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## **Report on statistical harmonization in Africa**

## **I. Background**

1. African countries, in collaboration with regional and subregional economic communities (RECs), have endorsed programmes for regional integration and macroeconomic convergence, including steps toward free trade areas (FTAs), customs unions, and common currencies. The adopted frameworks for convergence consist of (i) common definitions on the convergence criteria, including primary and secondary criteria of convergence, and (ii) the harmonization of macroeconomic and statistical concepts.

2. Accordingly, there has been an increase in the demand for statistical information aimed at accompanying these integration efforts. These include the statistics for the convergence criteria, such as the harmonized budget deficit as a ratio of the Gross Domestic Product (GDP); the harmonized inflation rate under an agreed ceiling; limits on the financing of central banks and foreign reserves; and extensive change in the compilation of balance of payments and trade statistics due to the removal of trade barriers.

3. Since the bulk of the criteria and the statistics for integration are expressed as a ratio of GDP, harmonization of definition and compilation of national accounts is given special attention. Another important element of statistics used in the integration process is the measurement of inflation. Inflation is defined as the general increase in prices of goods and services used by households and is measured by the Consumer Price Index (CPI), due, *inter alia*, to the availability of data among countries. In the long term, and in order to have a harmonized economy-wide measure of inflation, it might be necessary to shift to the use of GDP deflators as a measure of inflation.

4. Harmonized trade statistics is a major requirement in the assessment of the compliance with criteria on external position and the reduction of trade barriers, including the compilation of intra-trade and extra-trade data from the potential countries to be part of the unions.

5. This report will review the methodologies used by subregions in statistical harmonization in Africa and assess the level of compliance with international concepts and standards such as the International Classification, the 1993 System of National Accounts (SNA), the International Merchandise Trade Statistics (IMTS)-Rev2, and Balance of Payment (BP5). It is presented in conjunction with the "Report on Statistical Coordination in Africa" as parliamentary documentation to the First Meeting of the Statistical Commission for Africa (StatCom-Africa I) on statistical coordination and harmonization in Africa.

6. As a result of integration, it is no longer sufficient to develop methods at country level as peer countries have to be consulted and statistical operations have to comply with international standards. There is, therefore, a need to develop common definitions and use common standards at every step of the statistical process from the questionnaire design to data processing and dissemination. This report will highlight the progress made in statistical harmonization by RECs including progress in terms of conceptual compliance with international standards, in the implementation of common data collection, use of common software for data processing, data dissemination, the existence of Statistical Working Groups (SWGs) on harmonization, and legal and institutional frameworks supporting statistical harmonization.

7. There are several benefits from integration, including the increased size of the domestic economies and increased economic growth through synergies and complementarities between member countries. However, before participant countries start reaping the benefits from integration, there is a need to provide the process of economic and/or monetary integration with quality information on a regionally or subregionally coordinated basis as opposed to the country level.

## **II. Harmonization of National Accounts**

8. At the subregional level, some RECs and countries have already well-established statistical committees or SWGs on national accounts, which meet regularly to harmonize national accounts and to compile comparable GDP. For other RECs, the establishment of SWGs on national accounts is still under consideration due to lack of technical support and capability from RECs. The main methodologies of compilation of comparable GDP in subregions are described below.

9. Member countries of the Central African Economic and Monetary Community (CEMAC) and the Economic Community of West African States (ECOWAS) with technical support from the Observatoire économique et statistique pour d'Afrique Subsaharienne (AFRISTAT), have initiated the harmonization process and established SWGs on national accounts with the ultimate objective of compiling a national accounts benchmarking using a methodology consisting of the rebasing of their national accounts in compliance with the 1993 SNA using harmonized methods and national accounts software. However, until the new base year, normally conducted every ten years, the temporary adjustment is made by the establishing bridge tables between the countries' compiled GDPs towards comparable GDPs at the subregional level. The bridge tables are intended to reconcile the differences resulting from the methodology used in compiling the set of accounts by various countries.

10. Despite these adjustments, the comparable GDPs are still far from complying with the 1993 SNA and the differences in methods remain significant in terms of concepts, accounting rules, and quality of data sources. The adjustment towards comparable GDP is developed from the definitive GDPs rather from the preliminary or provisional GDPs.

11. *Task forces on national accounts*: Task forces, comprising experts from RECs and national accountants from member States undertake several phases of incremental adjustments. Firstly, the task forces review the methodologies used in the compilation of national accounts in each member State. They then work out a common platform for national accounting. The latter is made in such a way that the work required for each State to conform to the common platform would be as light as possible, taking into account deadlines and financial and human resources constraints in each State. Ultimately, those accounts that conform to the common platform are not necessarily those that are the closest possible to international standards. So far, the reference for the common platform remains the 1968 SNA and not necessarily the 1993 SNA.

12. *Common reference and presentations* of national accounts include common presentation of accounts, harmonized contents and scope for accounts and reconciliation bridge tables, the harmonized presentation of accounts that makes them easier to read and compare. Consequently, the GDP supply tables at current prices and basic price are presented according to a common

nomenclature for sector-specific industries, while the tables on GDP expenditures are presented according to a common nomenclature of expenditure operations. The detailed GDP from the supply side is broken down into three areas of activity: primary, secondary, and tertiary. The primary component includes three sectors: agriculture, cattle breeding, fishing, forestry, and hunting; the secondary component includes the mining industry, manufacturing, energy, building and public works; the tertiary component includes transport and telecommunications, trade, banking and insurance, and other commercial and non-commercial services.

13. *In terms of harmonization of concepts*, the harmonized definitions are aimed towards a comprehensive coverage of the production boundaries. Some operations are reviewed and the definitions harmonized, including the capitalization of government expenditure. Public service for civil purposes is a component of the government-side production which classification reflects on the GDP. It has to be estimated and downloaded into the general government accounts. Another revision concerns the imputed rental of home-owners that has to be estimated, the computation of the financial intermediation services imputed (FISIM), and the allocation of FISIM expenses to sector-user in the economy, as recommended by the 1993 SNA.

14. *Reconciling accounting rules*: Fiscal years vary across countries, hence the need to harmonize the accounting period to the calendar year. For the reporting of performance of countries, some fiscal years are aligned with the harvest of major crops given the significant contribution of crops and agriculture to the GDP. It is also a common practice for some countries to impute the agricultural production of year n+1 using that of year n, which leads to some inconsistencies. The latter can be resolved with the adoption of the 1993 SNA and the compilation of quarterly national accounts.

15. Finally, bridge tables are developed for a transition between current national accounts and the common platform. Each country based on the current contents of its accounts develops its own bridge tables in order to move from its current accounts to accounts that conform to the common platform.

16. In addition to these adjustments of accounts towards comparable GDP, subregions in -- notably West Africa and Central Africa -- have undertaken steps towards the modernization of national accounts including the implementation of the 1993 SNA, the development and implementation of harmonized methods for compiling data sources, and the use of software such as the ERE-TES.

17. SWGs were established to deal with the development of manuals on subject of interest. The working groups consist of national accountants from member countries and representatives of central banks and subregional institutions. From the principle of the 1993 SNA and customizing from their own experience, working group members have developed practical methods of accounts compilation, a series of practical compilation approaches on the major changes between the 1968 and the 1993 SNA, agricultural accounting, public finance accounting, foreign aid, balance of payments, local government accounts, the informal sector, and accounts of non-financial corporations.

18. Extensive work has also been done in terms of the harmonization of data sources used for national accounts, including the endorsement of a unique business accounting system by member countries for the production of financial statements of companies: the Systeme Comptable of West Africa (SYSCOA).

19. The use of software ERETES partially helps in the harmonization of national accounts, especially for the limited financial and human resources of the national accounting programme at the National Statistical Offices (NSOs). ERETES requires an initial extensive training and half a dozen elements of technical assistance before national accountants are fully operational with it. However, the long-term benefits include efficient computing framework for data storage and analysis, reporting forms, guidelines during the compilation process with the provision of the sequence of tasks and the role played by each staff member, and on-line help on concepts and methods of national accounting.

20. With the assistance of AFRISTAT and partners, the ECOWAS and CEMAC member States have conducted the modernization of their national accounting using the ERE-TES System.

21. After the training of staff, the main objective is to start the use ERE-TES as an advocacy tool for the improvement of the compilation of the accounts including one benchmark year and a current year. With some difficulties and delays, the majority of countries have managed to undertake this minimum exercise with different base years and current years according to their respective capabilities.

22. The use of ERE-TES further highlights the issue of human resources, in that given the intensive investment, experienced national accountants on ERE-TES are recommended to provide support for several years. However, with the current high staff turnover, it seems difficult to continue the annual compilation with ERE-TES.

### **III. Harmonization of Consumer Prices Indexes**

23. The CPI has been recognized as the measurement of the common definition of “inflation rates” for multilateral surveillance, regional integration and common currency programmes. The development of reliable and comparable price indexes across countries is therefore considered as a precondition to the implementation of these programmes. Some RECs including the Southern African Development Community (SADC) have already started the development of harmonized CPI (HCPI), the methodology being tested in pilot countries while an HCPI project for the Common Market for Eastern and Southern Africa (COMESA) countries is still under consideration.

24. Working Groups on prices have been established for some RECs, like the ECOWAS and the CEMAC, to harmonize the CPI in their respective member countries. The working groups assessed the existing indexes in member countries and noted the limitations and shortcomings in their computation including difference in approaches, nomenclature, non-representativeness of the index, unreliable weight in the basket of items, unsound data collection, inconsistent data processing, unsatisfactory data analysis, and limited dissemination of publications.

25. There is, therefore, a need to establish a harmonized index based on a common methodology of survey, data processing and dissemination so as to address the noted shortcomings. In addition,

there is a need to consider extending the coverage of the CPI beyond the observed limitation consisting of covering the capital city and/or the main residential areas of member countries.

26. The scope of the price index should cover household consumers as defined by the 1993 SNA. Common classifications have been developed, the West Africa's Consumers Classification (WACC), endorsed by member countries was derived directly from the international nomenclature "Classification Of Individual Consumption by Purpose" (COICOP) of the 1993 SNA, Annex IV. For each article, a sample of goods and services that are representative of household consumption is defined and taken from the household survey. There are three types of points of data collection. These are retail traders, gross traders and other sellers, rental, and administrative and tariffs documents. Basic prices are reference prices against which a series indexes for heterogeneous items and item indexes for homogeneous items are calculated. Estimates of budget coefficients used for weighting the indexes of the over hundred of consumption items under review have been taken from household surveys.

27. *Data collection methods* depend on the type of products and the type of outlets. Data collection is organized according to the principle of survey manual, which contains weekly surveys assignments. The data processing for the current month starts in the second week of collection, after a manual evaluation of questionnaires from the first out of four weeks of surveys. For the dissemination of results, member States use the same template which consists of four page publications and this should be published at the tenth of the following month.

28. Concerning resource requirements, the current expenses for a monthly calculation of the HCPI include the purchase of items, the transportation costs, allowances and stationery. One essential characteristic of the data collection for the harmonized indexes is that surveyors have to really buy the products in the markets and then weight the products at the national statistical office (NSO). This requires availability of liquidity for price surveyors and the availability of transportation.

29. To ensure the harmonization of data processing on harmonized price indexes, member countries are computing price with a statistical package for price statistics, known as CHAPO, which provide index help, guidelines on each of the stages and task assignments from the collection to the reporting tables.

#### **IV. Harmonization of International Merchandise Statistics**

30. Since the inception of RECs, there is a continuous interest in the development of harmonized external trade statistics due to the requirement to compile an external position of a monetary union and the convergence criteria on external reserves.

31. *Methodology and concept:* The external trade statistics of African countries are computed according to the United Nations concepts and methods, namely the International Merchandise Trade Statistics (IMTS-Rev2), with two main data sources, i.e. administrative records from customs and statistical mechanisms which consist of complementary surveys on major companies and major commodities.

32. *Common software*: Most African member States use the computerized Customs System (SYDONIA) and the EUROTRACE Software, which represent efficient packages for processing customs documents and statistical data on external trade respectively. As a result, a permanent framework mechanism for maintenance and training, comprising computer experts and specialized statisticians, has also been established in ECOWAS, CEMAC and COMESA.

33. COMESA countries have made significant progress in the use of SYDONIA at the customs offices and the use of EUROTRACE at the NSOs. Besides, the Council of Ministers of COMESA recommends the development of the capacity to process data where the data exist. Accordingly, COMESA strives to develop the capability at customs with extensive training on EUROTRACE.

34. The CEMAC and ECOWAS countries have established in their respective areas, regional committees on external trade with regular annual meetings which, however, seem insufficient to adequately address harmonization and exchange of experience on trade statistics. In addition to supporting the additional statistical requirements on external trade, the ECOWAS Secretariat has adopted new customs and statistical frameworks.

## **V. Role of ECA and Conclusion**

The meeting may wish to comment and/or express its views on the following:

35. The most advanced statistical subject with extensive harmonization in Africa is the international trade statistics dataset. Many African countries have adopted the EUROTRACE package for the compilation of their trade statistics. The harmonized CPI is also well in progress for Central and West African countries with increasing interest in other subregions such as the Southern African Development Community (SADC) and COMESA.

36. In terms of harmonization of national accounts, some progress has been noticed in selected African countries and regions. However, more needs to be done as the compilation of harmonized national accounts remains a very challenging task, due to limited capabilities of countries. The capacity to annually compile national accounts with ERE-TES is yet to be developed and strengthened in many countries. On the implementation of conceptual methods, African countries still have some way to go in terms of compilation of comparable national accounts in compliance with the 1993 SNA.

37. ECA should, therefore, scale up its support to statistical harmonization through its methodological work including development of statistical manuals, expert group meetings and workshops on major subjects such as the 1993 SNA, international classifications (CITI-rev4), trade statistics and informal sector in collaboration with major partners including the African Development Bank (AfDB), Afristat, the African Union Commission, and other sub regional, regional, and international organizations.

38. The group training programmes offered by ECA may serve as platforms for the working groups to better implement and customize international standards. In addition, ECA should support the establishment of SWGs at the subregional level, provide training and organize regular meetings

for the revision of methods for each subregion. It should also involved well-advanced RECs in the provision of technical assistance to other RECs.

39. RECs are highly encouraged to replicate the practices by other RECs in the urgent establishment of adequate SWGs on national accounts, trade statistics, price statistics and informal sector/social statistics. ECA, and the respective RECs, should provide adequate support to these working groups to ensure the provision of extensive training on United Nations manuals and that each group meets regularly.

40. Some regions have benefited from the technical assistance of a coordinating statistical institution. Therefore, in the long term, it may necessary to develop projects to provide technical assistance in the harmonization of statistical infrastructures. The experiences from the provision of technical assistance by AFRISTAT and the General Data Dissemination System(GDDS) projects may be used in this regard.

41. The harmonization of concepts and unified data collection methods on the informal sector will be the subject of a separate document presented during the meeting.