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INTERNATIONAL MONETARY FUND

ZIMBABWE

SELECTED ISSUES

February 12, 2020

Approved By
African Department

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ELUSIVE QUEST FOR MACRO STABILITY IN ZIMBABWE[1]

In February 2019, Zimbabwe introduced an interbank market FX where domestic quasi-currency instruments (bank deposits and bond notes) could be traded against the U.S. dollar at rates other than parity. This reform aimed to remove the significant distortions caused by a large and growing parallel market premium for the conversion of these domestic instruments into foreign currency. In June, the new Zimbabwean dollar was introduced as the sole legal tender, effectively ending the multi-currency regime that had been in place since 2009. The new regime was to be supported by prudent fiscal policy and discontinuation of monetary financing. However, quasi-fiscal operations by the central bank continued throughout 2019. In addition, the money targeting framework that the authorities announced in February has not yet been introduced. The rapid money growth and lack of a nominal anchor have resulted in rapid exchange rate depreciation and very high inflation. Looking ahead, stabilizing the economy will require fiscal restraint and a more moderate growth of monetary aggregates. This should be supported by institutional reforms at the Reserve Bank of Zimbabwe (RBZ) and the introduction of short-term monetary instruments to better manage market liquidity conditions.

A. A Brief Monetary History of Zimbabwe

1. The monetary regime of Southern Rhodesia, the predecessor of what today is Zimbabwe, was tied to the pound sterling. After an initial period when the pound sterling had sole legal tender, the Southern Rhodesian pound was introduced in 1940, and pegged to the sterling in a currency board arrangement. This currency was then replaced by the pound of Rhodesia and Nyasaland starting in April 1956, which remained pegged to the sterling.

2. With the breakup of the Federation of Rhodesia and Nyasaland, a new Rhodesian pound was introduced in November 1964, replacing the old currency at par. The Rhodesian pound was officially pegged to gold, but de facto remained pegged to the pound sterling (Ilzetski et al., 2017). A new Rhodesian dollar was introduced in February 1970 shortly before the Republic of Rhodesia was declared. This currency replaced the Rhodesian pound at a 2:1 rate, while establishing a decimal system. The de facto peg to the pound sterling remained in place until August 1970, when the new currency was pegged to the South Africa rand instead.

3. Upon Zimbabwe's independence in 1980, the currency was renamed the Zimbabwe dollar. Officially, it was pegged to a basket of currencies, but in practice the monetary authorities targeted the US dollar (Ilzetski et al., 2017). The Zimbabwe dollar was initially above par versus the US dollar, but depreciated sharply during the 1990s and the early 2000s in the context of declining and volatile output growth, policy instability, and monetary financing of public sector deficits. As drought and the fast-track land reform program deepened the economic decline, monetary financing accelerated in the mid-2000s, eventually leading to triple-digit monthly inflation rates

[1] Prepared by Niko Hobdari and Frederico Lima (both AFR).

starting in early 2007, and culminating in prices doubling almost every day by November 2008 – one of the largest hyperinflations ever recorded (Hanke and Krus, 2013).

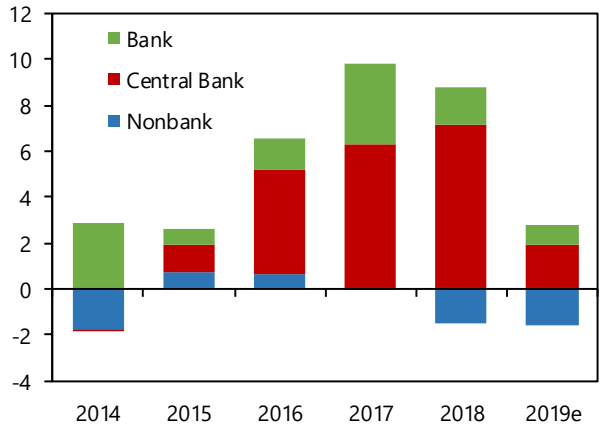
4. The hyperinflation ended in early 2009, when Zimbabwe abandoned its domestic currency and fully dollarized. As inflation spiraled out of control, the population dropped the Zimbabwean dollar and opted to conduct transactions only in foreign currency or through barter. In early 2009, the authorities officially recognized several foreign currencies as legal tender, including the US dollar, the UK pound sterling, the Euro, the Botswana pula, the South Africa rand, and the Chinese renminbi. Surrender requirements of foreign currency were formally abolished in March 2009, thus liberalizing the capital account.

5. The first few years after full dollarization were marked by economic recovery, low inflation and reengagement with the international community. Real GDP growth averaged 25 percent per year between 2009 and 2012, partially offsetting the contraction during much of the 2000s, and prices stabilized, helped by the fiscal discipline imposed by cash budgeting and a favorable external environment. However, a decline in commodity prices starting in 2013 and a steady devaluation of the rand versus the US dollar put pressure on Zimbabwe's terms-of-trade. This was compounded by erratic weather, including a severe drought during the 2015-16 season, and a return of fiscal profligacy which saw the fiscal deficit balloon starting in 2016.

6. After 2014, the authorities resumed monetary financing, supported by the creation of domestic quasi-currency instruments. Monetary financing was implemented via an RBZ overdraft and central bank purchasing of government bonds (Text Figure 1). The substantial increase in RBZ claims on the government, nominally equivalent to the US dollar but not supported by actual US dollar assets, was matched by an equal increase in system liabilities, and in particular bank deposits. Despite formally denominated in US dollars, these deposits began trading domestically at a discount versus the US dollar, and become known popularly as RTGS dollars.[2] Amid strict capital controls and deposit withdrawal restrictions, a parallel market developed to trade RTGS dollars for foreign exchange. Electronic RTGS dollars were also complemented by physical quasi-currencies, first with the introduction of bond coins in 2014, and later of bond notes in November 2016.

Text Figure 1. Zimbabwe: Domestic Financing, 2014–19

(in percent of GDP)



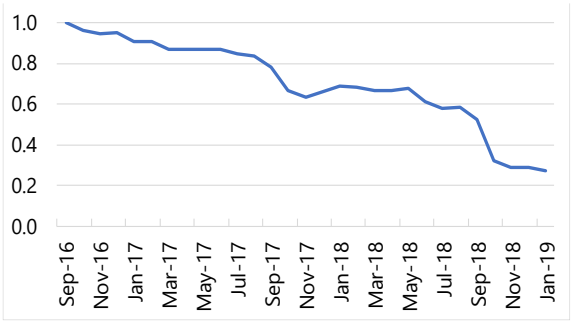
Sources: Zimbabwean authorities and IMF staff estimates.

[2] Real-Time Gross Settlement (RTGS) is a payment clearance system, used in Zimbabwe. The name came into use to separate domestic transactions from US dollar transactions between Zimbabwean and non-resident entities.

7. The growing parallel market premium for domestic quasi-currencies created severe economic distortions. Monetary financing, which peaked at 7.1 percent of GDP in 2018, led to a gradual depreciation of the RTGS dollar in the parallel market. This depreciation accelerated around multiple confidence crises, especially the one associated with the political transition in November 2017 that led to the ouster of President Mugabe, and another one in October 2018 when the authorities announced the formal separation of RTGS$ from nostro foreign currency accounts (FCAs). Having started at parity, by February 2019 these quasi-currencies were trading in the parallel market at 3.5 to 1 against the US dollar, implying a *de facto* nearly 80 percent loss in RTGS-denominated assets (Text Figure 2).

Depreciation resulted in rising inflation—which had increased from slightly negative in 2015 to nearly 60 percent in February 2019—and also significant distortions as the country was still *de jure* dollarized. For example, retail fuel prices were set administratively in US dollars, but paid by most in RTGS dollars, so that the real cost of fuel significantly declined, leading to increased smuggling to neighboring countries and a large fiscal cost. Similarly, tax liabilities and wages were often computed in US dollars, but paid in RTGS dollars, leading to a sharp decline in revenue and purchasing power.

Text Figure 2. Zimbabwe: Parallel Market Discount, 2016–19
(1 US$ per ZWL$)



Sources: Zimbabwean authorities and IMF staff estimates.

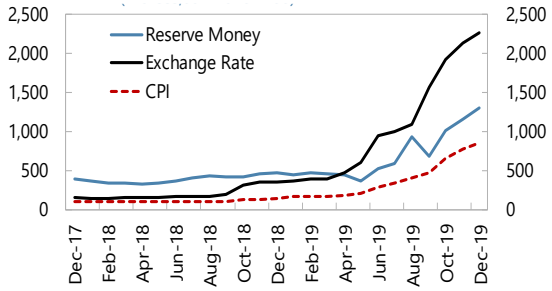
8. In February 2019, the authorities introduced a new domestic currency and an interbank foreign exchange market where it could be traded against the U.S. dollar.[3] The new domestic currency was originally named the Real Time Gross Settlement (RTGS) dollar and adopted a de jure floating exchange rate arrangement, previously a "no separate legal tender" arrangement. The RBZ denominated legally, through Statutory Instrument (SI) 33 of 2019, the existing RTGS dollar balances, bond notes and coins in circulation as RTGS dollars making them part of the multi-currency system in Zimbabwe. An inter-bank foreign exchange market was established to formalize the trading of RTGS dollar balances and bond notes with the United States Dollars and other currencies on a willing seller-willing buyer basis through banks and bureau de changes. The RTGS dollar was renamed as the Zimbabwean dollar (ZWL$) in June 2019.The reform was to be supported by prudent fiscal policy, with the 2019 budget anchored on no central financing of the deficit. The RBZ also announced it would adopt a reserve money targeting framework with base money as the nominal anchor, although it did not publicly disclose the specific base money targets and gave few details about the liquidity management framework it would use.

[3] See RBZ's Monetary Policy Statement of February 2019.

B. Developments Since the Introduction of the New Currency

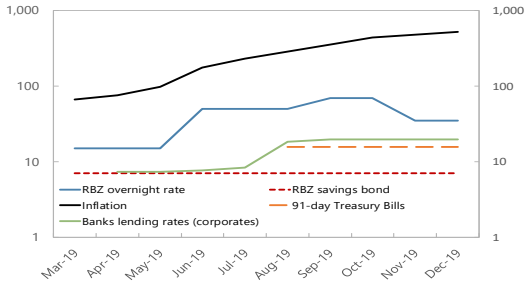
9. Rapid exchange rate depreciation and accelerating inflation continued through 2019. As of end-January 2020, the parallel exchange rate was around 25 ZWL$ per US$, compared to 3.5 less than one year before when the new currency was introduced. Inflation has also spiked sharply, reaching 521 percent in December 2019. These trends reflect a rapid increase in reserve money, which nearly tripled during the second half of 2019 as the RBZ resumed quasi-fiscal operations (Text Figure 3). These include the discounting in July 2019 of a 1½ percent of GDP USD Treasury Bill held by a domestic firm; provision of FX to fuel importers at subsidized rates to contain the increase of the retail fuel price (discontinued since October); and the introduction of an export incentive for gold purchases in September. Reserve money has also been very volatile, as the new quantitative monetary targeting framework that the RBZ announced at the time of the currency reform has not been operationalized, effectively leaving the economy without a credible nominal anchor. Domestic interest rates remain well below inflation, implying deeply negative real interest rates (Text Figure 4).

Text Figure 3. Zimbabwe: Reserve Money, Exchange Rate, and Inflation Trends
(Indices, Jan 2016 = 100))



Sources: Zimbabwean authorities.

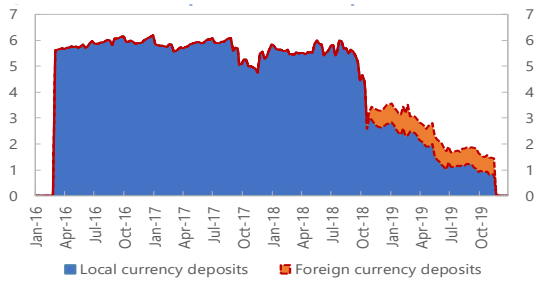
Text Figure 4. Zimbabwe: Domestic Interest Rates
(in percent, log scale)



Sources: Zimbabwean authorities

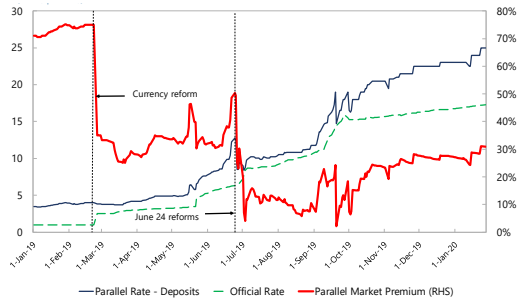
10. Real money balances have declined sharply and distortions in the FX market remain significant. Depreciation and the conversion of banks' assets and liabilities to ZWL$ at an exchange rate of 1:1 to the US$ in February 2019 caused bank deposits converted in US$ to shrink sharply, from about 6 billion in mid-2018 to 1½ billion at end-2019 (Text Figure 5). Concerned about exchange rate volatility, the authorities placed constraints on the FX market, including informal guidance and formal restrictions (e.g., mid-point determination and announcement) from the beginning, which have prevented real two-way trades and open price discovery in the FX market. The parallel market premium has declined significantly after the currency reform, dropping from about 70 percent prior to the reform to about 10 percent in mid-2019, although it has since increased again since then and exceeded 30 percent as of end-2019 (Text Figure 6). This higher premium reflects additional restrictions placed by the RBZ on trading margins in the interbank FX market. While volumes traded in the interbank market have been rising, sales appear to be almost exclusively from official sources or forced by administrative requirements.

Text Figure 5. Zimbabwe: Bank Deposits, 2016–19
(in US$ billion; ZWL$ deposits converted at parallel market rate)



Sources: Zimbabwean authorities.

Text Figure 6. Zimbabwe: Official and Parallel Market Exchange Rates
(ZWL$ per US$)



Sources: Zimbabwean authorities and IMF staff estimates.

11. In September 2019 the government established a new Monetary Policy Committee (MPC) at the RBZ. The MPC is tasked with setting monetary policy in Zimbabwe, with the majority of its members (six of the nine) selected from the private sector and academia, and also comprising the RBZ governor and its two deputy governors. The objective for the new MPC was to broaden the consultative process in setting monetary policy and increase the transparency of RBZ operations. The MPC has started to have monthly meetings with minutes of the meetings made public within a short timeframe,[4] and it has been instrumental in developing a Reuters System for Foreign Exchange Trading following extensive stakeholder consultation that is expected to become operational shortly. The MPC has publicly committed to adopting a prudent monetary policy to bring inflation under control, and has requested technical assistance to operationalize the money targeting framework.

C. What is the Appropriate Monetary Policy Framework for Zimbabwe?

12. Fiscal sustainability and central bank independence are preconditions for the success of any monetary policy framework. International experience has shown that, more than the choice of the monetary framework, the key for low and stable inflation is having sound and sustainable fiscal policy. By containing debt build-up or the need for monetary financing of the deficit, this minimizes fiscal dominance and facilitates the central bank's job in pursuing price stability and actively engaging public support for this task (Mishkin 2000).

13. Once these conditions are in place, there are three main policy frameworks that provide a nominal anchor for monetary policy. These include: monetary targeting; exchange rate pegs (such as full dollarization, a currency board, and a fixed exchange rate regime); and inflation targeting. All three monetary frameworks have their strengths and weaknesses (Text Table 1), and no one framework is best for all countries or at all times. In practice, most countries have followed discretionary frameworks mixing and matching monetary and exchange rate measures as they try

[4] https://www.rbz.co.zw/index.php/publications-notices/notices/press-release.

and meet multiple objectives, with inflation targeting gaining ground especially in developed and emerging market economies.

Text Table 1. Zimbabwe: Pros and Cons of Different Monetary Policy Frameworks

Regime	Pros	Cons	Common issues
Monetary Targeting	• Flexibility in setting inflation target • Ability to deal with transitory output fluctuations	• Does not work well in a low inflation environment (unstable money-inflation relationship)	• **Fiscal discipline** is required under any regime • **Central Bank independence** under inflation and monetary targeting (limit monetary financing of fiscal deficits, and give RBZ instrument independence) • **Central Bank transparency** (public availability of monetary data and central bank balance sheets)
Hard pegs (dollarization, currency union, currency board, fixed exchange rate)	• Easily understood by public • No FX volatility • Low inflation • Little/no currency risk (if credible) • Low interest rates (if credible)	• No independent monetary policy • Limited/No lender of last resort (currency board and dollarization) • Loss of seigniorage (dollarization) • Needs higher level of international reserves than alternatives	
Inflation Targeting	• Flexibility in setting inflation target • Ability to respond to real domestic and external shocks • Central bank accountability	• Weak transmission if interbank market is underdeveloped • FX and inflation volatility (especially at start)	

14. Exchange rate pegs and inflation targeting are not viable for Zimbabwe as monetary policy frameworks at the current juncture.

- ***Exchange rate peg.*** Such a regime has the advantage of providing a clear nominal anchor for monetary policy, and of anchoring public expectations for inflation. At the same time, a peg requires a significant level of reserves by the central bank to implement. The reserve adequacy metric (ARA) used by the IMF for low-income countries experiencing credit constraints (IMF, 2016) suggest that Zimbabwe's reserves should be about 5 months of imports under a fixed exchange rate regime. This is higher than under the traditional rules

Text Table 2. Zimbabwe: Reserve Metrics

	Millions of US$	Months of imports
IMF ARA metric		
Full dollarization	3,023	6.0
Fixed	2,519	5.0
Managed float	857	1.7
Currency board		
100 percent of monetary base[1]	464	0.9
100 percent of M2[1]	4,257	8.4
Traditional approaches		
3-month of imports	1,512	3.0
20 percent of M2[1]	851	1.7
Current reserves	**103**	**0.2**

Sources: Zimbabwean authorities and IMF staff estimates.

[1]As of end-2014 (before introduction of FX and deposit controls.)

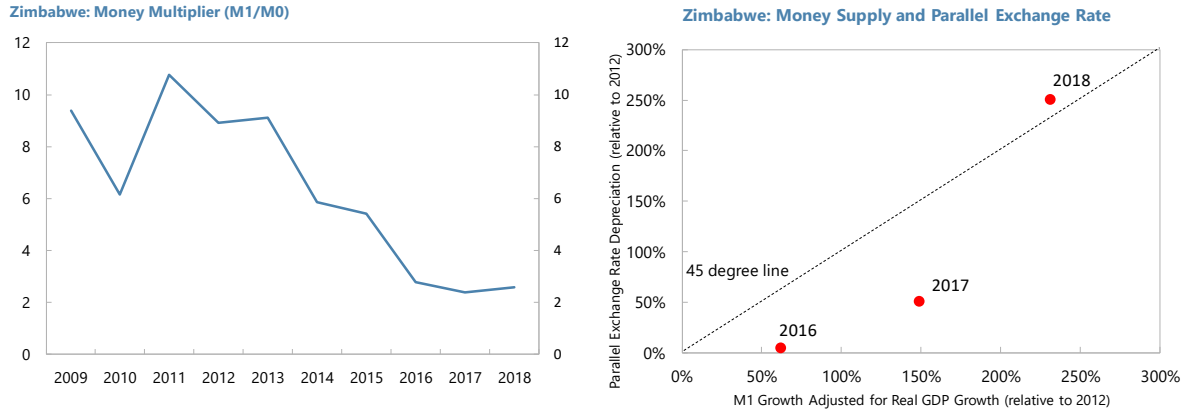
of thumb – 3 months of imports or 20 percent of M2 (Text Table 2). The reserve requirement for a currency board would be between 1-8 months of imports (depending on the monetary aggregate used, i.e., monetary base or M2), whereas reverting to a dollarized system would require about 6 months of imports. Given Zimbabwe's poor inflation track record, these reserve metrics are likely to define a lower bound, and a higher level of reserves is likely to be needed under each regime. With Zimbabwe's international reserves currently below one week of imports and no prospect for a material increase soon, an exchange rate peg is thus not feasible in the near term.

- ***Inflation targeting*.** There are several requirements for an inflation targeting regime to serve as an effective monetary policy framework (Mishkin, 2004). These include a prudent fiscal policy and fiscal sustainability to minimize fiscal dominance, a sound and stable financial system with a functioning interbank market to facilitate the monetary policy transmission mechanism, and a strong track record of delivering low inflation. Zimbabwe does not currently meet any of these conditions, which suggests that inflation targeting is not feasible either for Zimbabwe in the near term.

15. Monetary targeting is the most appropriate monetary policy regime for Zimbabwe for now. As summarized in Text Table 1 above, such a framework gives the authorities flexibility in setting the inflation target, as well as the ability to deal with transitory output fluctuations. Monetary targeting is based on a theoretical and observed long-run correlation between broad money aggregates and nominal output, and similarly between broad money and base money. Based on this, quantitative targeting postulates that controlling base money will ultimately have an impact on price stability. This theoretical framework assumes stable links between base money (the operational target) and broad money (the intermediate target) through a stable money multiplier, and a predictable relationship between broad money and prices, for a given rate of real growth.

16. In countries with high inflation (as is the case in Zimbabwe), experience has shown that money-based stabilizations have quickly brought inflation under control. For example, Peru undertook a money-based stabilization program in the early 1990s, using base money as the main intermediate target for monetary policy. This arrangement brought hyperinflation quickly to an end (Mishkin and Savastano, 2000). Other successful stabilization programs had a similar approach: tightening monetary policy early and sharply, and not easing it until stability had clearly been restored (Berg, et al 2003), with tight monetary policy aimed at reducing overshooting of the exchange rate and subsequent high inflation. In the case of Zimbabwe, rapid base money growth in recent years was the driver of the increase in broad monetary aggregates, with the money multiplier remaining broadly stable during 2016-18. The growth in broad money had, in turn, been a key contributor to the rise in the parallel market premium (Text Figure 7). Thus, moderating the increase in base money under the recently announced money targeting framework, with support from responsible fiscal policies, can stabilize the exchange rate and inflation.

Text Figure 7. Zimbabwe: Money Growth, Exchange Rate, and Money Multiplier



Sources: Reserve Bank of Zimbabwe and IMF staff estimates

17. Discretion will be needed in implementing the monetary targeting framework. While money targets can provide a clear nominal anchor for inflation, their implementation in practice is complicated due to fluctuations in money demand and unstable relations between base money and broader monetary aggregates. Thus, meeting money targets does not necessarily imply an adequate monetary policy stance. In addition, practice has shown that even if money targets are met, in many cases the exchange rate and interest rates displayed large swings. In turn, exchange rate fluctuations risk feeding into expectations and being validated by balance sheet effects and wage-price setting dynamics (Berg et al 2003). For these reasons, monetary targets in both emerging market and advanced countries suggest have usually been implemented quite flexibly. The monetary targets were missed about half of the time in Germany during the 1970s and 1980s, for example, while being quite successful in producing low inflation (Mishkin 2000). Peru's money-based stabilization of the 1990s also was not a "clean" monetary targeting framework, with the central bank using base money growth as only one of the elements guiding its decisions on instruments settings in the context of a strategy that can be described as one of discretionary monetary policy with an increasing focus on price stability (Mishkin and Savastano, 2000). These examples suggest that while monetary targets can play a useful role as a nominal anchor, the authorities should implement the framework flexibly considering other high frequency indicators—such as expected inflation, economic activity, wage growth, and exchange rate developments—when assessing the appropriateness of the stance of macroeconomic policies.

18. Once structurally-low inflation levels have been reached, the Zimbabwean authorities could consider alternative monetary frameworks. As discussed above, the monetary targeting framework relies on relationships between inflation and the growth in narrow and broad monetary aggregates. While such a relationship tends to be strong in a high inflationary environment, it typically becomes unstable at low levels of inflation. At that stage monetary policy needs to be more finely calibrated, and a price-based framework relying on interest rate signals, as opposed to the quantity-based monetary targeting, may become more effective in stabilizing and finetuning inflation. Therefore, at a later time, it would be expected that reserve money would be replaced by a policy interest rate as the operational target.

D. How to Operationalize the Monetary Targeting Framework in Zimbabwe

19. The operational target under monetary targeting is base money. As the growth of broad money cannot be directly influenced by the central bank, an operational target is needed. Base money, which comprises the central bank liabilities that support the expansion of broad money and credit, is typically defined as the sum of currency in circulation and banks' reserves at the central bank and is an operational target that can be directly influenced by the central bank.[5]

20. Monetary targeting frameworks rely on daily operations and constant monitoring. Because velocity of money (defined as nominal GDP divided by broad money) and the money multiplier (defined as broad money divided by base money) may not be stable, projections should be updated regularly to incorporate new information and accommodate changes in the underlying economic relationships. Base money targets will need to be adjusted accordingly, albeit at a lower frequency—quarterly or semi-annually—to strike a balance between the incorporation of new information and the need to anchor expectations through sticking to a pre-announced path for money.

21. A monetary targeting framework is implemented by conducting open market operations (OMOs) such that base money is in line with the target. Zimbabwean banks currently have a substantial stock of excess reserves—as of end-2019, banks held about ZWL$7 billion in excess reserves relative to a monetary base of about ZWL$9 billion. In such an environment of surplus liquidity, the RBZ may need to absorb reserves in sufficient quantity to contain growth in broad money (and consequently inflationary pressures). To encourage participation by banks, RBZ should allow true price discovery through OMOs and in government debt markets. However, this is expected to lead not just to more interest rate volatility, but also significant rises in the level of interest rates to bring them into line with expected inflation/depreciation. This would allow for an eventual re-start in the private credit markets (some credit at high rates is better than no credit at all for borrowers who do not benefit from official favors). Developing the capacity to understand and forecast known, large elements of money demand that can be volatile—notably fiscal operations—will be key to mitigate exchange rate and interest rate volatility.

22. OMOs should be limited to depository institutions and initially have short (e.g., seven-day) maturities. The counterparties to OMOs should be limited to institutions subject to reserve requirements (depository institutions), as these are the conduits of monetary growth. Initially, it is recommended that OMOs be focused on short maturities (e.g., up to seven days), given the need to adjust liquidity conditions at a high frequency and the desirability of avoiding locking in high interest rates given their potential volatility. Liquidity absorbing OMOs could be carried out through repurchase agreement ("repo") transactions using T-bills. With a sufficient stock of T-bills, the RBZ could use them as collateral in liquidity absorbing operations, which has several advantages, such as: (i) improving the ability of banks to undertake secondary market transactions with T-bills, as well as improve interbank liquidity; (ii) the RBZ would not compete directly with the MoF in the issuance of

[5] See Monetary and Financial Statistics Manual and Compilation Guide (https://www.imf.org/~/media/Files/Data/Guides/mfsmcg_merged-web-pdf.ashx).

short-term securities while at the same time providing liquidity to the government bond market; (iii) T-bills can be used as collateral if a bank needs to borrow from standing facilities; and (iv) usage of a single instrument in both monetary policy operations as well as government borrowing additionally allows for the efficient use of existing settlement infrastructure.

23. A daily calculation of the monetary base as well as current and expected liquidity conditions is required to calibrate OMOs. In pursuit of the monetary base target, the RBZ should make a daily evaluation of the current liquidity conditions, as well as a forecast of autonomous factors[6] covering the period of outstanding OMOs. This evaluation should be based on the previous day's RBZ balance sheet, outstanding OMOs, and standing facilities usage, as well as a short-term forecast of factors affecting liquidity conditions. In order to accommodate unexpected fluctuations in liquidity conditions, the reserve money target may be set as a monthly average. Day-to-day deviations from the target are considered in the average and influence the size of future operations in order to achieve the targeted average by the end of the month.

24. Adjusting reserve requirements on bank deposits can complement OMOs in affecting market liquidity conditions. With Zimbabwean banks having significant excess reserves, the effectiveness of a monetary targeting framework could be challenging. This is because money deposit growth through credit creation is not constrained, as banks may utilize excess reserves to fulfil the resulting increase in reserve requirements. The establishment in October 2018 of a reserve requirement of 5 percent of all corporate and retail domestic currency deposits has reduced somewhat the size of the liquidity surplus. However, since excess reserves remain significant, a temporary increase in the reserve requirement ratio to absorb additional excess liquidity and increase the demand for base money could be considered. The risk of affecting banks desired working balances with a higher reserve requirement and of excessive interest rate volatility can be mitigated by allowing averaging of required reserves.

25. Longer-term OMOs could be considered once interest rates have stabilized. In order to reduce the size of the daily OMOs, a one-month liquidity absorbing operation, with a fixed size, could be conducted once the interest rates in daily OMOs become more stable and banks develop confidence in their ability to anticipate interest rates over this period. Such longer-term operations should be conducted at variable rates at a pre-set amount with the central bank acting as a rate taker. The size of these operations should ideally not be larger than half of the outstanding OMOs. As longer-dated instruments are considered, coordination with the MoF to avoid overlaps in issuance timetables will be needed.

26. The effectiveness of the monetary targeting framework will also depend on jointly implementing reforms in FX and debt markets. The interbank FX market remains dominated by the RBZ, with surrender requirements, strict exchange controls, tight margin limits and moral suasion affecting price discovery and creating a large parallel market premium. These inefficiencies lower the total amount of FX available in the interbank market and create rent-seeking behavior,

[6] Autonomous factors include (i) net foreign exchange reserves; (ii) net claims on government; (iii) net other items; and (iv) currency in circulation.

where some connected firms have access to FX and others do not. Similarly, existing attempts to cap interest rates on government bonds or RBZ savings bonds limit private-sector interest in holding government debt and encourage demand for foreign assets, fueling depreciation pressures and exacerbating foreign exchange imbalances. While there may be scope for managing the transition, prices in the FX, money, and public debt markets should ultimately be determined in a framework that ensures a consistent outcome.

27. Communication and transparency on monetary conditions is critical for establishing the credibility of the monetary targeting framework. By communicating publicly and regularly on the reserve money targets and day-to-day levels, the RBZ can demonstrate its success in achieving its goals. The ability of the financial system and the wider public to observe these developments at a high frequency should help anchor expectations of future monetary developments. The RBZ should publish a weekly balance sheet on its website as well as daily information on the current month's monetary base target, the previous day's monetary base, and the rate and volume of OMOs and standing facilities. Additionally, the RBZ should ensure that the website contains all the rules and regulations pertaining to its monetary policy and exchange rate policy.

E. Conclusion

28. Stabilizing the economy requires fiscal discipline and a moderation of base money growth. The monetary targeting framework announced by the authorities can deliver a stable exchange rate and low inflation. However, as international experience indicates, more than the choice of the monetary framework the key for macro stability is having sound and sustainable fiscal policy, encompassing all relevant public sector operations. In particular, this requires containing quasi-fiscal operations of the RBZ consistent with a moderate increase in base money.

29. Operationalizing the monetary targeting framework requires setting reserve money targets and introducing open market operations to steer reserve money towards established targets. Nevertheless, discretion will be needed in implementing the monetary targeting framework. While monetary targets play a useful role as a nominal anchor, the Zimbabwean authorities should implement the framework flexibly taking into account other high frequency indicators—such as expected inflation, economic activity, wage growth, and exchange rate developments—when assessing the appropriateness of the stance of monetary policy. Clear communication on the performance against the monetary targets and their link with the ultimate objective of price stability is essential, and should be accompanied by regular and timely publication of RBZ balance sheets, to ensure transparency and help anchor expectations of future monetary and inflation developments.

30. The authorities are encouraged to liberalize the FX market further. The introduction of the new Zimbabwean dollar and an interbank FX market has significantly reduced distortions. Due to the existence of capital controls, a spread between the parallel market and the interbank market rates will persist. However, at nearly 30 percent, the premium remains too high and the authorities are encouraged to gradually relax the margin limits on trading in the interbank FX market, and gradually eliminating surrender requirements and exchange controls so that the exchange rate is

determined freely as a function of supply and demand. Consistently delivering on the commitment for moderate base money growth, effective communication, and timely dissemination of monetary statistics as discussed above will help reduce exchange rate volatility.

References

Berg, Andrew, Christopher Jarvis, Mark Stone, and Alessandro Zanello, 2003, "Re-Establishing Credible Nominal Anchors After a Financial Crisis: A Review of Recent Experience," IMF Working Paper 03/76.

Bindseil, Ulrich, 2004, "The Operational Target of Monetary Policy and the Rise and Fall of Reserve Position Doctrine," European Central Bank Working Paper No. 372.

Calvo, Guillermo, and Carlos Vegh, 1994, "Inflation Stabilization and Nominal Anchors," Contemporary Economic Policy. Vol. XII, April 1994.

Edwards, Sebastian and I. Igal Magendzo, *Strict Dollarization and Economic Performance: An Empirical Investigation*, Journal of Money, Credit, and Banking, 38(1), 2016

Enoch, Charles and Anne-Marie Gulde, *Making a Currency Board Operational*, IMF Paper on Policy Analysis and Assessment 97/10, 1997 https://www.imf.org/en/Publications/IMF-Policy-Discussion-Papers/Issues/2016/12/30/Making-a-Currency-Board-Operational-2415

Hanke, Steve, and Nicholas Krus, 2013, "World Hyperinflations", The Handbook of Major Events in Economic History, Routledge Publishing, Summer 2013.

IMF, *Guidance Note on the Assessment of Reserve Adequacy and Related Considerations*, June 2016, https://www.imf.org/external/np/pp/eng/2016/060316.pdf

Kramarenko, Vitaliy, Lars Engstrom, Genevieve Verdier, Gilda Fernandez, S. Erik Oppers, Richard Hughes, Jimmy McHugh, and Warren Coats, *Zimbabwe: Challenges and Policy Options after Hyperinflation*, IMF, 2010 https://www.imf.org/external/pubs/ft/dp/2010/afr1003.pdf

Mishkin, Frederic, 2001, "From Monetary Targeting to Inflation Targeting: Lessons from the Industrial Countries", World Bank Policy Research Working Paper No. 2684.

Mishkin, Frederic, 2004, "Can Inflation Targeting Work in Emerging Market Countries?", NBER Working Paper No. 10646.

Mishkin, Frederic and Miguel Savastano, 2000, "Monetary Policy Strategies for Latin America," NBER Working Paper 7617.

Stone, Mark, 2003, "Inflation Targeting Lite," IMF Working Paper No. 03/12.

UNLOCKING ZIMBABWE'S AGRICULTURAL POTENTIAL[1]

The agricultural sector is a major component of total value added in Zimbabwe, the largest employer, and the country's second largest source of exports earnings. This Selected Issues Paper (SIP) describes the evolution of agricultural production in Zimbabwe since independence in 1980, focusing on the steady decline in agricultural productivity over the last two decades and the growing gap between Zimbabwe's agricultural output and its potential. Using cross-country analysis, we identify the key drivers and bottlenecks of agricultural productivity in Zimbabwe, including structural, regulatory, and financial barriers to sustainable growth. We then examine the role of government support and subsidy programs for agriculture, including the large fiscal costs associated with these subsidies. Finally, we identify fiscally sustainable reforms to improve agricultural as a vehicle for inclusive growth in Zimbabwe.

A. The Evolution of Agricultural Production in Zimbabwe Since Independence

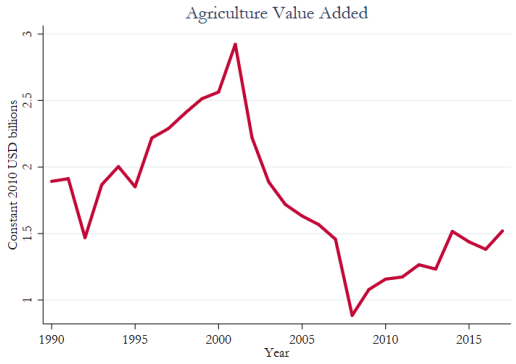
1. Agriculture plays a critical employment and production role in Zimbabwe. The agricultural sector represents about 10 percent of aggregate value added, and while this is down from 20 percent just a few decades ago, the sector remains of fundamental importance to the economy. About two-thirds of working Zimbabweans are employed in agriculture, and agricultural exports represent about 30 percent of the US dollar value of exports, second only to mining. Moreover, agriculture plays a critical role in food security and poverty reduction in the country. For example, the drought of 2018-2019, which continues into 2020, has led to a rapid rise in the number of Zimbabweans who are food insecure, which currently stands at 8 million people (about 60 percent of the population)

2. Adjusted for inflation, agricultural value-added remains below what it was in the 1990s, and roughly 50 percent below its peak. Agricultural value-added reached its peak in 2000, after nearly 20 years of sustained growth, but has fallen precipitously since then. This decline occurred despite a secular increase in inputs, as agricultural land in production has been stable and employment in the sector essentially doubled (Figure 1). While most agricultural products experienced a trend decline during this period, the reduction was most pronounced in non-irrigated crops such as cereals.

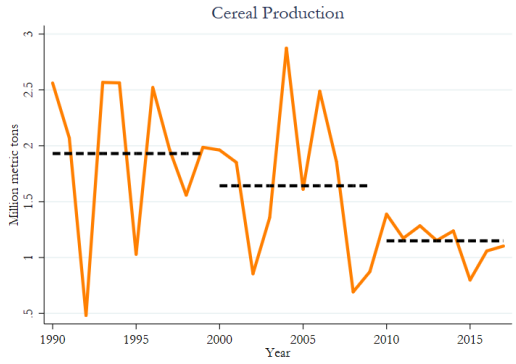
[1]Prepared by Frederico Lima and Trevor Lessard (both AFR).

Text Figure 1. Zimbabwe: Agriculture Production and Inputs, 1990–17

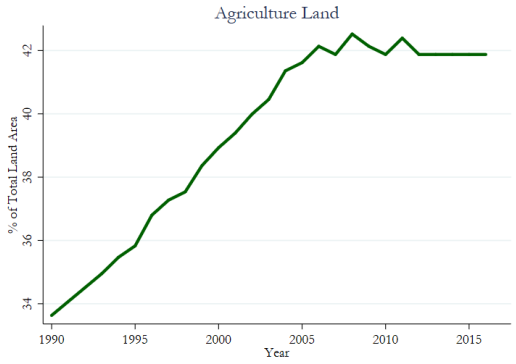
Value added is about half of its peak…



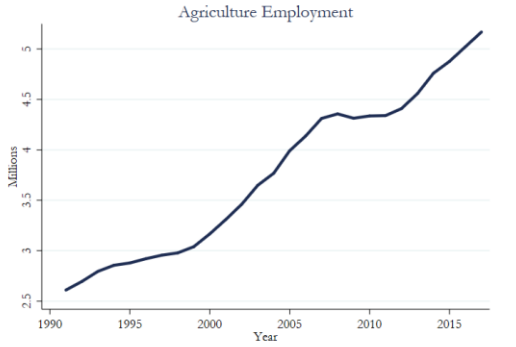
and cereal production collapsed…



despite a stable land input…



and doubling agriculture employment.



Note: FAO, ILO and IMF staff calculations. Value added figures include agriculture, forestry and fishing, and are expressed in constant 2010 US dollars.

3. Independence gave voice to the preference of many Zimbabweans to redistribute land in a more egalitarian manner. At the time of independence, the ownership of land was heavily skewed, with a minority of white Zimbabweans (approximately 2 percent of the population) owning 40 percent of the country's farmland, which produced 40 percent of the country's GDP and was responsible for 60 percent of its export earnings. These inequalities created pressures for the Government to redistribute land to poorer black Zimbabweans, as well as to provide settlements for war veterans.

4. While land reform lasted several decades, and underwent several distinct stages (Table 1), it was only during the last phase that agricultural output and productivity were severely affected (Figure 1). The Fast-Track Land Reform Program (FTLRP), represented a marked departure from previous land reform phases, in particular by abandoning the process of 'willing buyer-willing seller' that had been followed until then. The FTLRP was also saddled with a more radical political environment, which resulted in a shift from technical to politically-driven land allocations and the drying up of donor support for land reform.

Table 1: Phases of Zimbabwe's Land Reform		
Date	**Land Reform Initiative**	**Description**
1980-1992	'Willing Buyer, Willing Seller'	• The Lancaster Agreement of 1980 marked an initial effort to redistribute land more equitably, but contained provisions protecting white farmers from compulsory land acquisition for 10 years. • Progress in land transfer under this policy was slower than anticipated, but orderly and largely market-based land transfers sales. • By 1989, the number of commercial farms had decreased from 6,000 to 4,300 and the share of land from 42 to 30 percent. • It is estimated that more than 80 percent of the beneficiaries of land transfer fell in the category of those with the greatest need.
1992-2000	National Land Policy of 1992 Land Reform and Resettlement Program (LRRP)	• Government passes the Land Acquisition Act. (1992), which allows for compulsory acquisition of land with limited compensation and limited rights of appeal to the courts. • British Government decides to stop its program of helping to finance land acquisition/compensation. • Government of Zimbabwe announces it will take no action to remove war veterans (or other communities) who have occupied white-owned land.
2000s	Fast Track Land Reform Process (FTLRP)	• Constitutional amendment 16 includes a clause that states the responsibility for compensating evicted farmers is the UK's, while a separate clause removed the requirement for 'fair and adequate' compensation, and another amended the law to prohibit judicial challenges to questions surrounding the fairness of compensation. • Government of Zimbabwe revises the Land Acquisition Act, stating that in the absence of a fund set up by the UK for compensation of evicted farmers, the Government of Zimbabwe would pay for only improvements on the land but not the land itself. • Process created two new classes of models of farming, A1 and A2 shareholders. A1 module was primarily for smallholder, family plots, while A2 module was primarily for medium-to-large farms that were primarily commercial. • Introduction of land leases of between 25-99 years. • By 2008, significantly more land had been redistributed by FTLRP, 6.8 million hectares, than all previous schemes combined, 3.7 million hectares.

5. The trend-decline in value added for the agricultural sector is partially attributable to declining production volumes and a hollowing out of the value chain. As an example, cereal production fell from an annual production of 1.9 million tons in the 1990s, to 1.6 million in the 2000s, and closer to 1.1 million since 2010. While some grains experienced increases, such as sorghum and millet, this was mostly due to changing incentives for crop selection as farm size decreased, access to credit evaporated, and farmer skills declined. Cash crops, such as tobacco, experienced a similar sharp decline. Declining agricultural production and macroeconomic instability proceeded to affect agribusiness as well, leading to the closure and scaling back of many firms.

6. Fundamentally, the driving force for the collapse in agriculture was the steep decline in productivity since 2000. The decline in agricultural productivity affected the sector as a whole, but unevenly. Productivity, measured as output per hectare of land, declined for both staple crops (e.g. maize), but also essential export earning cash crops such as tobacco (Figure 2). In both maize and tobacco, Zimbabwe moved from being above the average of its peers to significantly underperforming (Table 2). A bright spot is the rebound in tobacco productivity since 2010, which is attributable specific developments in the sector, including the start of contract farming in the mid-2000s, and which provides insights on how to reform the agricultural sector as a whole to restore growth.

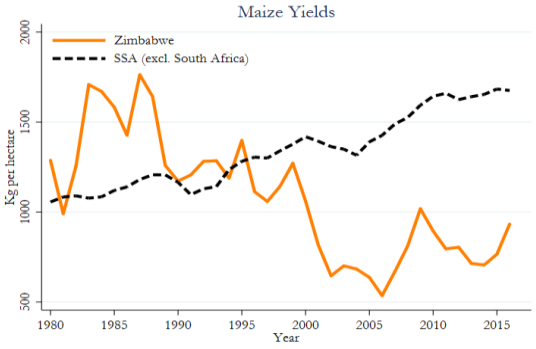
Text Table 1. Agriculture and Productivity – Zimbabwe versus Peers
(kgs per hectare)

Maize				Tobacco			
Country	1980s	2010s	% change	Country	1980s	2010s	% change
Top SADC Producers				*Top World Producers*			
South Africa	1,922	4,653	142%	China	1,796	2,167	21%
Tanzania	1,336	1,438	8%	USA	2,313	2,375	3%
Malawi	1,154	2,000	73%	India	1,142	1,688	48%
Zambia	1,907	2,666	40%	Brazil	1,390	2,018	45%
Mozambique	419	1,004	140%	Indonesia	555	874	57%
Angola	398	935	135%	Zambia	1,037	1,683	62%
Zimbabwe	1,471	830	-44%	**Zimbabwe**	2,064	1,881	-9%

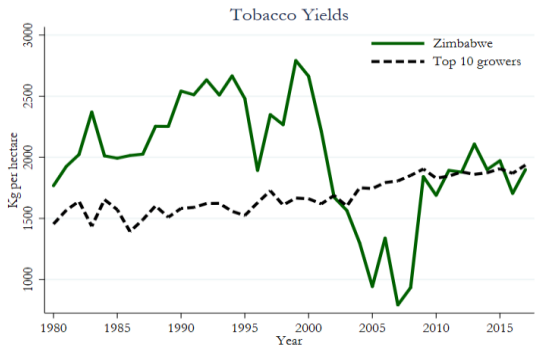
Source: FAO, Zimbabwe authorities, and IMF staff calculations. Peer countries are ranked by their production shares in the 1980s.

Text Figure 2. Zimbabwe: Agriculture Productivity, 1980–2017

Maize yields halved since the 1980s…



…while tobacco yields have partly recovered.



Sources: Zimbabwean authorities, TIMB, FAO, and IMF staff estimates.

Note: Maize yields are presented as a 3-year moving average

7. Starting in 2015, the Government of Zimbabwe started to place additional emphasis on the importance of agriculture, especially through its fiscal and quasi-fiscal activities under Command Agriculture. This commitment to agriculture is bolstered by the medium-term Transition and Stabilization Plan (TSP) and the Vision 2030 long-term development strategy, which aim to transform Zimbabwe into a middle-class economy. For these goals to be met, agriculture will have to improve its productivity and increase volumes in order to provide a reasonable income for Zimbabwe's many farmers. However, recent interventions have focused primarily on income support and other subsidies rather than financing long-term productivity enhancing investments (Section C). At the same time policy uncertainty, FX shortages, land rights and transfer issues, environmental shocks, and macroeconomic instability have choked off (external and domestic) private investment in the sector.

B. Determinants of Low Agricultural Productivity in Zimbabwe

8. Zimbabwe has enormous untapped agricultural potential and agriculture (and agribusiness) are essential ingredients in any sustainable development model for the country. The abundance of fertile land, an educated labor force, good weather, and access to large export markets are highlighted as strengths of the sector that can be built upon to build a dynamic agriculture/agribusiness sector. Unfortunately, weak infrastructure, market distortions, structural barriers and policy mistakes have presented formidable headwinds to improving productivity in the sector.

9. Economies of scale are limited by unsecure property rights and difficulty in accessing financing.

i. Reforms to the land tenure system eventually led to the extinguishing of most private property rights through socially differentiated forms of land tenure provided to the A1 and A2 land beneficiaries. The latter get 99-year lease contracts providing land use rights to individual landholders. The A1 beneficiaries, on the other hand, receive statutory permits to

occupy and use land in perpetuity as a family land right. Nevertheless, due to governance challenges, rent seeking, and political headwinds it is not uncommon for holders of A1 and A1 claims to not be able to access their land for several years (and sometimes never). Moreover, the security of these property claims in uncertain, as they can be revoked through ministerial authority, and owners are in general not able to transfer land titles, an essential aspect of using land as collateral for access to finance.

ii. The uncertainty surrounding the 99-year leases, the influx of new farmers without strong farming experience, and government interventions in the market have made it difficult for the sector to access credit. About 21 per cent of the beneficiaries reported encountering problems with access to credit because they did not have adequate land tenure documents and the majority of these were A2 landholders.

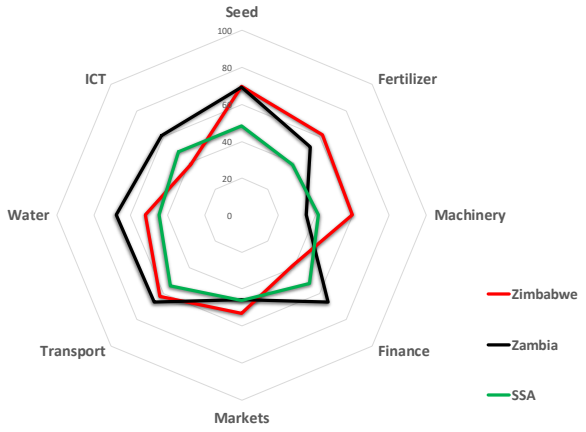
iii. While average farm size in the aggregate does not indicate a barrier to economies of scale, with A1 allocations around 5-10 hectares and A2 averaging 100 hectares, caution should be taken in using these figures. For example, there are challenges in estimating farm size, because of widespread use of land by those with unsecured property rights, as well as insufficient data on subdivided plots. More importantly, the dividing of seized farm land into plots under the FTLRP was conducted with a focus on social and political outcomes, rather than profitability, and consequently many of the plots were no longer economically viable as a standalone entity.

10. While notionally access to credit for Zimbabwe seems relatively robust for the agricultural sector, the reality is that most of the credit is short-term creditor for fertilizer and seed that is backed by a government guarantee. Private lenders, despite default rates in excess of 90 percent in recent years, have thus been able to receive a risk-free return on these 'agricultural' loans. However, through a combination of interest rate caps, risk perceptions, and unclear property rights, access to medium-term capital for investment (or land acquisition) is basically non-existent through private domestic channels. **The Enabling the Business of Agriculture (EBA) survey highlights some of the fundamental barriers to a dynamic agricultural sector** (Figure 3). The 2017 report is a project by the World Bank to assess the regulatory framework in agriculture and agribusiness. Higher scores represent better laws and regulations in each EBA topic. The 2017 report covers 62 countries and 12 topics. The report focuses on the quality of laws and regulations, and not how they are implemented in practice. In the case of Zimbabwe, we see that Zimbabwe scores similar or better than the average SSA country and a close peer country (Zambia) across several topics, such as fertilizer, machinery, market access, transportation and seed. However, it scores poorly in water, ICT and especially finance. While it scores similar to its peers in terms of seed availability and better than average for fertilizer it is important that these two achievements were reached in 2017 by unsustainably high fiscal outlays under Command Agriculture to subsidize these two inputs. Consistent with other information, one dimension where Zimbabwe scores particularly low is that property rights, credit registry and availability of collateral for accessing finance.

11. The Enabling the Business of Agriculture (EBA) survey highlights some of the fundamental barriers to a dynamic agricultural sector (Figure 3). The 2017 report is a project by the World Bank to assess the regulatory framework in agriculture and agribusiness. Higher scores represent better laws and regulations in each EBA topic. The 2017 report covers 62 countries and 12 topics. The report focuses on the quality of laws and regulations, and not how they are implemented in practice. In the case of Zimbabwe, we see that Zimbabwe scores similar or better than the average SSA country and a close peer country (Zambia) across several topics, such as fertilizer, machinery, market access, transportation and seed. However, it scores poorly in water, ICT and especially finance. While it scores similar to its peers in terms of seed availability and better than average for fertilizer it is important that these two achievements were reached in 2017 by unsustainably high fiscal outlays under Command Agriculture to subsidize these two inputs. Consistent with other information, one dimension where Zimbabwe scores particularly low is that property rights, credit registry and availability of collateral for accessing finance.

Text Figure 3. Zimbabwe: Agriculture Regulatory Framework, 2017

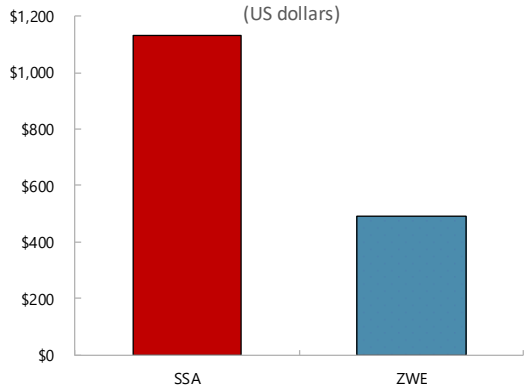
(scores from 0 to 100)



Sources: World Bank Enabling the Business of Agriculture, 2017. .

12. Infrastructure remains a weak point across the economy, affecting the productivity of all sectors. The combination of low public investment with a growing population has led Zimbabwe to fall below the regional average, with Zimbabwe's per capita public capital stock now approximately half the average for sub-Saharan Africa (Text Figure 4.) For agriculture, the fundamental infrastructure barriers are a lack of irrigated land, with only 1 percent of agricultural land equipped for irrigation, and a deficient transportation network (roads, rail, airports) to get agricultural products to market. More recently, electricity shortages that decrease the effectiveness of irrigation equipment and the damage caused by Cyclone Idai to transport infrastructure have only exacerbated these challenges.

Text Figure 4. Zimbabwe: Public Capital Stock per Capita, 2017



Sources: IMF FAD Database, and staff estimates.

13. The ineffectiveness of fertilizer to meaningfully increase output despite relatively high use is consistent with the literature on fertilizer input schemes. Generally, the literature shows lower maize response to fertilizer on smallholder-managed plots, for reasons that correlate strongly

with Zimbabwe's situation. First, crop yields response to fertilizer tend to be lower and less predictable when farmers rely on rainfed irrigation. The need to couple irrigation with fertilizer will become even more critical over the coming decades as rainfall becomes more erratic due to climate change. Second, there tend to be strong learning-by-doing effects in the use of fertilizer, with younger and less experienced farmers averaging lower yields for the same amount of fertilizer per hectare. For Zimbabwe, with a generation of new farmers, this could have a large aggregate decrease on the effectiveness of fertilizer. Finally, diversion and re-selling of fertilizer, while difficult to quantify, is undoubtedly also partly responsible for the low effectiveness of fertilizer. Anecdotal evidence suggests that the 100 percent government guarantee for agricultural input loans has led some unscrupulous recipients to take those loans, sell the inputs and default on the loans. Consequently, the real amount of fertilizer being used maybe less than estimated figures (Figure 5).

C. Impact of Government Support Programs on Agriculture

14. Recognizing the importance of agriculture as an engine of growth for Zimbabwe, the Government has devoted significant support to the sector under the umbrella program 'Command Agriculture'. Starting during the 2016/2017 season, a set of initiatives were introduced, and subsequently scaled up, which entailed the significant mobilization of public (fiscal and quasi-fiscal) and private (with a government guarantee) financial flows into the agricultural sector. These initiatives had four components:

i. *The Presidential Input Scheme (PIS)*. In place since 2011, the PIS is a social safety net where the government distributes agricultural inputs – seeds and fertilizer – to small-scale and impoverished rural farmers to support grain and soya bean production. The PIS was scaled up significantly, from US$42 million in 2016 to US$263 million in 2018. Data constraints limit the ability of a full evaluation of the effectiveness and targeting of the PIS, but anecdotal evidence indicates governance, cost, and distribution challenges.

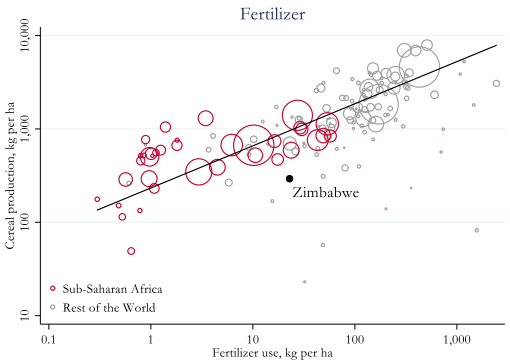
ii. *The Special Maize Program.* This backbone of Command Agriculture has increased production, but at a significant cost. Under the scheme, the Government of Zimbabwe, via a full 100 percent guarantee of the loan, encourages private companies (banks, fertilizer importers, etc.) to extend inputs to farmers on credit. The contract stipulates that the farmer commits to producing a minimum of 5 tons per hectare and would pay back the credit via delivery of the grains to the Grain Marketing Board (GMB).

iii. *The Tobacco and Cotton Input Funds.* Next to gold, tobacco is the most import export for Zimbabwe and in 2017 a revolving fund for tobacco support was established via an RBZ quasi-fiscal activity; the fund has had to be recapitalized since its establishment. A similar input support scheme was put in place for cotton, with public support to the fund in 2016 and again in 2017.

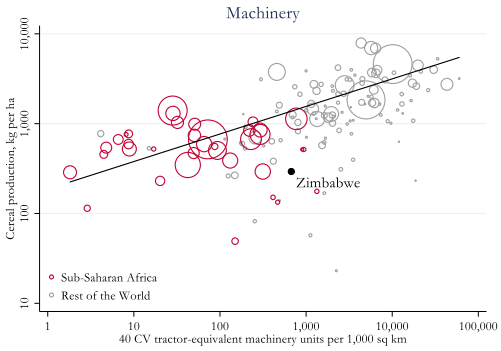
iv. *Price Subsidies for both inputs and outputs.* To incentivize sale to the GMB, the purchase price offered to farmers is set well above import parity and production costs. At the same time, the GMB sells this grain at a steep discount compared to import parity prices in an attempt to avoid price increases for final consumers. The result were income gains for producers and consumers of grain, but at the cost of large losses at the GMB that needed to be covered by fiscal transfers.

Figure 1. Zimbabwe: Determinants of Agriculture Productivity

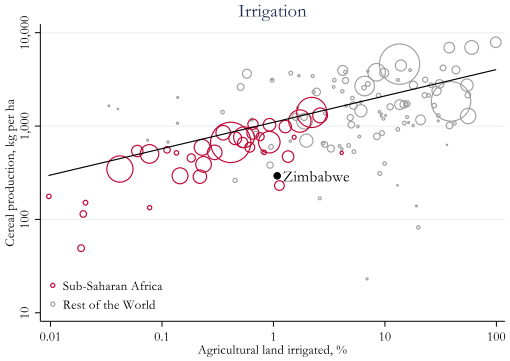
Cereal yields are disappointing even though fertilizer use is relatively high…



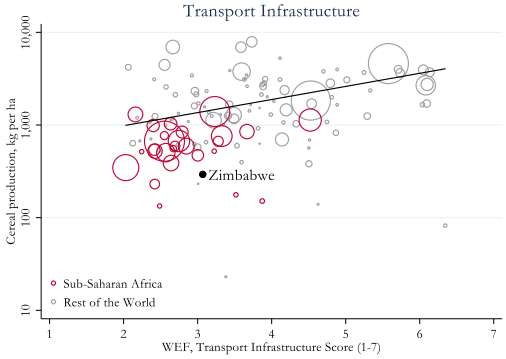
…and available machinery per hectare is above many other countries in SSA.



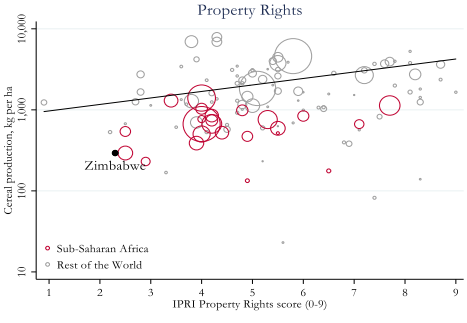
Only about 1% of agricultural land is equipped for irrigation…



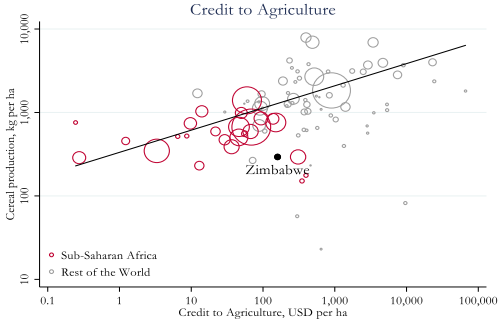
…while the coverage and quality of transport infrastructure are lagging.



Zimbabwe scores poorly on protection of physical property rights and land tenure…



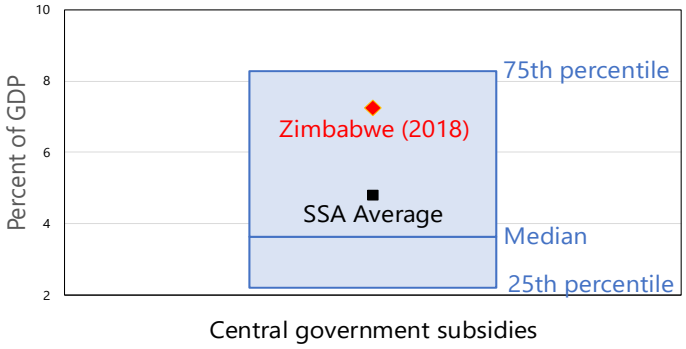
…and although credit to agriculture is high, it does not translate to higher productivity.



Note: FAO, ILO and IMF staff calculations.

15. Zimbabwe has a long history of central government subsidies, which are large relative to other sub-Saharan countries (Figure 6). While historically these subsidies have been to SOEs and to facilitate private sector bailouts, in recent years they have increasingly been directed towards increasing the incomes of farmers, and to a larger extent, agribusinesses.

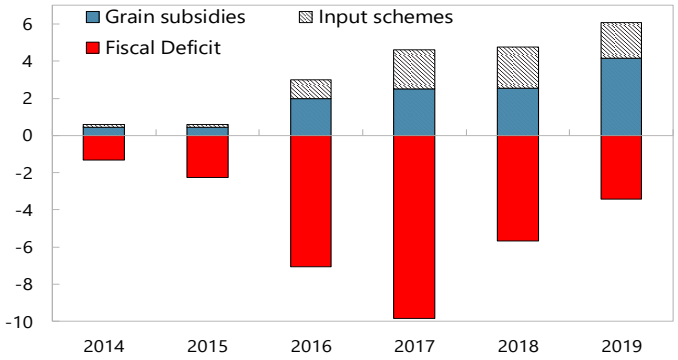
Text Figure 5. Zimbabwe: Subsidies in Sub-Saharan Africa
(in percent of GDP, average of 2009-2018)



Sources: Zimbabwean authorities., and IMF staff estimates. .

16. The fiscal costs of Command Agriculture have been dramatic and a principal contributor to the unsustainable deficits in recent years (Figure 7). The cost of grain subsidies and input schemes escalated substantially in 2016 with the start of Command Agriculture. Overall, nearly 20 percent of GDP worth of fiscal and quasi-fiscal expenditures were spent on agriculture between 2015- 2018, and preliminary indications are for the 2019-2020 crop season to also incur significant fiscal costs. Although large, these fiscal costs understate the true costs to the economy as they omit: costly subsidies for fuel imports via RBZ quasi-fiscal activities and the full cost of repayment of defaulted farmer loans, and the destabilizing macroeconomic consequences of RBZ money creation to finance unexpected, off-budget, agricultural expenses.

Text Figure 6. Zimbabwe: Agriculture Spending and Central Government Deficit
(in percent of GDP)



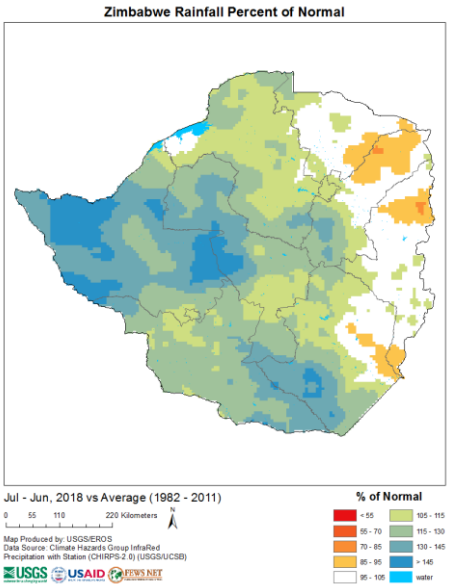
Sources: Zimbabwean authorities.

17. Despite their large fiscal cost, government programs have had limited impact on agricultural output and no discernable impact on productivity. Comparing three-year averages before and after the Command Agriculture program was started shows little to no change in maize output or yield per hectare. Fluctuations are almost entirely attributable to rain variance, highlighting the need for increased irrigation to improve agricultural output and climate resistance. Figure 8 provides an illustrative and compelling example of the negligible effect of government intervention in recent years by comparing 2014 with 2018. While in 2014 there was very little government intervention, 2018 saw public support reaching more than 4 percent of GDP. Despite reasonably similar weather conditions, government support translated into only a small increase in yields, with

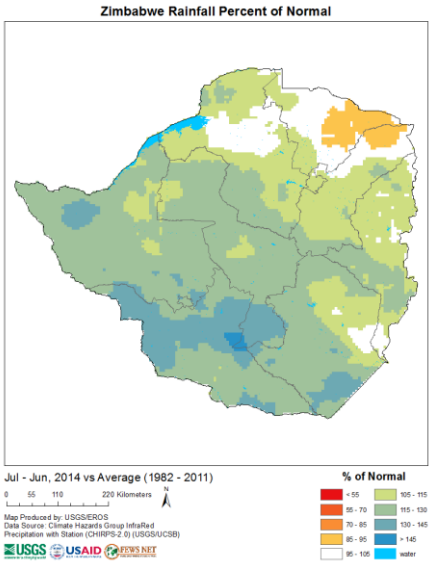
maize output increasing by just 15 percent (from approximately 1,500 tons to 1,700 tons). Under this scenario, the marginal cost of an extra ton of maize produced with the support of Command Agriculture was US$2900, nearly nine times the cost of importing the maize and selling it at prevailing subsidized rates.

Figure 2. Impact of Government Spending in Agriculture

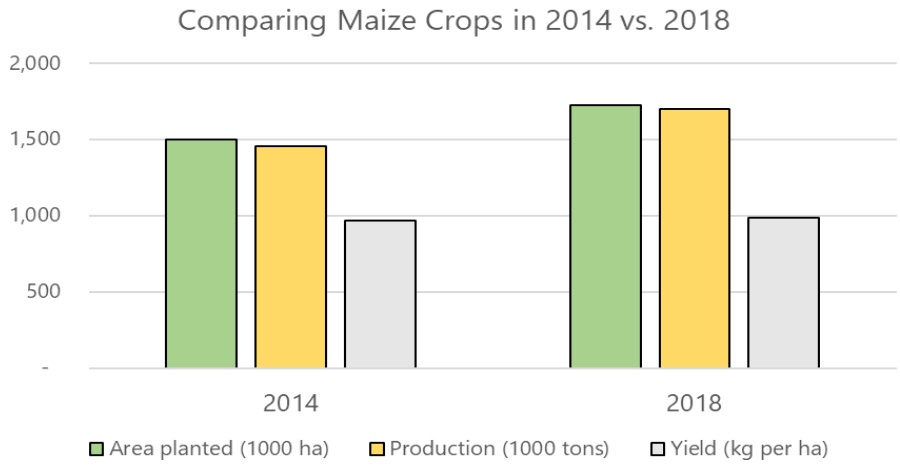
2018 was a good weather year, with above average rainfall across most regions, including Mashonaland West and Central.



2014 was also a good weather year, with similar rainfall performance across the same regions



Although government spent about 4 percent of GDP on agriculture subsidies in 2018, the impact on production was only 15 percent, and the impact on maize yields was negligible



Sources: Zimbabwean authorities, USGS, USAID, FEWS.NET and IMF staff calculations.

D. Policy Recommendations to Improve Sustainable Growth in Agriculture

18. Improving public spending on agriculture can enhance productivity, improve volumes, catalyze growth, and strengthen the sector's resilience to climate change. In the case of Zimbabwe, the fundamental policy prescription is to shift spending away from income support, input subsidies and price controls and towards skills development, R&D, and infrastructure spending; in essence, moving fiscal resources away from the provision of private goods to the provision of public goods. A new agricultural plan must also respect fiscal constraints and bring public support for agriculture to a sustainable level.

19. In this regard, consideration should be given to following policy reforms:

- *Reduce the guarantee on loans from 100 percent to avoid moral hazard and consistently high default rates.* If the government wishes to continue to subsidize access to finance for farmers consideration should be given to providing only a partial guarantee that ensures fair risk sharing across stakeholders and is subject to a cap to avoid fiscal shocks. Alternatively, the government could commit to paying a portion of the interest bill so that farmers receive concessional financial support. Moreover, penalties and consequences for farmer loan defaults need to be established and enforced.

- *Remove the inefficient and untargeted price subsidy for maize and replace it with an expanded social safety net.* While the Government has made much progress in reducing prices subsidies, the recently announced subsidy for maize millers goes in the wrong direction. This uncapped, untargeted subsidy is expected to cost at, prevailing prices, ZWL 1.2 billion in 2020, but could likely rise depending on the future inflation path.

- *Catalyze resources from the private sector and donors through joint partnerships for the funding of growth-enhancing investments.* There remains strong interest among the official and private sector to invest in agriculture given its potential for lucrative exports. Carefully designed joint-partnerships with appropriate burden-sharing can help alleviate critical bottlenecks in electricity generation, storage and transportation, market access, and skills development that would permanently increase the productivity of the sector.

- *Reduce the distortionary effects of price controls*. Not only are there fiscal consequences to fixed prices, but large deviations in the fixed price and import parity have at times led to the large-scale diversion of agricultural output. While consideration needs to be given to the security of livelihood of small farmers, it is less clear why medium-to-large scale commercial farmers should not be required to respond to market forces. Increased tailoring of income support to small farmers, potential through insurance-based instruments (e.g. crop insurance) and improved social safety nets (e.g. cash transfers), would result in improved outcomes and lower and more predictable fiscal outlays.

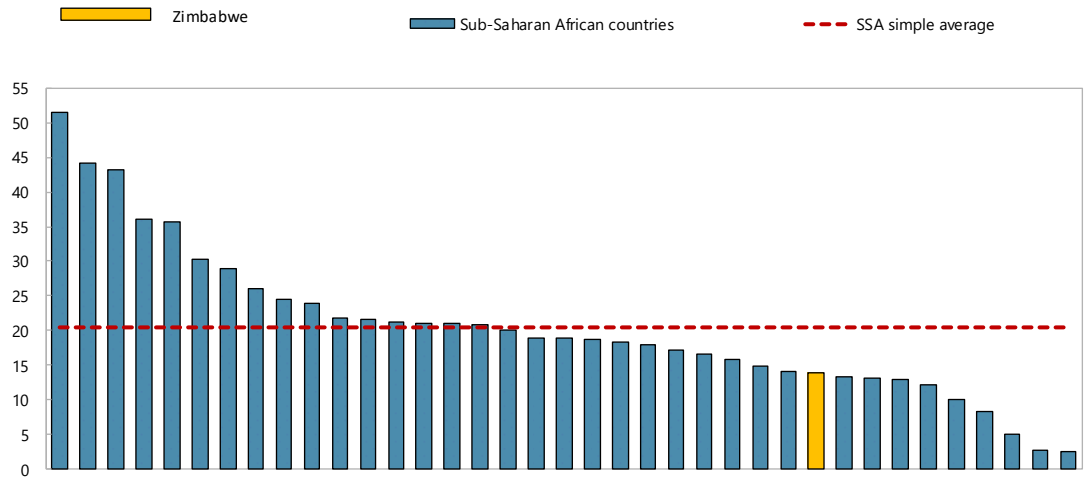
- *Improve and increase the use of contract farming*. Contract farming has seen notable success in Zimbabwe with tobacco, where yields have increased as financial constraints were removed and

a market for the sale of the agricultural product was created. To promote the use of contract farming in other crops, efforts should be made to improve and simplify the legal structure for contract farming and encourage small and communal farmers to form cooperatives that could facilitate contract farming at the appropriate scale.

20. It is also imperative to improve the regulatory environment and legal clarity of land titles. It is essential to improve the land tenure security of individuals, particularly A1 and A2 farmers. An immediate improvement would be to standardize and de-politicize the leasing of agricultural land. Moreover, to unlock foreign investment, and remove a significant perceived risk to the sector, a formal agreement for compensation of previous farmers who had their land expropriated is indispensable.

21. It is worth noting that many of the barriers to sustainable growth in agriculture are not unique to the sector, but affect the entire economy. Macroeconomic stability, reliable electricity supply, and a functional transportation network are as essential to agriculture as the rest of the economy. If Zimbabwe is going to reach its stated goals under the TSP, Vision 2030, and the Sustainable Development Goas (SDGs), it is going to require an increase and reprioritization of fiscal spending (Figure 9). While the additional spending needs for Zimbabwe are less than the average for sub-Saharan Africa, they remain substantial. Securing these resources will require concerted efforts to mobilize domestic revenues, a commitment to macroeconomic stability, and a normalization of its financial relationships with the external community.

Text Figure 7. Zimbabwe: Additional Spending to Meet the SDGs in 2030
(percentage points of GDP)



Sources: Zimbabwean authorities, and IMF staff estimates.

References

USAID. "Maize Production and Marketing in Zimbabwe: Policies for a High Growth Strategy"

African Development Bank. *"Zimbabwe Infrastructure Report 2019."* African Development Bank Group, 2019.

Annor-Frempong, Charles, Kisan Gunjal. *"Review, Estimation and Analysis of Agricultural Subsidies in Mongolia."* World Bank Group, 2014.

Asfaw, Solomon, Andrea Cattaneo, Giacomo Pallante, and Alessandro Palma. *"Improving the Efficiency of Targeting of Malawi's Farm Input Subsidy Programme: Big Pain, Small Gain?"* Food Policy, 73, 2017, pp. 104-118.

Burke, William, Thomas Jayne, Nicole Mason, and Joshua Ariga. *"Review: Taking Stock of Africa's Second-Generation Agricultural Input Subsidy Programs."* Food Policy, 75, 2018, pp. 1-14.

Chapoto, Antony, and Catherine Ragasa. "*Moving in the Right Direction? The Role of Price Subsidies in Fertilizer use and Maize Productivity in Ghana."* Food Security: The Science, Sociology and Economics of Food Production and Access to Food, vol. 9 (2), 2017, pp. 329-353.

Chirwa, Ephraim, et al. "*Agricultural Input Subsidies for Improving Productivity, Farm Income, Consumer Welfare and Wider Growth in Low- and Middle-Income Countries: A Systematic Review."* International Initiative for Impact Evaluation, 3ie Systemic Review 41, 2018.

Davidova, Sophia, Alastair Bailey and Lonestar Sibande. "*The Impact of Farm Input Subsidies on Maize Marketing in Malawi."* Food Policy, 69, 2017, pp. 190-206.

Faeth, Paul, Lindsey Fransen, Yuko Kurauchi, and Antonio La Vina. *"Reforming Agricultural Subsidies: 'No Regrets' Policies for Livelihoods and the Environment."* World Resources Institute, 2006.

Fuestes, Porfirio, Maria Wanzala-Mlobela, and Solomon Mkumbwa. "*Practices and Policy Options for the Improved Design and Implementation of Fertilizer Subsidy Programs in Sub-Saharan Africa."* International Fertilizer and Development Center (IFDC), 2013.

Gautam, Madhur. *"Agricultural Subsidies: Resurging Interest in a Perennial Debate."* Indian Journal of Agricultural Economics, vol. 70, No. 1, 2015.

Goyal, Aparajita, and John Nash. *"Reaping Richer Returns: Public Spending Priorities for African Agricultural Productivity Growth."* World Bank Group, 2017.

Hungwe, Vincent and Simon Pazvakavambwa. *"Land Redistribution in Zimbabwe"* in "Agricultural Land Redistribution: Toward a Greater Consensus." World Bank Group, Ch. 5, 2009, pp. 137-68

Latruffe, Laure, and Jean Joseph Miniviel. *"Effect of Public Subsidies on Farm Technical Efficiency: A meta-Analysis of Empirical Results"*. Applied Economics, 49:2, 2016, pp. 2130226.

Matandare, Mufaro Andrew. "*An Analysis of the Role of Agriculture Sector: Case of Zimbabwe.*"

Meyer, Richard. "*Subsidies as an Instrument in Agricultural Finance: A Review."* World Bank Joint Discussion Paper, 2011.

Moyo, Sam. "*Land Reform and Redistribution in Zimbabwe Since 1980"* in "Land and Agrarian Reform in Zimbabwe: Beyond White-Settler Capitalism,' Moyo, Sam. Chapter 2, pp. 29-78.

Murisa, Tendai. "*Prospects for Equitable Land Reform in Zimbabwe: Revisiting Sam Moyo's Work on the Land Question."* Centre for Agrarian Research and Education for South (CARES), 2017.

Odunze, Daisy and Dominique Uwizeymana. "*Zimbabwe's Special Maize Programme for the Import Substitution (Command Agriculture) Scheme: a Hit-and-Miss Affair."* Journal of Reviews of Global Economics, (8), 2019.

Wossen, Tesfamichael, et al. *"Productivity and Welfare Effects of Nigeria's e-Voucher-based Input Subsidy Program."* World Development, Vol. 97, 2017, pp. 251-265.

Zimbabwe Government, World Bank. *"Zimbabwe Public Expenditure Review with a Focus on Agriculture"* World Bank Group, 2019.