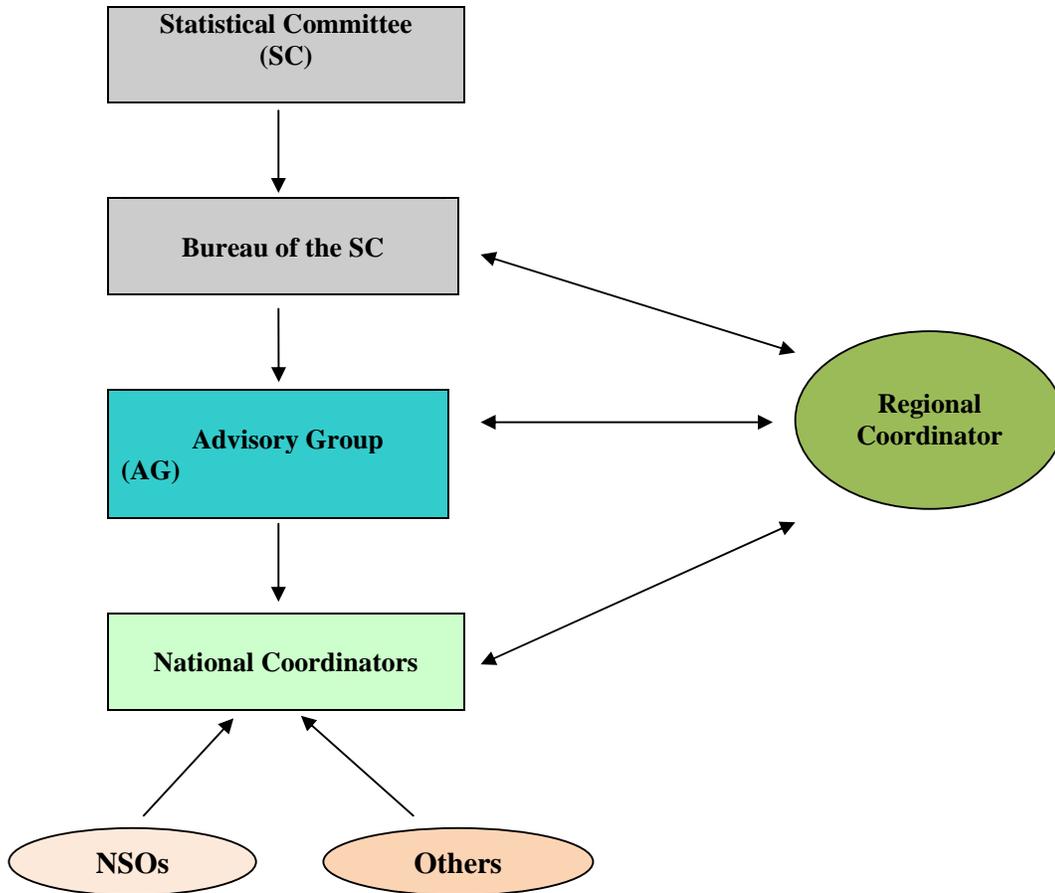
ACRONYMS

CFC	Consumption of Fixed Capital
COFOG	Classification of the Functions of Government
COICOP	Classification of Individual Consumption by Purpose
CPC	Central Product Classification
FISIM	Financial Intermediation Services Indirectly Measured
GDP	Gross Domestic Product
GFCE	Government Final Consumption Expenditure
GFCF	Gross Fixed Capital formation
HFCE	Household Final consumption Expenditure
ISIC	International Standard of Industrial Classification
NPISH	Non-Profit Institutions Serving Households
PFCE	Private Final Consumption Expenditure
PIM	Perpetual Inventory Method
SNA	System of National Accounts

General Notes and Instructions

Notes

This section will include a couple examples so that the ideas behind corresponding questions are made clear:

For question no. 3: Ex: If the base year for the current NA series is 2005, and the previous NA series had as base year 2001, then the answer is that the NA series is rebased every 4 years.

For question no. 4: Ex: If the preliminary (first) NA estimates for the year 2007 are released in October 2008, then the release lag would be the number of months since the reporting period ended (End of December 2007), till the date the first estimates are released (October 2008), and in this example the release lag would be 10 months.

For question no. 5: An example of a revision policy might be that the NA estimates are subject to two successive estimates each year after it has been published for the first time. For example, in this case, the NA estimates for the year 2005 are firstly published in October 2006 (t+10), and is revised in October 2007 (t+22) and in October 2008 (t+34). After that, the NA data for 2005 will be considered final, unless methodological changes or rebasing is applied.

For question no.6: A release calendar means if there is an announced date for releasing the first NA estimates each year. For example, if the NA estimates of each year are announced to be released in October of the next year.

Instructions

Please answer all the questions.
Please fill in all the tables with the requested information.
Whenever explanation is needed, please use the provided cells to indicate you detailed explanation.

A. General Questions on National Accounts Compilation

1. Which SNA is followed?	☐ 1968 SNA ☐ 1968 SNA, but in the process of adopting 1993 SNA ☐ 1993 SNA

2. What is the base year for the present series of national accounts?	☐ 199_ ☐ 200_

3. Every how many years is the National Accounts series rebased? *(As per the latest rebasing)*

4. What is the general release lag of first (preliminary) National Accounts Estimates? *(How many months between the release of the first estimates and end of the reporting period?)*

5. Is there a revision policy for annual National Accounts Estimates?	☐ Yes ☐ No
5a. If yes,	please describe the policy briefly
6. Is there a release calendar?	☐ Yes ☐ No
6a. If yes,	please indicate briefly: As per the calendar, NA estimates are released in _____ of every year.

7. Industrial Classification followed:	☐ ISIC Rev.2 ☐ ISIC Rev. 3 ☐ ISIC Rev. 3.1 ☐ ISIC Rev 4
	☐ any other (please specify):
8. Product classification followed:	☐ CPC Ver. 1 ☐ CPC Ver. 1.1 ☐ CPC Ver. 2
	☐ any other (please specify):

9. Is the Classification of Individual Consumption by Purpose (COICOP) used to classify consumption?	☐ Yes ☐ No
10. Is the Classification of Functions of Government (COFOG) used to classify government transactions?	☐ Yes ☐ No

11. What are the main uses of National Accounts data in your country?

12. Who are the main users of National Accounts data in your country?

13. Is there any kind of evaluation of NA data or user satisfaction results?

14. Do you think your country's officials are aware of the importance of National Accounts in economic and social analysis and policy making?

15. What is the size of the National Accounts team?	Professional: General Support Staff: Others:

16. What is the average period that an employee remains with the National Accounts team?

17. Please indicate the number of times you received technical assistance in the last 5 years.

18. Which of the following is insufficient in your country and stand as obstacle against SNA'93 implementation?
(1= Number of staff, 2= NA expertise, 3= Training, 4= Technology, 5= Promotion of SNA importance, 6= Technical assistance, 7= legislative mandate, 8= Data sources, 9= Coverage of data, 10= Knowledge of SNA'93, 11= Availability of manuals and guides, 12=Other, please specify) (*If many apply, please list in order of importance.*)

19. Please specify whether the following aggregates are compiled at present (Please indicate by 'Yes' or 'No')

Aggregates	At Current Prices	At Constant Prices
Gross value added by type of economic activity		
Private final consumption expenditure (PFCE)		
Government Final Consumption Expenditure (GFCE)		
Gross Fixed Capital Formation (GFCF)		
Change in Inventory		
Gross National Income		
Gross National Disposable Income		
Gross Saving		

20. Please specify whether the following institutional sector accounts are compiled at present (Please indicate by 'Yes' or 'No')

Accounts	Total Economy	Financial Corporations	Non-financial Corporations	General Government	Households	NPISHs	Rest of the World
Production account							✕
Generation of income account							✕
Allocation of primary income account							
Secondary distribution of income account							
Use of disposable income account							✕
Capital account							
External transactions of Goods & Services	✕	✕	✕	✕	✕	✕	

21. Does the household sector include unincorporated businesses? ☐ Yes ☐ No

22. Are separate estimates of *mixed income* for unincorporated enterprises compiled? ☐ Yes ☐ No

23. Are quasi-corporate bodies distinguished from other household sector units? ☐ Yes ☐ No

B. Production-side Estimation

24. Please indicate the sources and methods used for compiling the gross value added by economic activities (Refer to ISIC Rev. 3.1):

Economic activity (ISIC 3.1)	Current Prices		Constant Prices		Remarks
	sources	methods	sources	methods	
Agriculture, hunting, forestry and fishing					
Mining and quarrying					
Manufacturing					
Electricity, Gas and Water Supply					
Construction					
Wholesale and retail trade; repair of goods					
Hotels and restaurants					
Transport, storage and communication					
Financial Intermediation and insurance					

Real estate and business services				
Community social and personal services				

C. Expenditure and Income side Estimation

25. Please indicate the sources and methods used for compiling the following expenditure side aggregates

Expenditure-side aggregates	Current Prices		Constant Prices		Remarks
	sources	methods	sources	methods	
Private final consumption expenditure (PFCE)					
Government final consumption expenditure (GFCE)					
Gross fixed capital formation (GFCF)					
Change in inventories/stocks (CIS)					
Exports and imports (X-M)					

26. Please indicate the sources and methods used for compiling the following income side aggregates

Income-side aggregates	Current Prices		Constant prices		Remarks
	sources	method	sources	method	
Compensation of employees (COE)					
Operating surplus (OS)					
Mixed income (MI)					
Taxes & subsidies (T-S)					

D. Coverage

27. *Activity Coverage*: Do you include estimates for the following activities that shall be included under the production boundary in the compilation of National Accounts Statistics in your country?

Do you include estimates for the value of food and livestock products produced by farmers for their own consumption?	☐ Yes	☐ No	☐ Not Relevant
Other non-agricultural household production for own final use	☐ Yes	☐ No	☐ Not Relevant
Informal production	☐ Yes	☐ No	☐ Not Relevant
Non-agricultural production in unregistered household un-incorporated enterprises	☐ Yes	☐ No	☐ Not Relevant
Premium supplements in respect of life and non-life insurance in output estimates	☐ Yes	☐ No	☐ Not Relevant
Own-account production of housing services by owner-occupiers	☐ Yes	☐ No	☐ Not Relevant

Production of domestic and personal services by employing paid domestic staff for own use	☐ Yes	☐ No	☐ Not Relevant
Own-account fixed capital formation	☐ Yes	☐ No	☐ Not Relevant

What do you do about imputed rents for owner-occupied dwellings? *(Please mark the one that applies.)*	No estimates are made	
	Estimates are made using rents actually paid for similar dwellings	
	Estimates are made by the user cost method (sum of consumption of fixed capital, net operating surplus and intermediate consumption)	
	Estimates are made using the owners' estimate of the rental value	
	If other method, *please explain*:	

28. Are the following treated as capital formation?

Expenditures on mineral exploration	☐ Yes	☐ No
Expenditure on research & development activity – both for market and own use	☐ Yes	☐ No
Own-account fixed capital formation	☐ Yes	☐ No

E. Others

29. Is valuation of output and value added done at *basic prices*?	☐ Yes	☐ No
30. Do you make direct estimates for current expenditures of NPISH?	☐ Yes	☐ No
30a. If yes: Are direct estimates made for domestically-funded NPISH?	☐ Yes	☐ No
Are direct estimates made for NPISH funded from abroad?	☐ Yes	☐ No
31. Are there any production activities reported under Household sector other than "Ownership of dwelling" and "Activities of private households as employers and undifferentiated production activities of private households"?	☐ Yes	☐ No
31a. If yes, please indicate:	]	

32. The approach followed for estimating consumption of fixed capital (CFC)?	☐ Perpetual Inventory Method (PIM) ☐ Based on data on reported depreciation ☐ Other (*specify*):

33. Are financial intermediation services indirectly measured (FISIM) allocated to the users of these services - as intermediate consumption to industries and as final consumption to final users?	☐ Yes	☐ No
[34a. If yes, describe briefly	]	
34. Is balancing of GDP estimates from demand, supply and income sides attempted?	☐ Yes	☐ No
[35a. If yes, describe briefly	]	
35. What software is used for compiling sequential accounts and input/output tables?		

36. Does your country's published national accounts tables and accounts currently include:

Value added components by industry in current prices	☐ Yes	☐ No
Employment by industry	☐ Yes	☐ No
Supply and use table	☐ Yes	☐ No
Cross-classification of output/value added by industries and sectors	☐ Yes	☐ No
Purpose classification of intermediate and final consumption across all sectors	☐ Yes	☐ No
Financial accounts for all sectors	☐ Yes	☐ No
Balance sheets, revaluation and volume changes in asset accounts	☐ Yes	☐ No
Asset accounts for financial assets	☐ Yes	☐ No
Asset accounts for produced assets	☐ Yes	☐ No
Asset accounts for non-produced assets	☐ Yes	☐ No

ISIC Rev.3.1

Broad structure

The individual categories of ISIC have been aggregated into the following 17 sections:

A   Agriculture, hunting and forestry

B: Fishing

C: Mining and quarrying

D: Manufacturing

E: Electricity, gas and water supply

F: Construction

G: Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods

H: Hotels and restaurants

I: Transport, storage and communications

J: Financial intermediation

K: Real estate, renting and business activities

L: Public administration and defence; compulsory social security

M: Education

N: Health and social work

O: Other community, social and personal service activities

P: Activities of private households as employers and undifferentiated production activities of private households

Q: Extraterritorial organizations and bodies