



# BOTSWANA

## TECHNICAL ASSISTANCE REPORT—NATIONAL ACCOUNTS MISSION

August 2021

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# TECHNICAL ASSISTANCE REPORT

## BOTSWANA

### Report on the National Accounts Mission

**JUNE 2021**

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## Glossary

|          |  |
|----------|--|
| 2008 SNA | <i>System of National Accounts, 2008</i>                                       |
| AfDB     | Africa Development Bank  |
| AFS      | IMF's Regional Technical Assistance Center for Southern Africa - AFRITAC South |
| BURS     | Botswana United Revenue Service  |
| CEE      | Census of Economic Enterprises   |
| FISIM    | Financial Intermediation Services Indirectly Measured                          |
| GVA      | Gross Value Added  |
| HFCE     | Household Final Consumption Expenditure  |
| IC       | Intermediate Consumption   |
| IMF      | International Monetary Fund  |
| IPD      | Implicit Price Deflator  |
| SB       | Statistics Botswana  |
| SUT      | Supply and Use Tables  |
| TA       | Technical Assistance   |

## SUMMARY OF MISSION OUTCOMES AND PRIORITY RECOMMENDATIONS

1. **A remote technical assistance (TA) mission was conducted by IMF's Regional Technical Assistance Center for Southern Africa (AFS)<sup>1</sup> during April 12–16, 2021 to assist Statistics Botswana (SB) in improving the quality of the national accounts statistics.**
2. **Reliable national accounts are essential for informed economic policymaking by the authorities.** It also provides the private sector, foreign investors, rating agencies, donors and the public in general with important inputs in their decision-making, while informing economic analysis and IMF surveillance. The System of National Accounts, 2008 (*2008 SNA*) recommends that the national accounts be rebased every five years. Rebasing requires comprehensive surveys and ideally, supply and use tables (SUTs) to support coherent checking of data.
3. **SB has made considerable progress in populating the SUTs and the process is nearly complete.** Since the last mission, the margin matrix, taxes and subsidies on products, input matrix, government consumption and capital formation have been populated. However, there are a few outstanding items to be included such as financial intermediation services indirectly measured (FISIM) and the informal sector estimates. The method for allocating margins and taxes to products were reviewed and deemed to be sound.
4. **The balancing process has commenced but several issues have been raised by the mission before it can be finalized.** In particular, the SB should compare the revised input-output ratios with the current input-output ratios and validate and document any significant changes; ensure intermediate consumption (IC) compared to household final consumption expenditure is reasonable when balancing the products; ensure that products such as electricity, water and telecommunications are attributed to all/most industries; and document all assumptions and data sources used in compiling and balancing the SUTs.
5. **SB has implemented or is implementing all of the recommendations from the previous mission.** The October 2020 mission strongly recommended that SB reviews the preliminary estimates of gross value added (GVA) prior to balancing the SUT. SB needed to analyze the revisions to current GVA estimates, the revised input-output ratios and implicit price deflators (IPDs) before finalizing the preliminary estimates. This remains an outstanding issue. This mission stressed that the revisions need to be analyzed prior to completing the SUTs otherwise any subsequent changes will be more difficult to implement.

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<sup>1</sup> AFS provides TA and training to Angola, Botswana, Comoros, Eswatini, Lesotho, Madagascar, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Zambia, and Zimbabwe. AFS donors are the European Union, Switzerland, Germany, China, Mauritius, the United Kingdom, Netherlands, European Investment Bank and Australia.

**6. Additionally, the inclusion of corporate income tax data in the annual estimates was explored by SB but cannot be implemented as the Botswana Unified Revenue Service (BURS) captures taxable income only in its system currently.** The BURS taxpayer system is being updated and once complete SB will be able to obtain the data required but it will not be in time for this rebase.

**7. SB is receiving support from Mr. Jan Redeby, African Development Bank (AfDB) consultant, for two days a week.** He is assisting the SB on the SUT as well as the rest of the rebasing of the national accounts.

**8. The following priority recommendations will improve the national accounts statistics for Botswana:**

**Table 1. Botswana: Priority Recommendations**

| Target Date | Priority Recommendation  | Responsible Institutions |
|-------------|--|--------------------------|
| June 2021   | <i>Finalize population and balancing of the SUTs</i>                 | SB                       |
| June 2021   | <i>Disseminate rebased annual GDP by production and expenditure.</i> | SB                       |

Further details on the priority recommendations and the related actions/milestones can be found in the action plan under *Detailed Technical Assessment and Recommendations*.

## ANNUAL NATIONAL ACCOUNTS REBASE

**9. SB is currently rebasing the national accounts to a base year of 2016.** Previous missions have recommended that SB review and improve, where possible, the data sources and methods used to compile annual GVA for all 59 industries as part of the rebase. This is complete. The data sources are a mix of administrative data, VAT data and annual financial accounts for businesses depending on the industry.

**10. SB explored the possibility of using corporate income tax data to estimate annual GVA but this was not possible.** Currently, the BURS system captures taxable income only which is not relevant to measuring GVA. BURS have indicated that their system is being updated so that all data required will be captured. It is expected this system update will be complete in May 2021. However, this is not timely enough to be incorporated into this rebase. The SB will commence evaluating the data once it becomes available with the intention of including it in the future.

**11. The October 2020 mission indicated that SB had compiled all rebased GVA estimates except for agriculture.** The mission indicated that SB needed to undertake further work to validate the revised estimates. For example, the revisions to the currently published current price levels and constant price growth rates; revisions to the IPDs; and revisions to the

input-output ratios which would not be expected necessarily. The mission indicated that this should be completed prior to balancing the SUT as any changes after that would be difficult to implement. SB has not completed this task and the balancing process has commenced. The mission strongly recommended that these revisions analyses be undertaken before the SUT is finalized.

**12. SB has commenced backcasting the time series from 2006 to 2016.** The mission reviewed one industry where the method for estimating the constant price series was revised. Instead of deflating the current price series, a quantity indicator was used to estimate the constant price series and an IPD was derived. The mission noted that whilst in principle the method change seemed reasonable the results would require significant justification. The revisions to the growth rates were significant and changed the direction from positive growth to negative growth. The mission indicated that the current method was reasonable also so to justify the change would be difficult. The mission stressed that any revisions to the backcast series needs to be validated and justified. It was agreed that SB would review all revisions to the backcast series.

**13. The previous mission finalized the allocation of FISIM to IC and provided guidance on measuring the informal sector.** SB still needs to implement the allocation of FISIM. The mission indicated that FISIM must be allocated in the SUT before the balancing is finalized as well as ongoing compilation of GVA. SB has partially completed the informal sector worksheet. This mission provided guidance as to what data was required to complete the worksheet and therefore derive an estimate for the informal sector. Once again this must be included in the SUT prior to its finalization. SB are clear on what is required.

**Recommended Actions:**

- *SB to evaluate BURS corporate income tax data when it becomes available.*
- *SB to validate and justify revisions to the rebased GVA estimates, in particular current prices levels, constant price growth rates, IPDs and input-output ratios.*
- *SB to validate and justify revisions to the backcast series.*
- *SB to finalize and include the allocation of FISIM to IC and informal sector estimates in the SUT.*

## SUPPLY AND USE TABLES

**14. SB is compiling SUTs as part of the rebasing exercise.** These are extremely beneficial as they enable the balancing of the measures of GDP. They also result in valuable ratios such as input-output ratios which are used in the ongoing compilation of GVA. SB is receiving technical support on the SUT from Mr. Jan Redeby, an AfDB consultant.

**15. The previous mission indicated that the follow-up surveys required to obtain product-level data for the SUT were complete.** These surveys included the trade services,



transport, construction, and manufacturing industries. SB have incorporated the data into the SUT where appropriate. Essentially, SB allocated the totals obtained from the CEE to the product-level using the ratios from the follow-up surveys. The mission reviewed the methods used and deemed them to be sound.

**16. SB has nearly finalized the population of the SUT.** The previous mission indicated that the output matrix (except for agriculture), household consumption expenditure, imports and exports data were included. Since that mission SB have loaded the margins, taxes and subsidies on products, input matrix, capital formation and government consumption expenditure datasets. However, as previously mentioned there are still some outstanding data that needs to be included. Namely, FISIM and the informal sector estimates.

**17. The previous mission recommended that SB reviews and validates the preliminary input matrix prior to commencing the balancing process.** SB had produced an input structure for some industries. That mission highlighted that there were key products not showing an estimate, such as electricity, water and telecommunications. These products are expenses for every industry and therefore you would expect to see an estimate. SB are still working through this analysis to ensure products that are expected to be used by an industry are included.

**18. Many of the product flow worksheets cutting across several industries were reviewed during the mission.** The mission provided several recommendations mostly related to justifying and validating the results as well as the revisions. For example, depending on the product the SB has used either household final consumption expenditure (HFCE) or IC as the residual when balancing a product. It appears that the HFCE data is deemed more reliable than the CEE data for most products. This is not unexpected, however, for some products the ratio of HFCE to IC upon review seemed to be implausible. The mission recommended that the SB review the HFCE to IC ratio for each product to ensure a plausible result.

**19. The input matrix for several products includes VAT which is not expected.** VAT is paid by the final consumer ultimately and is allocated to HFCE in the use table. The AfDB consultant has included VAT in the input matrix because a) small-scale producers not registered for VAT cannot deduct VAT paid on their inputs, and b) government pays VAT on its purchases.

**20. In reviewing most of the product flow and industry worksheets the mission noted that the documentation associated with the worksheets needs to improve.** For example, data sources need to be documented in detail, indicating that the data comes from the Ministry of Finance is not sufficient. All assumptions made must be documented in detail and ideally backed up with some justification.

**21. SB has commenced balancing the SUT.** However, as stated previously, there are several tasks that need to be addressed before the SUT can be finalized.

**Recommended Actions:**

- SB to review and validate the preliminary input structures for each industry prior to finalizing the SUT.
- SB review the HFCE to IC ratio for each product to ensure a plausible result
- SB to improve the documentation contained within the worksheets.

## DETAILED TECHNICAL ASSESSMENT AND RECOMMENDATIONS

Table 2. Botswana: Results Based Framework

| Objective: Strengthen compilation and dissemination of data on macroeconomic and financial statistics decision making according to the relevant internationally accepted statistical standard, including developing/improving statistical infrastructure, source data, serviceability and/or metadata. |  |                        |   |
|--|--|------------------------|---|
| Outcome  | Verifiable Indicators  |                        |   |
| Data are compiled and disseminated using the concepts and definitions of the latest manual/guide   | The general framework, concepts and definitions broadly follow the 2008 SNA. |                        |   |
| Milestones   | Assumptions  | Target Completion Date | Comments  |
| Compilation of rebased GDP by production estimates.  |  | November 30, 2020      | <b>Ongoing.</b> Considerable progress has been made in compiling the estimates but the analytical work including revisions analysis remains outstanding. Change date to May 31, 2021. |
| Compilation of rebased GDP by expenditure estimates.   |  | November 30, 2020      | <b>Ongoing.</b> Considerable progress has been made in compiling the estimates but the analytical work including revisions analysis remains outstanding. Change date to May 31, 2021. |
| Milestones   | Assumptions  | Target Completion Date | Comments  |

|   |  |                               |   |
|---|--|-------------------------------|---|
| SUT populated and balanced.   |  | November 30, 2020             | <b>Ongoing.</b> Population of the SUT is nearly complete. The balancing process remains outstanding and will take some time to complete. Change date to May 31, 2021. |
| Dissemination of rebased GDP estimates.   |  | January 31, 2021              | Change date to mid-June 2021.   |
| Disseminate backcast series from 2006 to 2016 (the new base year)                               |  | March 31, 2021                | Change date to June 30, 2021.   |
| Disseminate backcast series from 1994 to 2016 (the new base year)                               |  | June 30, 2021                 | Change date to 31 December 2021.  |
| <b>Outcome</b>  | <b>Verifiable Indicators</b>   |                               |   |
| Higher frequency data has been compiled and disseminated internally and/or to the public        | National accounts compiled and disseminated on a quarterly or monthly basis. |                               |   |
| <b>Milestones</b>   | <b>Assumptions</b>   | <b>Target Completion Date</b> | <b>Comments</b>   |
| Review quarterly GDP methodologies and data sources.  |  | December 31, 2020             | <b>Ongoing.</b> Updates are progressing. Change date to June 30, 2021.  |
| Dissemination of revised quarterly GDP estimates based on the rebased annual national accounts. |  | March 31, 2021                | Change date to June 30, 2021.   |

## A. Officials Met During the Mission

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|----------------------------|---------------------|--|
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