# BOTSWANA

## TECHNICAL ASSISTANCE REPORT—
## REPORT ON THE NATIONAL ACCOUNTS MISSION

June 2019

This Technical Assistance report on Botswana was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed on March 2019.

Copies of this report are available to the public from

International Monetary Fund • Publication Services
PO Box 92780 • Washington, D.C. 20090
Telephone: (202) 623-7430 • Fax: (202) 623-7201
E-mail: publications@imf.org  Web: http://www.imf.org
Price: $18.00 per printed copy

**International Monetary Fund
Washington, D.C.**

Regional Technical Assistance Center for Southern Africa
International Monetary Fund
7ᵗʰ Floor, Bramer House, Ebene, Mauritius
Tel.: +230-401-2500 - Fax: +230-468-1618

# BOTSWANA

## REPORT ON THE NATIONAL ACCOUNTS MISSION (FEBRUARY 25–MARCH 8, 2019)

### Prepared by Donna Grcman

# CONTENTS

# Glossary

| | |
|---|---|
| *2008 SNA* | *The System of National Accounts, 2008* |
| AfDB | Africa Development Bank |
| AFS | IMF's Regional Technical Assistance Center for Southern Africa - AFRITAC South |
| BURS | Botswana United Revenue Service |
| FISIM | Financial Intermediation Services Indirectly Measured |
| GDP | Gross Domestic Product |
| GDP(P) | Gross Domestic Product by production |
| GVA | Gross Value Added |
| IMF | International Monetary Fund |
| MTHS | Multi-Topic Household Survey |
| SB | Statistics Botswana |
| SNA | System of National Accounts |
| SUTs | Supply and Use Tables |
| TA | Technical Assistance |

# SUMMARY OF MISSION OUTCOMES AND PRIORITY RECOMMENDATIONS

**1.       A technical assistance (TA) mission was conducted by IMF's Regional Technical Assistance Center for Southern Africa (AFS)[1] during February 25–March 8, 2019 to assist Statistics Botswana (SB) improve the quality of the national accounts statistics**. This was the first mission on national accounts conducted by AFS to SB since January 2015.

**2.       Reliable national accounts are essential for informed economic policy-making by the authorities.** They also provide 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. Rebasing the national accounts is recommended every five years. They require comprehensive surveys and ideally, Supply and Use tables (SUTs) to support coherence checking of data.

**3.       SB are currently rebasing the annual national accounts with an expected release date of March 2020.** SB conducted a business listing exercise to provide the frame for the economic census which underpins the rebasing of the national accounts. However, the listing exercise identified fewer establishments than the taxpayer list (i.e., 14,452 and 25,396 establishments respectively). The apparent underestimation of the number of establishments by the business listing exercise has been compounded by an extremely low response rate for the economic census (i.e., 3,145 out of 14,452 establishments). SB needs to determine the statistical frame by supplementing their list with the taxpayer list, determine the weights of the establishments that responded to the economic census and improve the response rate where possible as a high priority. If this is not achieved quickly, progress on the rebase will be slowed dramatically.

**4.       SB and the mission developed a detailed workplan to demonstrate the magnitude of rebasing the national accounts.** The current release date for the rebase is extremely tight and, according to the mission, unrealistic. Typically, a rebase, including Supply and Use Tables (SUTs), at a similar point would take at least two years to complete. The workplan provided a more realistic (but still very tight) deadline for the completion of the exercise which was presented to management. The mission strongly recommended SB revise the release date for the rebased national accounts. It also recommended that the rebase include the SUTs even if it results in a later release date. The key milestones, including the SUTs, is included in Table 2 Botswana: Results Based Framework. The dates are subject to update depending on the final decision on the release date.

---

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

5.      **SB and the mission reviewed the industry and product classifications that had been developed with assistance from the Africa Development Bank (AfDB).** Classification principles were discussed and mappings to the international standards were produced. SB worked diligently to ensure this task was complete before the end of the mission. The results were discussed with the AfDB consultant who joined the mission for the last three days.

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

<div align="center">

**Table 1. Priority Recommendations**

</div>

| Target Date | Priority Recommendation | Responsible Institutions |
|:---:|:---|:---:|
| **May 2019** | *Determine the statistical frame and weights for the economic survey.* | **SB** |
| **June 2019** | *Undertake additional specialized surveys to collect missing product data.* | **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

6.      **SB is currently rebasing the national accounts to a base year of 2016.** An economic census commenced in 2016 with the first phase being a business listing exercise which resulted in the identification of 14,452 establishments (excluding branches). The second phase was the economic census (as opposed to a sample survey) which was undertaken during 2017. However, the response rate was extremely low with only 3,145 establishments responding.

7.      **SB acknowledged this was a low response rate indicating that the mail out strategy of the census was a significant contributor.** The mission and SB agreed that the current response rate is probably not going to give reasonable results, at least for some industries. Therefore, follow-up work will be required to obtain additional data, including follow-up visits, use of administrative data and financial statements and possibly imputation.

8.      **The initial frame was supplemented with approximately 500 large establishments that SB realized weren't included in the business listing exercise.** These units were identified from the large tax payer unit and other offices under the Botswana United Revenue Service (BURS). However, SB did not do any further reconciliation with the taxpayer list. During the mission, SB followed up with BURS and determined that there are 25,396 active taxpayers on their list. Therefore, SB needs to do some further reconciliation between their list and the taxpayer list to determine the actual business frame.

**9.** **Once the business frame is determined, SB will have to reconcile the establishments that responded to the economic census.** This reconciliation will have to ensure that there is good coverage of industries as well as size of establishments. Once this is determined they can determine the grossing up factors for the sample. The mission stressed that this task is a very high priority. The longer it takes to determine this the longer it will be before gross value added (GVA) estimates can be compiled. These are the underlying estimates for GDP by production (GDP(P)).

**10.** **Other data required for the rebase includes the Multi-Topic Household Survey (MTHS) and Agriculture Survey as well as trade data.** These data are currently available, and the SB can commence compiling the aggregates associated with these data. That is, household final consumption expenditure, agriculture GVA, imports and exports data. They can also commence compilation of industries that utilize administrative data rather than survey data to estimate GVA, e.g., Finance and Insurance, Public Administration, Health and Education. There was a brief discussion on the method to derive financial intermediation services indirectly measured (FISIM). Section A below provides an outline for its calculation. The consumer price index (CPI) has been rebased and will be used to deflate current price estimates for GVA.

**11.** **Detailed discussions on the compilation of the various components was not undertaken during this mission due to the limitation of data available.** These will be undertaken in future missions.

**12.** **The AfDB consultant overlapped with this mission for the last three days.** SB utilize the NADABAS system developed by this consultant in the ongoing compilation of GDP. The rebase exercise means that the system needs to be developed from scratch to take into account the new data sources and methodologies. He demonstrated how this would be undertaken and the national accounts team will create the databases for which there are data in the coming week whilst the consultant is there. However, this cannot be completed until all the compilation data are available.

***Recommended Actions:***

- *SB to determine the statistical frame and weights for the economic survey.*
- *SB commence compilation of aggregates that don't rely on the economic survey for data.*
- *SB to create the NADABAS datasets when compilation data become available.*

# SUPPLY AND USE TABLES

**13.** **SB are planning to compile 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 to output ratios which are used in the ongoing compilation of GVA.

**14.** **The AfDB consultant developed proposed industry and product classifications to be used in the SUT framework prior to this mission.** The national accounts team and this mission

reviewed the classifications and mapped them to the international standards. The national accounts team worked diligently to ensure the product mapping was complete prior to the end of the mission. As a result, they made several revisions to both classifications. These revisions were reviewed during the mission along with the AfDB consultant and a final decision was made on the construction of both the product and industry classifications. It was recommended that changes could still be made depending on the data available once compilation commences.

**15.     SUTs require detailed product level data.** These data are not available administratively, so the economic survey should include the capture of such data. The mission along with the team reviewed the survey instruments to ensure the required data were collected. Unfortunately, for some industries a further follow-up specialized survey is required. For example, the trade services industry needs to collect both the sales and purchases amounts for the major products sold. This was not collected initially. Further surveys are required for the transport, construction and manufacturing industries.

**16.     The mission indicated that the completion of SUTs takes at least three months.** SB need to take this into account in determining the release date of the rebased estimates. The mission stated that the rebase can be released without the compilation of the SUTs but this is not desirable. If SB decided to release the rebase without the SUTs then the SUTs should be held over to the next rebase. SB management indicated that the SUTs were considered integral to this rebase so they will take the timing to complete them into consideration when making a decision.

***Recommended Actions:***

- *SB to decide if SUTs will be included as part of the rebasing of the national accounts and take them into account when deciding the release date of the rebased estimates.*
- *SB to undertake specialized surveys for some industries to collect the required product level data.*

# STRATEGIC ISSUES

**17.     The current release date for the release of the rebased national accounts is the end of March 2020, where most of the compilation including the SUTs is complete by December 2019.** The mission strongly recommended this date be revised as it is unrealistic to expect the amount of work required to be complete in such a timeframe. Typically, a rebase, including SUTs, at a similar point would take at least two years to complete, maybe even into the third year depending on the resources available to complete the work and the quality of the underlying data.

**18.     SB and the mission developed a detailed workplan to demonstrate the magnitude of rebasing the national accounts.** Broadly the key tasks include rebasing GDP(P) and GDP by expenditure for the new base year; review and update the ongoing compilation of both GDP measures; compile and balance the SUTs; re-compile the quarterly estimates; and backcast all of

the series. The mission indicated that time can be saved by completing the rebase without compiling the SUTs (although not desirable because of the loss of cross-checking and detail) and indicated that the back series could be released at a later date.

**19.      The workplan provided a more realistic (but still very tight) deadline for the completion of the exercise which was presented to management.** Two options were presented to management. One that included the compilation of SUTs and the other excluding them. The mission strongly recommends SB revise the release date for the rebased national accounts. It also recommended that the rebase includes the SUTs even if it results in a later release date.

**20.      There was a discussion on whether or not the upstaffing the national accounts would assist in meeting the current deadline.** The mission indicated that it could but only if resources from within SB were used and those had some familiarity with the national accounts. The recruitment of staff from outside the SB would mean intensive training. This will take time, which is not available. The team currently has two temporary staff that have been with them for approximately 18 months. They have demonstrated a good understanding of the national accounts during this mission. It is recommended that they remain for at least the duration of the rebase. However, SB could consider keeping them permanently as the resource level in the national accounts is low for the work that is required to be done.

*Recommended Actions:*

- *SB management reconsider the release date for the rebased national accounts and include the compilation of the SUTs in its deliberations.*
- *SB keep the two temporary staff working in the national accounts for the duration of the rebase at least.*

# DETAILED TECHNICAL ASSESSMENT AND RECOMMENDATIONS

**Table 2: 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** |

| Assessment of deviations to the *SNA 2008* and relevant changes needed. | | March 29, 2019 | Complete. |
|---|---|---|---|
| Statistical frame and weights determined and applied to economic survey. | | May 31, 2019 | |
| Compilation of rebased GDP by production estimates. | | December 31, 2019 | |
| Compilation of rebased GDP by expenditure estimates. | | January 31, 2020 | |
| SUT populated and balanced. | | June 30, 2020 | |
| Dissemination of rebased GDP estimates. | | | To be determined. |
| **Outcome** | | **Verifiable Indicators** | |
| 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. | |
| **Milestones** | **Assumptions** | **Target Completion Date** | **Comments** |
| Review quarterly GDP methodologies and data sources. | | September 30, 2020 | Ongoing. Will be undertaken as part of the rebasing exercise. |
| Dissemination of revised quarterly GDP estimates based on the rebased annual national accounts. | | September 30, 2020 | |

## A. Simple Method for Estimating FISIM

**21.     Using reference rates to determine the level and allocation of FISIM is theoretically attractive and there is a strong expectation** (for example in the IMF's *Data Quality Assessment Framework*) that this procedure should be followed. But in practice, measurement is not straightforward.

Unless the financial services industry is dominant, as in a small "off-shore" tax haven, it is a complication that typically makes little difference to the level of GDP for low-income countries. The allocation is highly sensitive to the choice of reference rate, with unpredictable results when rates are varying. However, in many smaller developing countries, a service-free, risk-free, market-determined rate is not observable for use as a reference rate, for instance, because the inter-bank lending market is small or unrepresentative or at a rate that is artificial or controlled. Given the uncertainties about the 'true' reference rate for FISIM, one simple, objective and transparent method it to calculate the reference rate as the simple average of the actual lending and borrowing rates. The required data are readily available from the banks' profit and loss accounts. Specifically, if:

$yL$ = stock of loans
$yD$ = stock of deposits
$rL$ = rate on Loans
$rD$ = rate on Deposits

then define the reference rate rr as:

rr= (rL + rD)/2

The Output of FISIM is then = (rL - rr) yL + (rr - rD) yD

(The *2008 SNA* advises against this approach, but it is often used and gives sensible results in cases where the reference rate is either unavailable or gives unsuitable results.) Allocation (to sectors and activities) will require additional data, such as on the distribution of lending across activities. It will be important to get data for the loans and deposits of the household sector, which are usually available. By convention, government could be exempt from such allocation.

## B. Officials Met During the Mission

| Name | Institution | E-mail Address |
| --- | --- | --- |
| **Dr. Burton Mguni** | Statistics Botswana (Statistician General) | bmguni@statsbots.org.bw |
| **Malebogo Kerekang** | Statistics Botswana (Deputy Statistician General) | mkerekang@statsbots.org.bw |
| **Boitumelo Matlhaga** | Statistics Botswana (Director of Economic Statistics) | bmatlhaga@statsbots.gov.au |
| **Ketso Makhumalo** | Statistics Botswana | kmakhumalo@statsbots.org.bw |
| **Lekoko Simako** | Statistics Botswana | lsimako@statsbots.org.bw |
| **Winsten Kabo** | Statistics Botswana | wkabo@statsbots.org.bw |
| **Chandler Madisa** | Statistics Botswana | chmadisa@statsbots.org.bw |
| **Boitumelo Kobua** | Statistics Botswana | bkobua@statsbots.org.bw |
| **Phemelo Ntwayapelo** | Statistics Botswana | pntwayapelo@statsbots.gov.bw |
| **Godiraone Gaolaolwe** | Statistics Botswana | ggaolaolwe@statsbots.gov.bw |
| **Michael Andina** | Statistics Botswana | mandina@statbots.gov.bw |
| **Koontse Mokgwathi** | Statistics Botswana | knmokgwathi@statsbots.gov.bw |
| **Temba Sibanda** | Statistics Botswana | tsibanda@statsbots.gov.bw |
| **Ipuseng Zambo** | Statistics Botswana | izambo@statsbots.gov.bw |
| **Mr. Jan Redeby** | AfDB, Consultant | jan@redeby.co.is; redeby@gmail.com |
| **Thapelo Maruatona** | Statistics Botswana | tmaruatona@statsbots.org.bw |
| **Phetogo Zambezi** | Statistics Botswana | pgopolang@statsbots.org.bw |
| **Jimmy George** | Statistics Botswana | jgeorge@statsbots.org.bw |