Economic Diversification in Zambia: Agriculture Leading the Way

His Excellency, the President of the Republic of Zambia, Edgar Chagwa Lungu during his inauguration said, “Our new mission must now be to give ourselves the ability and confidence to be masters in our own destiny. We must begin to conclusively wean our economy from the current copper mining dominated mono-economy. In this new dispensation we must promote and sustain agriculture to become one of the main drivers of our diversification programme” 13th September, 2016, Heroes Stadium (Lusaka Times, 2016).

Key Points

Economic diversification through agriculture in Zambia has lagged behind mainly due to:

- Lack of guided investments in key agricultural growth drivers by the Government.
- Focus on subsidy programmes which in some cases have crowded out private sector investment and made Zambia’s agricultural sector a maize-centric one.
- Weak linkages from agriculture to other sectors of the economy.

Based on an extensive literature review of best regional and global practices on successful economic diversification, key findings suggest that for Zambia to achieve broad based economic growth through agriculture there is need for:

- Increased and sustained investment in research and development to enable the country to adopt modern country-specific farming techniques that are suitable to its culture and climate.
- Guided public and private investment in infrastructure.
- Increased promotion of the diversification of Zambia’s agricultural sector by implementing policies that utilize the comparative advantage of the diverse agricultural conditions in the country.
- Promotion of the commercialization of the agricultural sector through the removal of the constraints that farmers face especially in accessing both short and long-term agricultural finance, productivity enhancement technology, extension messages, and markets.
- Promotion of value addition and industrialization to generate stronger forward and backward linkages between sectors of the economy.
- Creation of an enabling, conducive, and stable policy environment that allows for the greater participation of the private sector.
- Stronger institutions that support the agricultural transformation agenda.
AGRICULTURAL GROWTH AND TRANSFORMATION

In the early stages of development, the growth of the agricultural sector is key for achieving development objectives (Diao et al., 2010). Therefore, for a developing country like Zambia, growth in the agricultural sector is the clearest avenue through which sustainable economic growth and poverty reduction can be achieved. It is widely accepted that broad based growth in agriculture incomes is essential to stimulate economic growth in primarily agrarian societies (Hazell et al., 2003; IDA, 2009). In other words, when growth comes from sectors that most poor people work in, there is a much higher likelihood to address poverty.

Zambia’s agricultural sector employs approximately 48.8 percent of the total labour work force and contributes close to 10 percent to the country’s total Gross Domestic Product (GDP). The mining and quarrying industry, which competes with the agriculture sector in terms of contribution to GDP, employs only 1.4% of the total labour work force (CSO, 2014).

However, in an import dependent economy such as Zambia, the sector that earns the most foreign exchange gets the most prominence. Further, the sector that provides the most tax revenue to the Government generates the most interest and/or concern, and is the easiest to notice. The Zambia Extractive Industries Transparency Initiative (ZEITI) reports that the mining sector earns from 60% to 85% of Zambia’s foreign exchange. Further it has been reported that 45% of Zambia’s tax revenues come from the mining sector (ZEITI, 2015).

Therefore, for the agricultural sector to become more prominent and noticeable, it has to start earning considerable foreign exchange and start providing substantial tax revenue to the Zambian economy. Fortunately, the goals of broad-based economic growth through agriculture, increasing foreign exchange and tax earnings in agriculture are actually mutually reinforcing.

The Zambian agriculture sector in its current state cannot earn considerable foreign exchange, tax revenues, and provide broad-based economic growth. This is because of the extremely low productivity in the sector and declining agriculture value addition per worker. Figure 1 shows the comparison of value addition per worker in the agricultural sector and the comparison of the contribution of the agriculture and mining sectors to GDP.

Figure 1: Agriculture and Mining Contribution to GDP and Agriculture Value Addition per Worker

![Graph showing Agriculture and Mining Contribution to GDP and Agriculture Value Addition per Worker](source: CSO (2014); WDI (2015))
What is clear is that productivity in the agriculture sector is low and declining, whilst the gap for contribution of mining and agriculture sectors has closed up since 2006. Nevertheless, developing countries that have successfully achieved economic transformation did it through increased productivity and rapid diversification of agricultural exports (Timmer, 1988; Breisinger et al., 2010; 2011). This reinforces the need to transform the sector through productivity enhancement and diversification to achieve broad based economic transformation.

Furthermore, the problem of structural stunting or accelerated decline of the agricultural sector has been exacerbated by negligible linkages to other sectors in the economy. A good example is the decline in the share of manufacturing value added in total GDP, which is used as a proxy for manufacturing GDP share. As can be seen in Figure 2, both the share of agricultural value added and manufacturing value added in total GDP have recently been declining. This just shows that there are weak linkages between agriculture and other sectors of the Zambian economy such as manufacturing.

There is limited evidence of structural transformation in Zambia. Ideally, with structural transformation, the contribution of agriculture to GDP declines whilst that of the manufacturing and industrial sectors increase. This only happens when the land and labour productivity in agriculture increases resulting in a shift of surplus labour force to other sectors of the economy.

Timmer, (1988) identified four phases in the process of agricultural transformation where; in the first stage agricultural productivity increases creating a surplus which, in the second phase could be used for the development of non-agricultural sectors. In the third phase, a progressive integration of the agricultural sector with the other sectors in the economy occurs as a result of resources flowing out of the agricultural sector. When this phase has been successfully completed, the role of the agricultural sector is no different to the role of any other sector in the economy which represents the fourth phase. The main issue in Zambia is that we are still struggling to get the first phase going.

Additionally, other factors that have led to Zambia’s failure to transform its agricultural sector include inadequacy of human and physical assets, lack of institutional and technological resources, poor policy and coordination capacities especially among small scale farmers.
It is against this backdrop that this policy brief is written, in order to provide the Zambian Government with some key recommendations based on global and regional best practices on how to successfully achieve economic transformation in the country using agriculture. The recommendations in this brief are based on an extensive literature review and empirical research from IAPRI and other institutions.

**CURRENT POLICY OPTIONS**

The revised Sixth National Development Plan (SNDP) recognizes that agricultural development is critical for achieving inclusive growth and poverty reduction in Zambia. This document clearly indicates that to attain more inclusive agricultural growth there is an urgent need to address the “unbalanced agriculture policies which have favoured maize production and disadvantaged the production of other crops”. This was reinforced by His Excellency, President Edgar Chagwa Lungu, during his official opening of the First Session of the Twelfth National Assembly on Friday 30th September, 2016.

“The agriculture sector, fisheries and livestock will be the main focus around which other sectors will be developed in an integrated manner under the Seventh National Development Plan. Agriculture will therefore be the major priority of our economic diversification agenda.”

*His Excellency, President Edgar Chagwa Lungu – 30th September, 2016, National Assembly*

The recognition that agriculture is the main vehicle through which economic transformation can be achieved is a first step in the right direction. Nevertheless, very little progress has been made to diversify agricultural spending away from inefficient subsidies that mainly focus on Zambia’s staple but low value crop, maize. Many IAPRI studies have shown that the current policy approaches, where the bulk of the agricultural budget is used to subsidise inputs for maize production and maize markets are ineffective in addressing stubbornly high poverty rates and low productivity among smallholder farmers in Zambia (see a summary in Chapoto and Sitko, 2014).

Current agricultural policies in Zambia have failed to achieve broad based poverty reduction and productivity growth because they have in large part been responsible for constraining growth by under-funding investments in key agricultural growth drivers that can benefit all rural people, such as; rural infrastructure (roads, rail, and telecommunication), agricultural research and development, market information, irrigation, institutions that foster the development of effective markets and complementary services such as agricultural extension and credit. In addition, the maize-centric policies have been undermining Zambia’s ability to become a stronger player in the regional agricultural sector, which further inhibits inclusive growth. It is clear that the approach that has been pursued in Zambia - under different guises - of devoting most efforts and resources to input and consumer subsidies, has failed lamentably.

**MoA Budget, 2016**

**Maize Centric Budget**
A number of promising policies and programmes to diversify and grow the sector were presented in the 2017 budget. These include:

- To fully migrate to using the electronic voucher (e-voucher) system for the distribution of farming inputs starting 2017/18 agricultural season;
- To promote diversification to cash crops such as; cotton, cashew nuts, soya beans, cassava and rice;
- To promote fisheries and livestock by establishing 18 artificial insemination centres, cordon line in Shangombo to Jimbe, 4 fingerling centres in Rufunsa, Mungwi, Kasempa and Chipepo, as well as expanding the Fisheries Development Fund;
- To set up 20 irrigation schemes under the PPP model, particularly in farm blocks;
- Enhancing the use of ICT to improve the delivery of extension services to farmers;
- Policy consistency (in agricultural marketing and trade): pursue an open border policy by introducing 10 percent tax on maize exports, and Food Reserve Agency (FRA) to stick to strategic reserves;
- Scaling up the Food Security Pack (FSP) from 30,000 to 40,000 beneficiaries, and increasing allocations to social cash transfers;
- Creation of a Fund under the Emergent Farmer Support Program (US$40 million) to support 1,000 emergent farmers in the mechanization of crop production.

If implemented effectively, these pronouncements will likely move the sector in the right direction. However, both the budget allocation for 2016 and 2017 show that Zambia’s agricultural spending is still highly skewed towards subsidies. For example, 52.6 percent and 42.1 percent of the total budget allocation to the Ministry of Agriculture (MoA) was allocated towards the Farmer Input Support Programme (FISP) in 2016 and 2017 respectively. However, the budgetary allocations to key drivers of agriculture growth such as Research and Development (R&D), rural infrastructure, irrigation and extension services are still too low (Kuteya, 2016).

**HOW DO WE ACHIEVE ECONOMIC TRANSFORMATION IN ZAMBIA?**

Zambia recently held its general elections in 2016 under a new Constitution. This presents the country with an opportunity to pursue the agricultural transformation agenda because the new Constitution and the full five year Government mandate provides political and economic stability. There are some accepted economic realities such as the current tight fiscal space, Climate Change, and dire poverty, especially in the rural sector. Addressing these challenges means that the most effective tools and strategies need to be employed. Business as usual is no longer an option as the country lags behind. Therefore, the Government needs to prescribe and implement major changes in the agricultural sector which may be unpopular at first, but would within a short period result into broad-based economic growth. Specific recommendations on how the country can achieve sustainable economic transformation are provided in the next section.

**Water Bodies in Zambia**
In Brazil the establishment of the Brazilian Agricultural Research Corporation (EMBRAPA-Empresa Brasileira de Pesquisa Agropecuária) in 1973, solely funded by the Government, is considered to have been the cornerstone of Brazilian agricultural transformation. This was done by building an agricultural system based on science and research through the development of research infrastructure (Alves, 2010). Further these findings are consistent with substantial evidence from Africa showing returns to investment in agricultural research and development of over 20 percent per year (Oehmke and Crawford, 1996; Masters, 2005; Lipton, 2005).

In Zambia, restructuring and strengthening Agricultural Research Centres such as the Zambia Agricultural Research Institute (ZARI) through adequate funding and institutional capacity building, would enhance their role in facilitating research and development in the sector.

Examples can be drawn from the Asian experience. Today, agriculture is the largest employer in developing Asia, but not the largest sector in any Asian country by GDP. Agricultural labour and land productivity in Asia has grown faster than in other developing regions. Improvements in yields of traditional crops was achieved through technological change - an area they invested in heavily since the 1960s. In addition, structural transformation has been happening as the composition of agricultural output of developing Asia has shifted from traditional to high-value products (ADB, 2011). For example, in South Korea through agriculture intensification, food production increased four-fold within six decades, whereas the area cultivated declined by over a half a million hectares (FAO, 2012; Choi, 2012).

In Zambia increases in agricultural productivity can be achieved by prioritizing some investment in identifying appropriate fertilizers for each agro-ecological region. In addition there is need for increased access to credit to allow farmers to better access modern farming techniques through mechanization. In this regard, the creation of a fund (as announced this year) specifically designed to assist smallholder farmers is most commendable. Further adoption of improved seed varieties should be encouraged to further increase yields.
In developing Asia, the rising demand for livestock products is increasingly driving the regions agricultural growth and fostering greater demand for other high-value crops, which are also more labour intensive (World Bank, 2009). Moreover, the share of agri-business in GDP is substantially higher than that of agriculture. Agri-business as a share of GDP for Indonesia, Thailand, and Philippines is 33%, 43% and 15%, respectively (World Bank, 2009; Balisacan et al., 2011).

Brazil saw the most significant change in its agricultural export structure. For example, coffee accounted for 72.4 percent of total agricultural exports in 1969, nine years later it only accounted for 31% of Brazil’s total agricultural exports (ibid). The diversification of agricultural exports is the reason Brazil became one of the world’s most important agricultural exporters of many other commodities.

Another success story comes from Ethiopia, which decided in the 1990s to invest in sesame and cut flowers for export. Close collaboration between the Government and the private sector enabled strong year-on-year export growth in an otherwise stagnant agricultural sector (EIU, 2008).

Structural change within the agricultural sector is a prerequisite for growth. Therefore the government should encourage the commercialization of crops through the use of incentives and policies to stimulate the private sector to invest in high yield technologies. In Zambia, increasing yields in traditional crops, especially grains, is critical but not sufficient. There is an urgent need to shift away from maize-centric policies to those that encourage farmers to diversify to crops that have higher earnings per hectare.
Public investment is imperative during the initial stages of agricultural transformation but should not stifle incentives for farmers and the corporate private sector to invest. For example, the Korean Government in addition to investing in public goods such as the construction of reservoirs, water tanks, pumping stations, irrigation facilities, arable land readjustments and the diffusion of agricultural technology, covered many other areas that were normally considered the domain of the private sector (e.g. constructing greenhouses, diffusing machinery and constructing processing facilities) (Mudbhary, 2006).

In Zambia, most agricultural development plans focus on supply side interventions, such as subsidies on improved seed and fertilizers. However, such investments fail to recognize that these subsidies are ineffective and stifle investments into key drivers of agricultural growth.

The Government needs to refocus funding and channel it towards investments in the key drivers of agricultural growth. This will involve the reorientation of spending, away from FRA and FISP towards increased investment in public goods including:

i. Irrigation development as a means to mitigate drought and improve productivity;
ii. Crop, soil, and livestock science research and development to enhance genetic advances, and promote refinements in the adaptation of improved practices and technologies;
iii. Extension programs, particularly focusing on effective and appropriate input use, and integrated soil fertility management practices to improve soils and raise crops’ response to inorganic fertilizer applied; and physical infrastructure development.

Some issues:

- Poor targeting
- Delayed printing of cards (consider mobile money systems)
- Limited number of inputs
- Some Co-ops limiting farmer’s choice – only fertilizer & maize seed provided
Strategic Institutional Reforms
Countries that achieved agricultural transformation made their plans very explicit. There were strong institutions in each country that pursued a transparent path to agricultural transformation. This was only achieved by providing a conducive environment for the private sector, backed by strong political will on the part of the Government.

Further these countries used policy to make the environment conducive for private sector participation. A conducive environment is achieved when the private sector is assured that they will get a return from what they invest in. These institutions promoted reform and decisiveness, but crucially this was subject to checks and balances. This approach assured that this power, was used for the greater good. This system delivered monetary stability and more effective governance, both of which created an environment where the Government could reduce interventions in agriculture, and the private sector felt confident to expand their investments and production (Bates, 2006).

Any country seeking to learn from Brazil’s agricultural successes will do well to consider its institutional transformation. Korea also relied more on policy changes and creating an environment conducive for farmers to apply advanced technologies and production systems including mechanization. In Morocco, the Government helped facilitate the export of high value crops to Europe through a combination of technical assistance, economic and political measures (such as helping growers to meet European farm certification requirements), and an agreement with the European Union (EU) to expand tariff-free access for Moroccan producers (Wickramasinghe et al., 2012; Mudbhary, 2006; EIU, 2008).

In Zambia this can be done, at least in part, through the setting up of the proposed Agricultural Marketing Council, and through the enactment of the Agriculture Marketing Bill. This will bind the Government to make decisions only through consultations with stakeholders thereby enhancing transparency and promoting confidence in expanding private sector investments in the sector. There is also a need to find a way to entrench in the Zambian civil service, the fact that the private sector is the key to agricultural and economic transformation.

THE PROBLEM

THE SOLUTION

Evidence Based Policy Making a Must
The evidence suggests that agricultural-development programs also require the active engagement of private agents such as farmers or farmers’ organizations, input suppliers, warehouse operators, buyers, and traders, including international trading companies (Mudbhary, 2006).

Successful cases of agricultural transformation have shown that creating an enabling environment for farmers and the private sector to invest in agriculture is a fundamental prerequisite. Such an enabling environment is likely to encourage farmers to invest in their own agricultural land, especially in activities that protect the land from soil erosion such as; terracing, mulching, adding rock or soil bunds, and in activities that enhance productivity. Two of the primary conditions for farmer’s investment in land are; ownership of land and the capacity to fully utilize the benefits of their labour (Wickramasinghe et al., 2012).

**CONCLUSION**

Following periods of decline in the agricultural share to GDP and productivity, economic growth in Zambia in recent years has mainly been attributed to the mining sector. However, due to volatility in the price of copper, Zambia’s main export commodity, many stakeholders have called for diversification of the economy away from mining and into more productive and sustainable sectors such as agriculture. Agriculture has become the main focal point largely due to the fact that the majority of the Zambian population earn their incomes from the agricultural sector. To achieve broad based economic growth, there is need for the country to develop and actively engage in a strategy that raises agricultural incomes. This can only be achieved through the transformation of the sector, the creation of strong linkages with other sectors of the economy, and the promotion of value addition.

Best practices learnt from other countries that successfully achieved economic transformation through agriculture, suggest that for Zambia to achieve broad based economic growth through agriculture, there is a need to heavily invest in research and development, encourage commercialization through the use of incentives, and promote the participation of the private sector by providing a conducive environment through strong policy frameworks.

Making these necessary changes requires strong political resolve and will. The status quo is trapping a large majority of Zambians in poverty. However, despite this worrisome observation, the status quo has its fans. There exists a very small minority in positions of power that may be benefiting from the system through rent seeking. This minority will find every excuse not to make the necessary reforms in the agricultural sector. These may cast innuendos at proven pathways to agricultural transformation and broad-based economic growth. There are also those who need to be informed about the evidence on transformation. In the end “Logic dictates that the needs of the few outweigh the needs of the many” (The Wrath of Khan, 1982).
REFERENCES


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