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Politicking Maize Production Subsidies, Discordant Policing and Maize Self Sufficiency in Zimbabwe

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Abstract

This paper discusses the main challenges faced by Zimbabwe in attaining self sufficiency in maize production. Almost every household in Zimbabwe consume the staple maize meal on nearly every day basis and therefore failing to achieve self sufficiency would force the country to import maize thereby straining its limited foreign currency and unnecessarily crowding out more important imports like fuel and healthcare drugs. Focusing on experiences, views and opinions from three districts in Mashonaland East province namely Marondera, Seke and Goromonzi districts, the study sought to establish the main factors contributing to reduced maize production and productivity. From household surveys, observation, in-depth key informants, analysis of current literature, statistics, policy papers and observations the major inhibitors of achieving self sufficiency are politicisation of agricultural programmes, ad hoc, piecemeal and discordant agriculture policing and general lack of political willpower to improve both maize production and productivity. It is recommended that the government should avoid using of politically exposed persons in fronting agricultural programmes who seek political benefits at the expense of productivity. It's further suggested that the government should fund upstream agricultural input producers which are easier and cheaper to monitor and supervise and avoid individual farmer targeted subsidies. The government should also establish, capitalise and supervise a strategic maize hectarage which is under its direct control

Keywords: *maize self sufficiency, producer price, agricultural subsidies, food imports*

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Introduction and problem

Zimbabwe has struggled to be maize self sufficient since the fast track land reform programme (FTLRP) of early 2000. For over two decades now, the country has been relying on maize imports and in the process expending over 300 million United States dollars (USD) annually on maize imports alone (GoZ, 2021). The choice of maize is informed by the relative importance of the crop, being a staple crop consumed in nearly every household, Zimbabwe cannot do without or at least substitute maize. Failure to produce adequate maize within its borders will definitely induce maize imports. In fact, maize production holds key to food security; in the consumer basket of basic goods, maize components are prominent and constitute about 11% of the total value of the basket (Consumer Council of Zimbabwe [CCZ], 2014). In addition, maize is the most common crop in Zimbabwe, grown in all the ten provinces including metropolitan provinces and unlike wheat grown under irrigation only maize can be rain fed or under irrigation. Hence the importance of achieving self sufficiency in maize cannot be overemphasised for Zimbabwe. Firstly, since Zimbabwe has an agro based economy which prides itself for having vast tracks of fertile land, importing maize summarizes its inability to utilise the land and poses fundamental questions about the real success and

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rationale of the land reform. Summarily, for Zimbabwe to move from a being net exporter and being a bread basket of southern Africa, exporting an average of over a million tonnes of maize per year to being a chronic net importer, on the same land and having most capital prohibited from leaving during the early 2000s land invasions provides a strong case for alternative thinking that the land invasions were misinformed and a terrible own goal for Zimbabweans. If the new farmers cannot use land productively to feed themselves, then this could provide rationale for debate on whether the country could have benefited in better ways with an alternative land policy that would have left land with the whites farmers who could productively use the land whilst paying rentals for land use which could then be channelled towards fiscal expenditures on infrastructure and social services that would benefit the black original land owners.

Secondly, importing maize put unnecessary pressure on the country's trade balance. There are a host of commodities that Zimbabwe should justifiably import for example crude oil products like diesel and petrol which it is not naturally endowed with, technological products, pharmaceutical which it does not have a comparative advantage in producing because of low investment in research and design. It is importing maize that is disastrous for the economy since the few export earnings are needlessly used where they could be saved or at best earned through maize exports. In addition, maize imports provide direct support to foreign agriculture industry and provides employment and income at the expense of the domestic economy.

In spite of these benefits of achieving and maintaining maize self sufficiency highlighted in the foregoing, Zimbabwe has not been able to achieve it and has relied mainly on maize imports since the turn of the new millennium. Whilst there had been some seasons when the country was self sufficient, for example 2020-2021 season, these have been very sparse. The majority of the seasons have not been able to achieve self sufficiency. More recently, for instance, the 2021-2022 cropping season in Zimbabwe has not been self sufficient. In fact, according to the second round crop and livestock report, Zimbabwe was expected to harvest 1.2 million tonnes which is 43% lower than the 2.8 million tonnes that were harvested in the 2020-2021 cropping season. Zimbabwe has an average annual domestic demand for maize is around 2.2 million tonnes of which 1.8 million tonnes are for human consumption and 400 thousand tonnes are for stock feeds. This therefore implies that the 1.2 million tonnes expected harvest is only 66 percent of the annual national requirements for human consumption. In addition, a report by the Grain Marketing Board (GMB) in early April 2022 indicated that only 5 thousand tonnes of maize have been received up to the first of April 2022. In the same period in previous seasons, the GMB would have received an average of 55 thousand tonnes. This implies that maize receipts for the period are only 10 percent of the tonnage expected for the period. Even after taking into account other factors that may delay deliveries to the GMB, such as late onset of the rainy season and harvest delay owing to an extended rainy season, the drop in maize deliveries points to serious maize inadequacy and needs urgent mitigatory strategies.

The 2020-2021 season is reported to have a surplus of nearly 1 million tonnes, however, the Grain Miller Association of Zimbabwe (GMAZ) have already paid for 400 thousand tonnes maize from Malawi and Zambia as of May 2022, at a time when deliveries for 2021-2022 are still being received[3]. This casts enormous doubt over the existence of the surplus of the surplus in the first place or may suggest they may not have been properly stored to cover up for the current deficit. If the yesteryear's surplus had been properly stored, given the current season yield, Zimbabwe could be having around 2.2 million tonnes which exceed the national requirement of 1.8 million tonnes.

The paper seeks to examine the major barriers to maize production and productivity. In particular it seeks to establish role of agricultural policy inconsistencies and politicizing agricultural programs in curtailing maize production and maize self sufficiency, both at household and national level. The study focuses on experiences, views and opinions from three districts in Mashonaland East province namely Marondera, Seke

[3] For more information on the maize imports see The Africa report (2020)

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and Goromonzi districts. Based on a purposive sample of 239 farmers across the three districts, the study sought to find out how agricultural policy with regards to marketing, financing and subsidization including selection of beneficiaries of the subsidization programs affected both production and productivity of maize, including the lucrativeness of growing maize against other crops that might be in their crop portfolios. Of the 239 farmers, for convenience reasons, 102 where from Marondera district, comprising 59 communal peasant farmers across 14 villages, 28 smallholder resettled farmers (A1 model) and 15 large scale resettled farmers (A2 model). Seke district, contributed 71 farmers, 37 of which were communal peasant farmers across 8 villages, 24 smallholder resettled farmers (A1 model) and 10 large scale resettled farmers (A2 model). The third district, Goromonzi, contributed 66 farmers, 35 of which were communal peasant farmers across 4 villages, 23 smallholder resettled farmers (A1 model) and 8 large scale resettled farmers (A2 model). Choice of participants was based purely on convenience, easy access and research cost minimization. Once a farmer is chosen and agree to participate, a household survey, observation, in-depth interviews and focus group discussions were conducted with the farmers. Key informant interviews were undertaken with stakeholders, such as Agritex officers, village heads and secondary data were also collected from government reports and journal and newspaper articles. The data obtained from the household survey were used to validate views and opinions put forward and was analyzed using SPSS, and the qualitative data were analyzed using thematic coding. Whilst some of the factors require further in-depth studies to establish their exact culpability, the study provide a background upon which further studies will be build. If the real reasons for outputs fall could be establish and rectified, the country could save millions of dollars which could be appropriated to other key sectors.

Official reasons for poor maize outputs

Climate variation

The main reasons given by the government for a fall in agricultural output over the years are rainfall variation and targeted sanctions believed to be making it difficult for farmers to efficiently utilise their lands. Whilst the effects of these factors cannot be completely overruled as complete sophistry, the question is how far have these factors been the leading reasons behind fall in agricultural output in general and maize production in particular. Rainfall variation and uncertain weather patterns are theoretically the main reason for agriculture output variation in sub Saharan Africa (Blanc 2012, Waha et al., 2013, and Meza et al., 2021). Developing countries have had unstable agricultural outputs for years owing to droughts, cyclones and other physical menaces. In most cases, however, through government support, farmers have over the years managed to mitigate effects of moderate variations in rainfall (see Wilhite, 2014, and Shiferaw, 2014). For instance, adequate funding of agricultural research institutions including the meteorological services furnish farmers with effective rainfall forecasts that enable farmers to grow crops varieties that match the anticipated rainfall patterns. Coupled with investment in seed varieties that are drought tolerant, the effect of rainfall variation on output can be reduced.

Apart from that, improvements in irrigation technology have lowered the cost of standby irrigation systems that are useable to avert mid seasons dry spells (Dixon et al., 2020). Such irrigation technologies already exist and there should be adequate willpower to encourage adoption of these technologies. In Zimbabwe, irrigation infrastructure including dams and underground main pipes were erected by former white farmers and are already available for most farms. 62% of resettled farmers surveyed indicated they have broken down irrigation infrastructure that they inherited from the former white farmers which was either vandalised or failed to maintain due to financial constraint. 34% of rural farmers indicated that they have access to petrol and diesel powered water pumps. Most of them however use them for market gardening and not maize production due to low maize prices making petrol irrigation unviable. From these sentiments it can be deduced that the country haven’t done enough to ensure the irrigation culture is propagated across farmers.

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The culpability of climate in reducing maize yield can also be measured by performance of neighbouring countries. Zimbabwe largely imports maize from neighbouring South Africa[4], Zambia and Malawi. Whilst climatic conditions slightly differ across these neighbouring countries, it is somewhat comparable, with Zimbabwe deemed to have relatively better climatic conditions for maize production. Importing from these countries reduces the culpability of climate since countries with almost similar conditions are harvesting enough to feed themselves and export.

Sanction and economic sabotage

The second official reason for a dip in maize output in Zimbabwe has been the targeted sanctions imposed on Zimbabwe since 2002. These sanctions, the government argues has posed financing challenges to the new farmers. In fact, since the fast track land reform in early 2000s, there has been growing discontent about the refusal of local commercial banks to offer credit to new farmers in the manner that the banks did to former white farmers. In earlier years, banks with foreign ownership have been criticized for not supporting the land reform at best and sabotage at worst. Even in the wake of that criticism banks extended loans of over USD2.5 million in 2010 (Masiyandima, Chigumira and Bara, 2011). Efforts by government to make the 99 year lease bankable have also not generate adequate interest on the part of commercial banks to offer credit raising questions regarding why these commercial lenders are not interested in offering loans to this big market. But how far true is the sanction and economic sabotage rhetoric? For banks to loan money to any institution or individual, perhaps the most important consideration is the risk profile of the customer involved. In particular, the bank considers the chances that the loanee will default. This is informed largely by customer risk assessment that includes previous loan performance, the purpose for which the loan is being sought, the loan duration and amount.

With the foregoing, it is prudent for the government to understand that the new black farmers are not as creditworthy as their former white counterparts owing to lack of collateral security accounting for 60% of loan rejections, lack of real farming discipline as exhibited by poor past production performance accounting for 20% of the rejections, lack of farmers capital contribution 9% of the total rejections (Masiyandima et al., 2011). Moreover, increased uncertainty brought about by macroeconomic instability that have characterised the economy since early 2000s have reduced the general creditworthiness of the new farmers. To add on, banks are not willing to lend out because of the politicization of agricultural related loans, the high transaction costs associated with ensuring low default and lengthy litigation times associated with seeking default recourse. Another militating factor against new farmers' credibility is how they were created. The land reform wasn't executed in a pre-planned manner but was largely a matter of legalised farm invasions. This presented two main challenges; firstly there was adverse selection in land grabbing. Because of the violent nature of the land invasions, individuals with high propensity for violence and thuggery benefited ahead of genuine, educated and resourced would be farmers who had better commitments. 58% of surveyed A1 farmers indicated that they thought they deserved to be given land because they participated in violent invasions against the former whites and should remain on the land regardless of they use it. Secondly, with these adversely selected individuals who did not only have capital[5] but also lack the zeal or knowhow to farm[6], the government was forced to financially support them to avoid admitting the land reform as unplanned political mistake. This, as a result, compounded the problem of creating group who have high dependency syndrome. Honestly, expecting banks to lend out to these farmers does sound plausible. For instance, If the government have more than twice battled high default on loans (the RBZ mechanisation and CAP) there exist no guarantee that if commercial banks lend out to these farmers they would pay up. Additionally, most of these farmers not have any bankable project proposal detailing what, when, and where would their projects be done. Besides factors within the farmers themselves, another challenge that increases the rate of loan default is policy uncertainty. Policy uncertainty adds more risks to agriculture on top of

[4] South Africa uses genetically enhanced maize varieties which Zimbabwe, Zambia and Malawi do not.

[5] 68% of resettled farmers indicated that they had no any form of capital or finance and expect the government to finance their operations.

[6] Less than 10% of the farmers had any form of agriculture related qualification

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physical and climatic challenges. The government policy framework has not been supportive of agriculture growth and survival. In particular, unviable producer prices that are not related to production costs increases default rate as farmers will fail to realise profit.

In response to the financing challenges the government have embarked on several programmes aimed to finance the new farmers. The programmes like the RBZ farm mechanisation programme, presidential input scheme, command agricultural programme and Pfumvudza programme. Whilst these interventions have resulted in excessive drain on the fiscal expenditure and have led to either partial or complete neglect of other important government financed social services like health and education, they have not been able to contribute positively to agricultural production in general and maize output in particular. For example the RBZ mechanisation programme was done opaquely in 2007/2008 season benefiting largely rich politically exposed persons creating a USD1.4 billion debt burden for the taxpayers have not had much production effect.

Other challenges

Most of maize production and productivity challenges are more to do with what the government have not done to support production of the staple crop. In particular, policy discord, reactive as opposed to proactive policy approach, sophistry and lack of political willpower to manage maize production has been the major production challenges. In fact, a combination of these factors tends to dissuade farmers to grow these staple cereals.

Pricing Policy discord

As highlighted earlier, maize is grown in every of the ten provinces in Zimbabwe albeit with different intensity. Every household seek to achieve its own household maize self sufficiency. The government should however undertake to promote commercial maize production so as to cover the urban maize demand and those households which fail to achieve household self sufficiency. Promotion of commercial maize production would begin by setting a viable maize producer price which would make maize growing profitable. The current producer pricing model is the major debilitating factor in commercial maize production. Only 23% of surveyed farmers indicated the grow maize commercially. Almost all communal farmers indicated that they grow maize for own consumption as it is not commercially viable. Resettled farmers indicated that they allocated small hectarage to maize to cover their subsistence and to trade for labour during the following maize growing season.

The maize producer price for the 2021-2022 season, for example, has been set at 75000 Zimbabwean dollars (ZWL), with 30 percent of it payable in United States dollars (USD)[7]. Whilst the ZWL 75000 converts to USD 250 using official auction rate (OAR), it should be understood that the official RBZ auction rate overvalues the ZWL. In fact, the free market parallel rate is a more proper guide of the farmer's realities. The prices that farmers faces in shops when he seeks to buy either groceries or inputs to return to the farm are indexed using the parallel exchange rate and hence ZWL 75000 converts to USD150 should the GMB decides to pay on delivery. All the surveyed farmers felt that the maize producer price is too low to motivate maize production and should be increased. In addition, the GMB rarely pays on delivery. The GMB failed to timeously pay farmers for the maize they delivered in the 2015/2016 season (VOA, 2016). Payment delays have a debilitating effect on the forthcoming season production since farmers would use proceeds to buy inputs for the following seasons. Most farmers (72%) indicated that they had lost considerable monetary value owing to delayed payments in a hyperinflationary environment.

Comparing USD150 per tonne of maize to the cost associated with growing a tonne of maize suggest reasons why maize might not be on top of the Zimbabwean farmer crop portfolio. Agricultural hardwares in Harare sells a 50kg bag of compound D at USD 35 and Ammonium Nitrate at USD 75 as of June 2022. The

[7] All the surveyed farmers felt that the maize producer price is too low to motivate maize production and should be increased

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standard fertiliser application for a hectare of maize is 300kg compound D and 250kg AN[8]. Using the prices mentioned earlier, a farmer needs USD 585 on fertilizer alone to grow a hectare of maize. The average seed requirement for the hectare is 25kgs. Hybrid maize seed prices in hardwares in Harare as of June 2022 average USD 80 for 25kgs. Therefore for fertilizer and seed the farmer requires almost US700 to grow a hectare of maize. Expected yield per hectare (YPH) for maize in Zimbabwe is less than 2 tonnes. In the 2020-2021 seasons revered as a successful season the country harvested 2.8million tonnes of maize from 1.9million hectares giving a yield per hectare of 1.47 tonnes per hectare. However, this YPH accounts for subsistence and peasant farmers some of whom do not use inorganic fertilisers and hybrid seeds. To demonstrate that the producer price is not viable we shall consider commercial maize farming using recommended inputs and harvesting an average of 5 tonnes per hectare. The farmer realises a gross income of USD750 per hectare. Without going into deep costing to factor in herbicides, pesticides, labour, transport to the GMB depot, etc the farmer is left with USD50 from which to apportion these remaining input cost and realise his profit. To this end, it can be seen that the government producer price for maize is not viable and may not encourage farmers to allot land and capital to maize production.

The setting of maize producer price show lack of political willpower by the government make maize farming a viable which would not only ensure food self sufficiency but also create local on farm employment and save around USD300million annually in maize imports. Surprisingly, the government shows greater willingness to pay foreign maize producers well above what they pay locally thereby directly supporting foreign farmers whilst suffocating local farmers which it is supposed to support. Zimbabwe imported 400 thousand tonnes from Malawi and Zambia worth USD 100 million (GMAZ, 2022). This translates to USD250 per tonne which is almost double what they are paying locally. If such prices can be paid to foreign producers, the major question is why it is difficult for GMB to pay USD250 per tonne to local farmers. Even after acknowledging the impending maize crisis in Zimbabwe in May 2022, the government only increased the prices to USD90 + ZWL75000 which is less than the USD250 paid to foreign farmers.

Maize subsidies and corruption

Whilst proponents of these low producer prices argue that since maize is a staple crop, there is need contain the price of maize meal for non-agriculture populace who have depressed salaries, it cannot be done by suffocating producers. In fact, the government should seek to achieve a balance between farming viability and making maize meal affordable. There are a number of options that the government could explore without necessarily affecting maize production viability. But all these strategies require proper planning and close monitoring otherwise with Zimbabwe ranking top ten in corruption, such subsidies will be misappropriated.

State funded Maize production support

In the 1990s the government stopped financing commercial agriculture because of the structural adjustment programs that emphasised privatisation (Murisa et al., 2015). After the FTLRP, the government reintroduced public agricultural support to finance the new farmers most of whom had no capital. Agricultural subsidy programs that were implemented by the government after the FTLR includes the Champion Farmer Scheme, Operation Maguta, the Presidential Well-Wishers Special Agricultural Inputs Scheme and the Agricultural Sector Productive Enhancement Facility (Pazvakavamba, 2009). These programs had different levels of success in affording finance to farmers for improving food security, support for irrigation rehabilitation and crop, horticulture and livestock production. The programmes however, faced challenges of poor targeting of farmers, politicisation, underfunding as well as non-repayment of loans (Pazvakavamba, 2009; Moyo and Nyoni, 2013).

[8] The fertiliser application rates are from the Zimbabwe Fertiliser Company (ZFC) quoted in https://www.fao.org/3/a0395e/a0395e0a.htm#:~:text=Under%20Zimbabwean%20conditions%2C%20maize%20generally,commonly%20used%20fertilizers%20on%20maize.

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In 2016 the Zimbabwe government initiated the Special Maize Import Substitution Programme called the Command Agricultural Programme[9] (CAP) to enhance domestic production and reduce food imports. Unlike the preceding programmes that were funded to USD40million tops, the CAP was funded to USD3 billion (WB, 2021). In addition, it had more stakeholders including the Ministry of Agriculture, Lands and Rural Development, the Zimbabwe Defence Forces and a Cabinet Committee on Food Security and Nutrition, the GMB, Sakunda Holdings[10], and other private seed, fertilizer and agrochemicals companies. The programme blueprint was pretty plausible and seemed to be a panacea to the long standing agricultural financing challenge since the FTLRP. Under the programme, the government undertook to provide inputs to farmers including seeds, fertilizer and agro-chemicals for hectarage that the qualifying farmers would choose depending on their landholding. After marketing the crop, the farmers would then repay the inputs that they would have received and apply for further inputs for the coming year. Defaulters in the first season would automatically be disqualified whilst those that pay back would be afforded an opportunity to increase their hectarage if they so wish. The command agriculture programme is credited for ensuring food self sufficiency in 2020-2021 season with maize harvest of 2.8 million tonnes generating a surplus of over a million tonnes (GoZ, 2021). Despite the bright prospect at its inception in 2016, by 2021, the government abandoned the CAP, citing its unsustainability owing to a very high default rate (GoZ, 2021). Apparently this debt burden is forced on the shoulders of the taxpayer, less than a decade after the tax payer was forced to assume the RBZ legacy debt from another failed agricultural financing model of the Mugabe era fronted by the RBZ.

Another financing method for agriculture that was meant for smallholder and rural farmers was the presidential input scheme, codenamed Timbaugute, Pfumvudza, scheme. The programme, based on conservative farming approach have an expected yield was about 4.5 -5.4 tonnes per hectare which is almost 400 percent of the normal rural yield of between 0.6 to 2.4 tonnes per hectare (Mazwi et al., 2019). With the government providing inputs to peasant and smallholder farmers, the Ministry of Agriculture's Department of Extension Service known as Agritex provided monitoring and supervision of the farmers. Agritex officers are tasked with physical mobilization of farmers. Each village has an Agritex officer who resides in their work areas and is also responsible for vetting farmers in terms of their suitability for the program. After vetting the farmers, they notify the farmers when the inputs will become available and ready for distribution (Mazwi et al., 2019).

Politicking, loan default and maize production

The two financing methods explained in the foregoing had several challenges. Chief among them was that whilst they provided the much needed finance; they also provided an avenue through which government resources could be used for political expediency. Whilst both projects were, on paper, government and hence national projects, benefiting was heavily linked to political persuasion. In both instances the majority of the benefactors were politically exposed persons (PEPs) and their cronies. In the three surveyed districts, Programme execution on the ground was done using grass root political structures ahead of Agritex officers and local community leadership. With the presidential input scheme, the naming of the program itself creates confusion with most villagers twisted to understand it as a gift from the president for voting for him. 71 % of the farmers indicated that they thought both CAP and PIS where party programmes and should benefit only those that are of the ruling party persuasion. Additionally, politicisation of these funding models reduces production through corruption, speculation and thievery that accompanied it. District officials working with village heads manipulated village list of beneficiaries and also benefited even without meeting the required criteria. There were also reports that PEPs who may not have any current interest in farming

[9] For detailed discussion of the CAP and its evaluation see (Mazwi et al., 2019)

[10] Sakunda Holdings is a privately owned petroleum firm and it's the rational of its involvement in CAP, an agricultural program remains unclear

benefited ahead of genuine farmers. Most such inputs were sold directly to middlemen who later sold them at the black market thereby negatively affecting productivity.

On the other hand, politicizing loan based agricultural support such CAP also compromised the effectiveness of the programme. Specifically, once the programmes are fronted by politicians, and having politicians as the face of the programme creates two major challenges. Firstly, in a politically polarised environment such as that of Zimbabwe, it is not unusual that such programs would exclude farmers of a different political persuasion. The fronting of the programs by politicians creates a very thin line between a government and a party program. In fact, some overlap is very likely that government programs are announced, discussed and registered on party related functions. 58% of communal farmers indicated that they normally get PIS related information at party meetings against 28% who indicated that they get the information through Agritex officials. Even if they could be separation of party and government business, confusion is bound to be created as most of community meeting do not have a clear agenda. Above all, the politicians is likely to exhibit rent seeking behaviour to buy votes, thus once a program is deemed political, PEPs from the ruling party will obviously seek to exclude those from other political camps. In some focus discussions with village heads and Agritex officers it emerged that councillors normally seek to use village agriculture related meeting as campaign rallies. The exclusion of farmers of different political persuasion reduced the effectiveness of these programs because benefiting is no longer based on merit. Secondly, if the program is fronted by politicians, benefactors are likely to deem loans as handouts and freebies such as other political campaign goodies they normally receive. And hence loan based interventions would suffer from high default rates. The high default rates would make the program unsustainable and hence lead to its abandonment.

Having discussed the major challenges in maize production and financing in general with particular focus on staple crop maize, I propose the following to improve production and productivity which would improve maize self sufficiency.

Upstream agricultural input production support

Firstly, the government should devise a financing model to offer subsides to maize production in particular and agriculture in general that is free from political pollution. In fact, agricultural production subsidies should not be prone to rent seeking behaviour where government resources are used for political gain. In this regard, government should abstain from giving individual farmers inputs since selection of beneficiaries can easily be politicised. Alternative funding model could be to fund upstream agricultural input production so as to reduce cost of inputs to all farmers across board. If we consider, for example, the value of CAP in 2020-2021 season of around USD3 billion and should it have been injected into fertiliser manufacturing firms to improve their production technologies, the cost of fertiliser could fall to regional averages. The same could have been done with hybrid seed producers and agricultural chemicals producers. If the subsidy targets already existing firms and fronted by non politicians with viable memorandums and contracts that specify the actual volumes of inputs to be produced at agreed prices, the subsidy could work better. It is needless to say the current financing schemes gives excessive pressure on undercapitalised agricultural input producers thereby pushing up the prices of inputs thereby crowding out private agricultural players. Agriculture support projects like the CAP creates enormous input demand thereby increasing input prices significantly to dissuade those left out to engage in production.

Moreover, funding input production makes it easy in monitoring and evaluation. The ministry of agriculture could identify firms with potential to participate in the scheme based on objective assessment of their current outputs. Once the targeted firms agree to receive production support and in turn produce the agreed input tonnage, they would sign binding contracts. Monitoring and expediting compliance will be cheaper as it involve dealing with only a handful of concentrated companies as opposed to dealing with thousands of farmers dotted around the country. Civil servants, within ministry of agriculture and not politicians would monitor whether the agreed tonnage has actually been delivered to the market and sold at the agreed price.

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Problems associated with input leaking, black marketing and smuggling out can also be dealt with easily since there will be no opportunity for domestic arbitrage. Once inputs are reasonably priced, the government can then set a producer price that takes into considering the new cost structure and offer reasonable farmer's profit. Enforcing such prices would be justified and dealing with illegal exporting of the harvest can be done using by already existing anti smuggling mechanisms.

Given the foregoing, politicking of agricultural finance is limited because in this case it will be government workers, not politicians, monitoring and evaluating these programmes. In any case, since the scheme doesn't deal with villagers and individual farmer, whom politicians view as electorate, it reduces the appetite of the politicians to become involved. Above all, as alluded to earlier, adverse selection is reduced real farmers and not opportunistic farmers tend to benefit since an individual farmer should at least show commitment towards agriculture by paying the subsidised input costs. More so, opportunities for speculation and arbitrage are nonexistent because there is no rationale to buy fertiliser even at the subsidised price if you don't intend to use it for agriculture since you can't side market it. If there are no opportunities to resale it at higher prices and the probability of smuggling it to neighbouring countries reduced, the case for speculation is removed.

Input, agricultural produce swap and top up

Apart from supporting upstream agricultural input producers, the government can trade agricultural produce with subsidized inputs. The government can devise a two tier payment system, for example, as the farmer delivers his maize to the GMB, he receives part of the payment as inputs equivalent to the grain delivered and the remainder as cash. For such a scheme two main issues emerge. Firstly, the government should undertake to pay for maize at delivery which it is not doing currently. Since the harvesting period for maize is known beforehand, they cannot be any excuse to delay payments since they have to be budget well beforehand. Since the average input requirements for a tonne of maize can be approximated, the farmer receives subsidized inputs equivalent to the delivered outputs and cash. This requires that the government set both the producer price and the subsidy at reasonable prices to ensure both viability and sustainability. Secondly, a significant proportion of farm produce is marketed by middleman due to market exclusion and higher transaction costs (Chigusiwa et al., 2013; Bindu et al., 2013). This will likely divert subsidies meant for the farmers to the middleman who receive subsidized input and resale them at the black market. The government should, if they choose this funding method, reduce transaction cost associated with maize marketing. One such way is by increasing GMB availability in the communities by setting seasonal collection centres where farmers could deliver any amount of grain. One comparative advantage of middleman over the GMB is spot payment. It is therefore needless to say that such collection centres should be able to pay farmers on delivery.

Mandatory maize hectarage

Besides removing corruption related subsidies, the government can also undertake to have a mandatory national maize hectarage reserve. The government owns several farms directly or under several ministries. For example, the Zimbabwe Prisons and Correctional Services (ZPCS) have several farms across the country with labour readily available in these prisons. If the government undertake to fully commercialise these farms and any other land they may have to ensure that at least 500 000 hectares are devoted to maize production every year, with an average yield of two tonnes per hectare, one million tonnes of maize will be realized. These strategic maize farms could also be equipped with latest irrigation technologies to mitigate the effects of mid season dry spells. Moreover, they should managed by professional agriculture expects whose contracts linked to performance. Given that these farms will be selling their output at the viable producer price, they are expected to be viable themselves. In some countries, during peace times, the defence ministry can be mechanised and undertake capital intensive maize production. The output from the strategic maize hectarage can help in achieving food self sufficiency and save millions of dollars that could have been used in imports.

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Political willpower

Another important aspect of maize supply is policy consistency and political willpower to improve production of such strategic crops. As I indicated earlier the government should pay a price that is reasonable given input cost and regional trends. Should it seek to underpay, it should understand that farmers may not allocate land to maize production in subsequent seasons. The producer price of maize determines it profitability and is often at the centre of cropping decisions. Following inability of the GMB to pay local farmers for their crop in 2007, the 2008 land under maize fell by 22%. It is therefore imperative that adhoc reactionary policies impact not only short run outcomes but rather have long run crippling effects on the ability of the nation to attain maize self sufficiency.

Conclusion

With better planning and coordination, and political willpower in maize production, Zimbabwe has the capacity to restore itself to being a breadbasket of Africa and avoid costly food imports. Reasons for poor maize output in Zimbabwe since the turn of the millennium are largely policy related. Whist physical and climatic conditions has not been very supportive, Zimbabwe government and the resettled black farmers has not done much to protect, maintain, improve irrigation equipment that they inherit from former white farmers to reduce the effect of mild to moderate droughts. As explained earlier, the pricing of maize, which is a regulated strategic crop has been counterproductive. With the GMB having monopsonistic powers over maize and failing to pay farmers on time, the policing framework doesn't create enough motivation for farmers to grow maize. The government should set a producer price that is viable to encourage farmers to undertake commercial maize production. Above all, the manner in which the land reform was undertaken created long term challenges. For instance, the land reform itself was heavily politicized, adhoc and unplanned resulting in land being allocated to persons who do not have capacity to utilise it. Land ownership alone without capacity to utilise generates hunger and poverty and put heavy pressure on government as it seeks to finance them. Options like production based lease holding where government could lease land to farmers who have capital and ability to utilise the land could encourage overall production. Encouragement of real debate and proper evaluation and independent auditing and sustainability of the land ownership with the view of finding a lasting solution is vital.

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