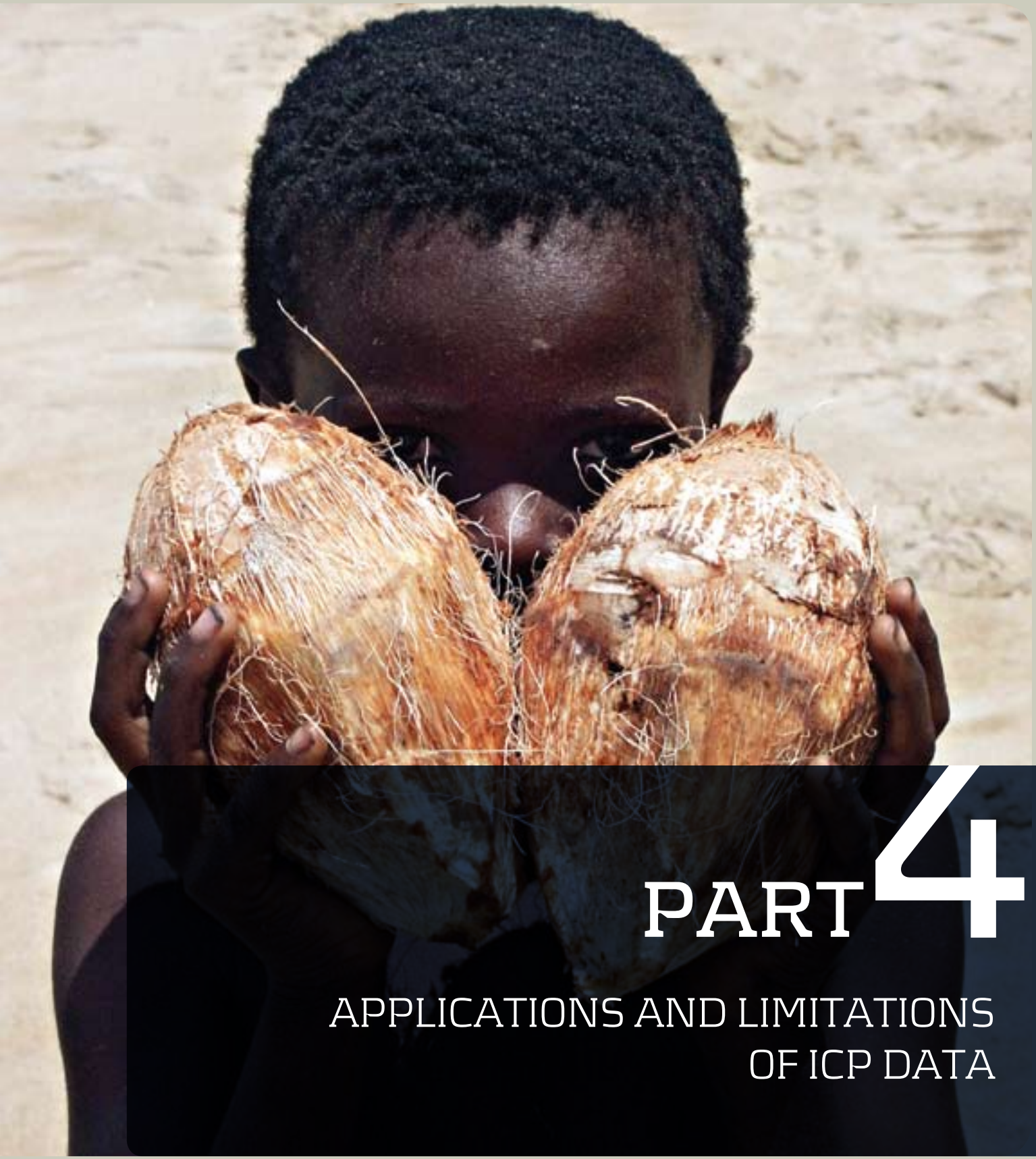

PART 4

APPLICATIONS AND LIMITATIONS OF ICP DATA

Applications and Limitations of ICP Data

4.1 POTENTIAL APPLICATIONS OF ICP DATA

As the benefits of PPPs and PPP-converted data have become more apparent, the range and types of users have increased. International organizations, universities, economic analysts, private sector businesses and policy makers use PPP-based data for analyzing levels of activity, productivity, income, investment and inequality in the distribution of incomes between countries and for compiling statistics on regional and global poverty. These applications illustrate the diversity of areas for PPP use, yet it is useful to know when to use PPPs and when market exchange rates are more appropriate.

Countries and donors could capitalize on the ICP-generated information to harmonize monetary and trade policies, improve management of tariff regimes, eliminate nontariff barriers and remove other impediments to free trade within and between countries and international markets. ICP-generated information can, therefore, facilitate regional convergence of policies and promote regional and subregional integration.

Various aggregates of GDP provided by ICP can also be used for assessing macroeconomic variables such as investment and government expenditure on health and education.

Although the applications of the ICP are typically discussed in the context of cross-country analyses, PPPs can be derived from country ICP data for monitoring economic progress among different regions within a country, particularly in large countries. PPPs can provide useful data for spatial comparison of prices and incomes across regions or provinces. Such data are crucial for developing effective poverty reduction strategies, compiling human development indices at provincial or district levels and fostering balanced regional development.

GDP Comparison

The domestic price level tends to be positively correlated with the volume of per capita GDP. Because price levels may vary considerably between countries, comparisons of per capita GDP in a common currency using exchange rates must not be interpreted as measuring volume differences only. Such differences in per capita GDP are likely to reflect differences in domestic price levels as well as differences in volumes. Thus, differences in per capita GDP based on exchange rates tend to exceed the differences in the volumes of per capita GDP, especially when comparisons are made between developed and developing countries with very different standards of living.

PPPs are used instead of exchange rates to convert national economic measures such as gross domestic products into a common currency. By accounting for price differences between countries, PPPs allow comparisons of market size, the structure of economies and what money can buy. PPPs reflect the relative prices of goods and services in the economy, including those not traded on international markets.

4.1.1 USE BY POLICY MAKERS

The ICP offers country policy makers a detailed and rich database on price and expenditure data for economic analysis on such issues as comparison of regional poverty incidence, exchange rate policies and regional wage differentials.

Because ICP results include the computation of indices on volumes and prices of produced goods and services in both relative and general terms, such indicators can be analyzed for policy recommendations on price management, such as inflation, deflation, or stagnation. In addition, such indicators can be used as national accounts deflators.

The ICP can provide information not only on whether prices in general are really higher or lower in other countries (or other provinces within the country) but also on which goods and services are relatively cheap or expensive in one country or province compared to other countries or provinces. The ICP data are thus useful for assessing the comparative advantage of a country or province.

ICP data can be useful for program cost analysis since specific ICP surveys on plant and equipment provide detailed information on prices, quantities, quality and installation cost, which are useful in the assessment of planned projects. For example, India has used ICP data to assess competitiveness in the international trade of selected manufactured goods and to evaluate taxes and subsidies.

ICP data make it possible to analyze the structural characteristics of the economy using international prices. For example, economic and price structures of countries at different stages of development could be examined in relation to a comparator country. A country could also determine measures to improve its competitiveness based on an analysis of its price structure in relation to regional price levels. Such analysis may point to the need to improve transport and storage facilities or packaging and marketing practices to reduce transaction costs and thus improve the enabling environment for investment.

4.1.2 USE BY THE PRIVATE SECTOR

Multinational corporations increasingly use ICP data for monitoring and assessing exchange rate developments because their investment decisions are based on the real values of the return on their investment. ICP data are also used for evaluating cross-country investment costs, including unit labor and material costs, project viability, market size and asset allocation. The assessment of industry growth potential and associated investment risks across countries is another important potential use of ICP data in the private sector. Some specialized firms use ICP data monthly to determine PPP-adjusted cost-of-living allowances across countries to meet the needs of multinational corporations, major non-governmental organizations and international development agencies.

4.1.3 USE BY INTERNATIONAL ORGANIZATIONS

At the international level, PPP data are used, among other things, for establishing the international poverty threshold (World Bank), constructing the human development index (U.N. Development Program), comparing health expenditures per capita (World Health Organization), assessing per capita expenditures in education (U.N. Educational, Scientific and Cultural Organization), monitoring the welfare of children (U.N. Children's Fund), comparing the

relative sizes of economies and estimating weighted averages of regional growth rates (IMF) and adjusting salaries and expatriate allowances to compensate for cost-of-living differentials (donors). The international community uses the international poverty line of $1 per day measured in PPPs to monitor progress toward reducing the number of people in absolute poverty.

4.2 LIMITATIONS TO THE USE OF PPPS AND GDP VOLUME MEASURES

While PPPs are a powerful tool for several kinds of economic analysis, a word of caution is needed. First, PPPs do not indicate what the exchange rate should be. This could be the case if PPPs just covered tradable goods, but the PPPs from the 2005 ICP round covered not only tradable products but also nontradable goods and services, such as construction and personal and government services. In any event, exchange rates are determined by the total demand for a particular currency, and foreign trade is only one component of this demand. Therefore, PPPs cannot be used to determine a country's correct exchange rate; it is determined by international currency markets

4.2.1 STATISTICAL ERRORS AND DISCREPANCIES

PPPs are statistics and, therefore, subject to sampling errors. National accounts statistics that are used as weights in compiling PPPs at basic heading levels also contain statistical errors. When PPPs and national accounts are combined into total or per capita GDP (in PPP terms), the resulting per capita real GDPs cannot be used to establish strict rankings among countries. Rankings should be used cautiously when differences among countries are relatively small. The reliability of PPPs and volume measures also depend on the level of detail. At a more aggregated level, PPPs are likely to be more reliable. For example, PPPs for food and nonalcoholic beverages are likely to be more reliable than PPPs for food alone, and PPPs for bread and cereals are likely to be more reliable than PPPs for just rice. This has been an important consideration in determining the optimal level of data disagregation in this publication.

In the same vein, caution should be used when comparing economies by their GDPs or by per capita measures. Because statistical errors occur in the calculation of GDP and population sizes as well as in the estimation of PPPs, small differences should not be considered significant. Caution should also be exercised in making comparisons of price levels or per capita expenditures at low levels of aggregation, where small errors may lead to large discrepancies.

4.2.2 TIME SERIES OF DIFFERENT BENCHMARK PPP ESTIMATES

Finally, time series of different benchmark estimates of real GDP (in PPP terms) are not directly comparable over time. Real GDP provides a snapshot of the relative real GDP levels among participating countries for a given benchmark year. When benchmark PPP estimates for different benchmarks are placed side by side, these snapshots may appear to provide a moving picture of relative real GDP levels over the years, but this apparent time series of real GDP is actually similar to a current price time series showing the combined effect of changes in relative price levels and changes in relative real GDP levels. Within each year, the indexes are at a uniform price level, but the uniform price level changes from one reference year to the next.

PART 5

CONCLUSION AND THE WAY FORWARD

Conclusion and the Way Forward

5.1 CONCLUSION

The results generated from this ICP-Africa round resulted in improved data to assess the relative standing of the countries in the region and are essential for comparing their economic performance and the potential well-being of their respective populations. Country GDPs can now be compared using PPPs, which provide a more robust set of comparisons than was previously the case when only exchange rates were used. Additionally, ICP-Africa provided an opportunity to strengthen human resource skills in the region.

The ICP-Africa results constitute a critical input in the policy-making and decision-making processes at national and international levels. Besides the usefulness of the data for facilitating cross-country comparison of GDP and related aggregates, the results are useful for poverty measurement (the PPP-adjusted poverty line of $1 per day), comparing regional poverty incidences and analyzing poverty across countries. They can also be used for the analysis of countries' comparative advantage to foster regional trade and integration, and in the investment and employment decisions of various economic agents.

The same countries predominantly determine the overall picture for Africa on gross macroeconomic indicators. South Africa is ranked first, followed by Egypt, Nigeria and Morocco. The picture changes considerably when the comparison is made on a per capita basis where Gabon, Botswana, Equatorial Guinea and Mauritius, which belong to the group of African countries with the smallest population, take the lead, accounting for real per capita GDPs, respectively, of 12,748 US$ (AFRIC 5,763); 12,060 US$ (AFRIC 5,452); 12,000 US$ (AFRIC 5,425) and 10,157 US$ (AFRIC 4,592). Mauritius has the highest living standard, followed by South Africa, Tunisia, Egypt and Gabon. The actual final consumption expenditure (AFCE) in these countries is two to three times higher than the regional average. The countries with the lowest living standards—Democratic Republic of Congo, Liberia, Zimbabwe and Guinea-Bissau—have an AFCE of less than one-third of the regional average. Accordingly, these countries also have the lowest real GDP per capita, just US$ 264 in Democratic Republic of Congo.

Although Africa began participating in the ICP program in 1970, this is the first time that an African institution has managed the program and provided support to the 48 participating countries in the region. This support included the design of price survey instruments for price data collection and office editing tools for data validation at the national and regional levels, as well as resources to undertake price and national accounts data collection. The end result is that the potential scope of the benefits for participating in ICP-Africa is wider than the specific objective for which ICP was initially conducted, namely cross-country comparison of GDP and its subaggregates. ICP-Africa has helped improve price and national accounts data by harmonizing statistical concepts according to international norms and standards and providing a comprehensive and integrated platform for statistical capacity building. It should be used by all African countries, the AfDB and all development partners in the region as the reference framework for the harmonization of GDP and price statistics and the timely generation of relevant indicators for all African countries.

In view of the importance of ICP-Africa data for development policy management, the AfDB and African countries must sustain ICP activities beyond the current round. In particular, countries must make ICP activities an integral part of their regular activities with a specified resource envelope. Some countries have committed resources for ICP activities, and the heads of national statistical offices made a commitment in the Accra Declaration of December 2007 to integrate the core ICP-Africa activities into their routine statistical activities. The international community should ensure that country efforts are adequately supported to maintain the credibility of the process and the results.

The interaction through meetings, workshops and retreats among regional statisticians has tremendously increased the efficiency of the implementation of the program and the leverage effects on national statistical institutes programs. In addition the synergy between ICP and CPI and the spillover of the former onto the latter should be furthered with a view to establishing harmonized CPIs for countries in the same economic groupings as well as for Africa as a whole.

The ICP-Africa partnership model in which all Africa statistical development stakeholders operated as an integrated system with interdependent parts should be used in the implementation of any subregional or regional statistical initiatives.

5.2 THE WAY FORWARD

The Bank committed to estimate and to publish yearly PPPs from 2006 up to the next global round. Most countries participating in 2005 ICP-Africa also collected data in the first semester of 2006. The estimation of the 2006 PPPs can be done by extrapolating the 2005 PPPs through some modeling or by using the 2006 first semester data after using CPIs to adjust them to annual averages. The 2007-2008 PPPs will done through modeling. Before the next ICP-Africa round in 2011, the AfDB plans to take advantage of the synergy created between the ICP-Africa and the CPI data collections to publish ICP-Africa results for the years 2009, and 2010 on the basis of a reduced list and coverage. The 2005 regional list will be reduced and price data will be collected in the capital city (and in one or two big cities) only. The list reduction will be achieved through an investigation and the 2005 data will be used to calibrate the price averages from capital city to a national scale.

The determination of GDP expenditure weights was carried out by all countries participating in the ICP-Africa under the close supervision and coordination of the Bank. It entails compiling GDP estimates and its main aggregates as well as their breakdown into detailed categories of expenditures. Relevant information for the period 2003-2006 was provided to the Bank by almost all of the 48 countries that took part in the 2005 ICP round. Provisional estimates for 2007 have also been provided . data for 2008 and 2009 are expected to be respectively processed in 2009-2010 and 2010-2011.

In view of preparing for the 2011 round the following actions will be undertaken by December 2009: (i) reviewing and improving SEMPER for data entry and processing; (ii) reviewing and updating the regional list to take into consideration new products, the new implementation structure of the program and lessons learned from the 2005 round; and (iii) reviewing the 2005 data collection manuals on the basis of lessons learned from the 2005 round with an emphasis on the CPI-ICP synergy.

It is envisaged to conduct the ICP-Africa 2011 on the basis of sub-regional economic groupings: AFRISTAT (including two sub-regions, CEEAC and WAEMU), ECOWAS, COMESA and SADC. A linking procedure needs to be defined beforehand as it has a great influence on the list of products and the data collection process.
In addition, the AfDB will intensify its statistical capacity-building initiatives through the Regional Reference Strategic Framework and the National Strategies for the Development of Statistics with the sole objective of maintaining and sustaining the momentum that has been built.