



AgDevCo^o

STIMULATING THE POTATO VALUE CHAIN IN ZAMBIA

Case study of the emerging transformational
impact of AgDevCo's investment in Saise
Farming Enterprises Limited

March 2019

ABOUT AGDEVCO

AgDevCo is an impact investor which aims to contribute to the transformation of African agriculture from subsistence farming to a modern, commercial sector. AgDevCo provides debt, equity, and hands-on support to establish and develop commercial-scale agribusinesses. It has invested over \$128 million into 70 agribusinesses across 8 African countries. AgDevCo considers the indirect and systemic impact of its investments, as per the IFC impact management principle 4, and is leading the industry with qualitative case studies to monitor these changes.

ABOUT THIS CASE STUDY

This independent case study analyses the transformational impact of AgDevCo's investment in Saise Farming Enterprises Limited (Saise). It was prepared by IPE Triple Line in March 2019 as part of a wider study of transformational impact the AgDevCo's portfolio. Findings from this work have been used by AgDevCo to refine its approach to transformational change.

The study is based on site visits to Lusaka and Mbala. Data was collected through semi-structured interviews with key informants from AgDevCo, Saise, Katito and Buya Bamba, focus group discussions with employees, and analysis of quantitative data provided by Saise.

The case study methodology used a network analysis approach, which tries to understand the ways in which each investment is connected to different actors, from their employees to suppliers and buyers. Quantitative and qualitative data was used to construct simple maps of the pre- and post-investment networks, which allowed us to build a visual picture of how the AgDevCo investment has had an impact, and how this has changed over time.

SUMMARY

Saise is Zambia's first seed potato producer. This study explores how AgDevCo's investment has contributed to the expansion of the value chain and encouraged commercial farming in Zambia's neglected Northern Province.



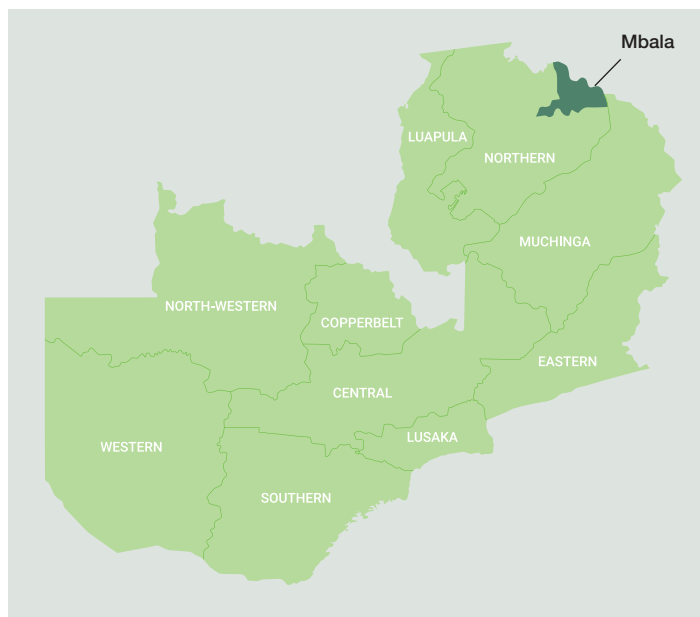
THE CONTEXT

THE COMPANY

Saise Farming Enterprises Limited was established in 2016 near Mbala, Zambia. It is one of the only commercial farms in the Northern Province – one of the poorest parts the country. It is also the first commercial seed potato producer in Zambia, established to meet the growing demand from the emerging potato sector.

Seed potatoes are high-quality tubers which are used to multiply the next generation of potatoes. Seed potatoes need to be grown under specific conditions to produce disease free, high-grade tubers. As such, seed potatoes are a key input for Zambian farmers growing potatoes for consumption (ware potatoes).

Saise purchases different varieties of seed potatoes from the German Potato breeder Europlant and cultivates them on 250ha of fully irrigated land. Saise's production, which amounted to more than 1800 tonnes in 2018, is then sold to Buya Bamba, Zambia's largest potato trader. Buya Bamba in turn sells them to its contracted producers - largely commercial potato farmers.



The company aims to create jobs and raise incomes in a region where most people are subsistence farmers and where formal employment is rare (the Zambian government estimates rural unemployment at around 75%)¹. Saise expects its production to result in up to 50% import substitution of seed potatoes, which were previously all imported. Finally, the farm envisions leveraging its proximity to Lake Tanganyika to export up to 30% of their production to other countries in the region where potato production – and hence demand for quality seeds - is growing.

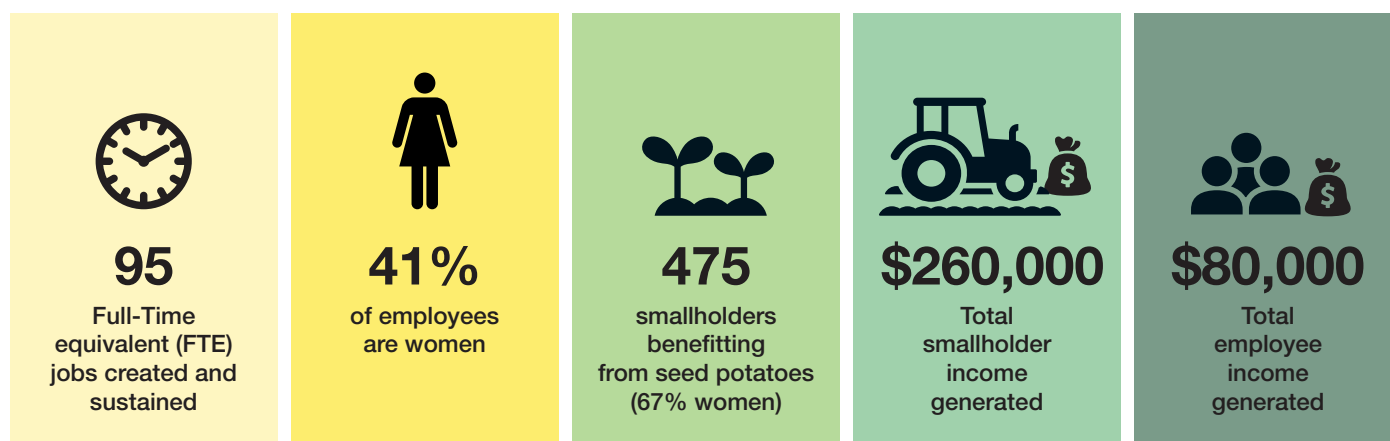
AGDEVCO'S ROLE

This investment is part of AgDevCo's larger strategy to help develop an agricultural hub in Northern Zambia, by injecting \$14M into the region and catalysing an additional \$23M of third-party investments.

The business is a joint venture between AgDevCo, Buya Bamba and the two managing partners responsible for running the farm. A \$5.3M greenfield enterprise, Saise was designed and built from the ground up by AgDevCo and its partners. AgDevCo has invested \$1.7M in equity, \$1.6M in long-term debt, as well as working capital loans.

As the majority shareholder, AgDevCo plays a hands-on role in the investments' development, sitting on the Saise board, working to maintain and strengthen relationships with partners, and providing technical agricultural assistance.

DIRECT IMPACT IN 2018



¹Republic of Zambia Central Statistical Office, "Zambia in Figures 2018".
<https://www.zamstats.gov.zm/phocadownload/Dissemination/Zambia%20in%20Figure%202018.pdf>



AGDEVCO'S VISION FOR TRANSFORMATIONAL CHANGE

AgDevCo investments do not only generate direct impact, but in many cases can have a transformational impact on the local economies in which they are located. These more indirect impacts are referred to as economic transformational change.

Transformational change:

"Wider knock-on effects in markets and rural communities, as a result of changes for AgDevCo investees and the smallholders that they work with.

These ripple effects can include (but are not limited to) economic spill-over activity, behavioural changes of other companies and farmers, and increases in economic activity along value chains"

AgDevCo investments create transformational change in two key ways:

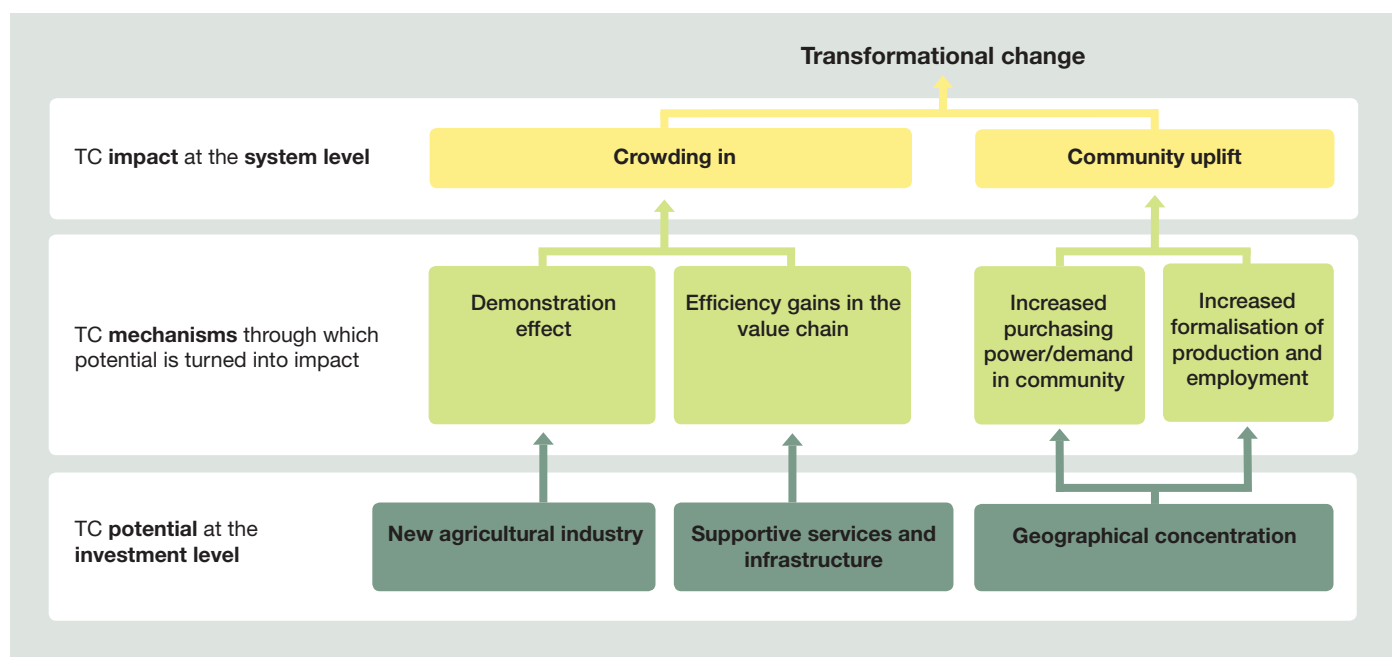
- > **Crowding-in of investment:** the investment can indirectly result in the growth and expansion of the overall value-chain.
- > **Community uplift:** the investment can also stimulate the local economy of the communities with which it is working, leading to the emergence of new economic actors and job opportunities.

In order for these changes to occur, investments have to have certain characteristics. Understanding these characteristics can tell us something about the **potential** for transformational change of each investment.

- > **The investment introduces a new agricultural industry to an area:** the investment establishes the commercial production, processing or value-addition of a crop or livestock in an area where it was not previously grown. The investment could also be introducing smallholder commercialisation of the product.
- > **The investment's direct impact is geographically concentrated:** the investment will formally hire a high number of employees, or work with smallholder farmers living in the same geographic community, and provide them with and a significant income uplift. It can also plan on sourcing goods and services locally and spread good business practices. This is likely to lead to increased purchasing power, demand, and formalisation, and ultimately lead to community uplift.
- > **The investment provides supportive infrastructure and services:** the investment will provide services or infrastructure that has the potential to unlock increased efficiency of an agricultural value chain and lead to its growth. This could include input provision (seed, fertiliser, crop protection, finance, tools and machinery), skills training, policy and regulatory improvements (e.g. lab testing or market information services).

The diagram below summarises how AgDevCo conceptualises transformational change. The potential for change is identified at the investment level, and the impact is measured at the system level. The transformational change mechanisms are the way in which potential transformational change is turned into impact, and provide an indication of what kind of evidence might suggest that this is occurring.

Figure 1. AgDevCo's approach to transformational change



SAISE'S TRANSFORMATIONAL POTENTIAL

Saise is operating in a **nascent but fast-growing industry**, and as a first mover is pioneering seed potato production in Zambia. **Saise has the potential to stimulate and transform a whole value chain** providing Zambian potato producers with high quality, locally produced seeds. Saise's location, in a **remote and long neglected** area in Northern Zambia, also provides the opportunity to demonstrate that commercial agriculture in the region is feasible. This could crowd-in additional investment both by making the case for further AgDevCo investments in Northern Zambia, and by attracting other investors.

By examining Saise's impact on its network, the study aimed to identify any emerging signs of transformational change and to better understand the mechanisms leading to these indirect economic effects.



NETWORK CHANGES

Using network analysis, we found the following changes, visualised in Figure 2:

Before Saise was established, the developing potato market in Zambia relied entirely on imported seed potatoes. Buya Bamba, the country's main potato dealer, imported seed potato from South Africa to supply to commercial farmers (as well as some large-scale smallholders) on contract. In some cases, smallholder farmers bought seed potatoes to informally distribute them to other farmers in their region. Buya Bamba sells potatoes to both commercial players (such as large retailers), as well as informal traders. These linkages are shown on the left of Figure 2.

As demand for potatoes in Zambia was growing, Buya Bamba was looking to source more and higher quality seed potatoes, with imports from South Africa often of a lower quality due to the long transport distances. The establishment of Saise, to produce seed potatoes supplied by Europlant (a German seed potato provider) changed the market by introducing locally produced, high quality seeds. These changes are shown in green on the right of Figure 2.

Prior to the investment, the remote Mbala region was not integrated into the potato value chain, with commercial potatoes sourced from the south. This absence of potato production, combined with the cool weather, makes it an attractive area for seed potato production due to the lower risk of diseases. Local communities had limited formal employment opportunities, with most living off subsistence agriculture.

The establishment of Saise has created new relationships, linking the Northern Province to the potato value chain and increasing monetary transactions at the community level. In 2017, AgDevCo invested in Katito, a second farm in the Mbala area set up to help Saise keep up with the demand. Both companies now employ former subsistence farmers to work on the farms, creating a new group within the network. These employees are able to spend more on goods and services from local businesses, strengthening these linkages. Saise also directly contributes to the local economy by hiring local contractors such as electricians and construction companies, and by buying inputs locally.

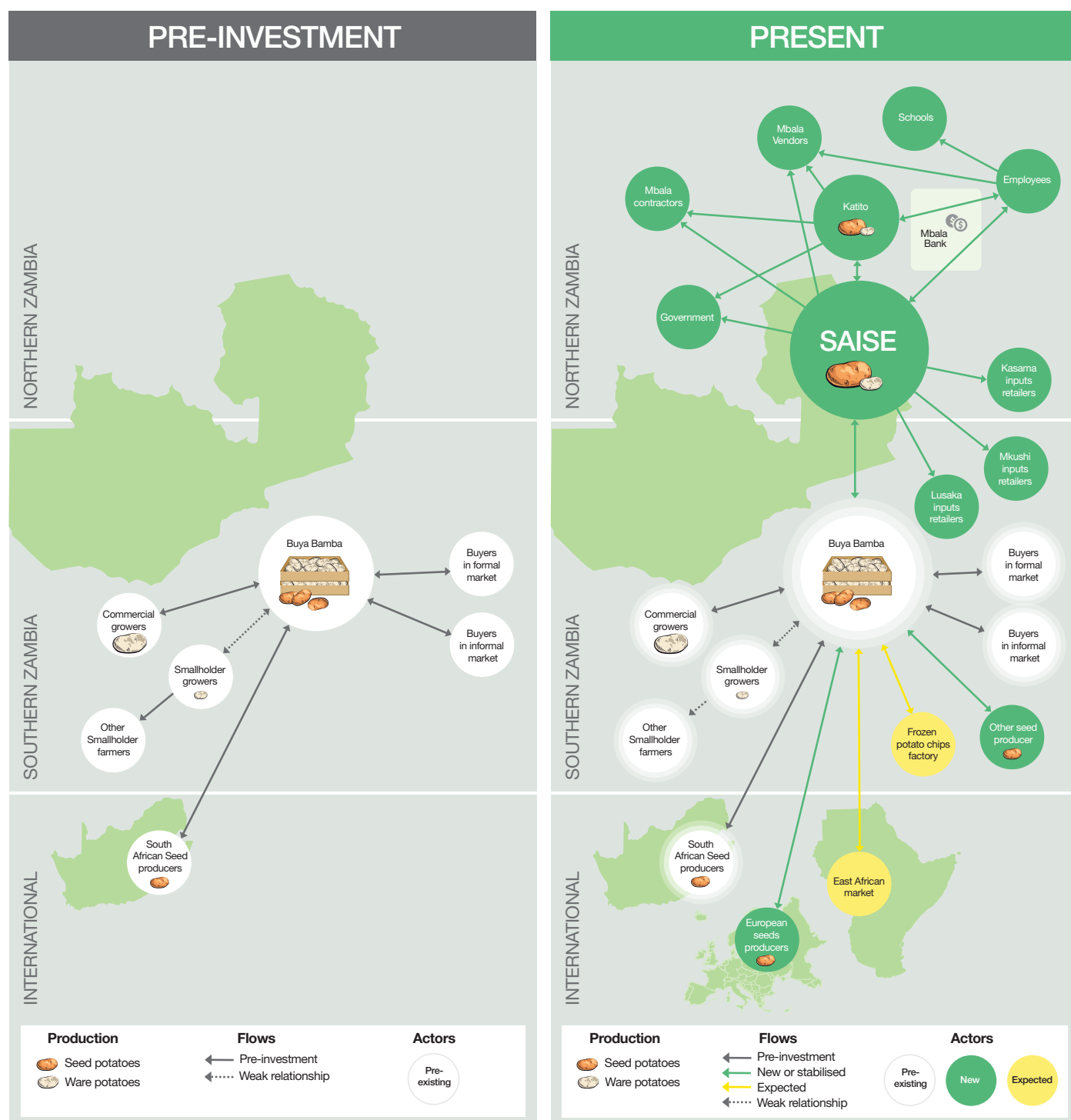
Due to AgDevCo's investment, Buya Bamba no longer exclusively purchases seeds from South Africa. Saise provides all of their seed potato production to Buya Bamba, including about 10% of potatoes that do not meet the seed requirements and are therefore sold for consumption.

In the future, Saise hopes to export to other countries in the region including Tanzania, Kenya and Rwanda. Potatoes grown with Saise's seeds could also be used to supply a frozen chips factory in Lusaka, a potential new investment catalysed by the growing industry. These potential future developments are shown on the map as yellow circles and arrows.

By mapping these changes, we are able to then identify signs of both crowding in and community transformation.



Figure 2: Network changes following AgDevCo's investment in Saise



EMERGING SIGNS OF CROWDING-IN

Analysis of AgDevCo's investment portfolio has shown that transformational change generally starts to become evident from the third year of the investment. Although AgDevCo's investment in Saise is still relatively new (3 years), there are some emerging signs that suggest that the indirect economic effects of the investment are contributing to the growth of the potato value chain and the development of commercial agriculture in the Northern Province.

NEW ENTRANTS

New entrants are competitors that have entered the market following the investment's establishment. When their entry can be linked to the investment, it is evidence that it is contributing to the growth of the value chain.

While there were no seed potato producers in Zambia before the establishment of Saise, there are now at least two others players in the Zambian seed potato market:

- > As a direct consequence of Saise's success, AgDevCo has invested in a second farm, Katito. Katito is now producing seed potatoes under contract for Saise, in order to meet demand for seed potatoes. Although Katito does not constitute a competitor and has not yet attracted external funding, AgDevCo is planning to mobilise other investors to finance further developments.
- > Buya Bamba has established another seed potato grower in Southern Zambia, partly encouraged by Saise and Katito's success.

These two examples provide some evidence of the demonstration effect. They also show that existing relationships and intangible resources (such as the transfer of knowledge and skills) can play a role as well.

INCREASED DEMAND FOR GOODS AND SERVICES

Increases in demand for goods and services from investments can stimulate economic activity in the value chain, and potentially lead to new entrants. For Saise, this increased demand is largely concentrated in transport and agricultural inputs. In 2018, the company spent close to \$208k in local agricultural inputs, and Katito (which is still establishing their operations) an impressive \$2.9 million.

Buying from Zambian businesses has increased other players' revenues, but it is difficult to assess the extent to which this has resulted in the establishment of any new businesses. There is however strong potential for this to happen as demand increases. One example, is potato storage boxes, which Saise is unable to procure from local businesses and instead has to import from South Africa at a cost of \$200k.

EFFICIENCY GAINS IN THE VALUE CHAIN

Investments can lead to efficiency gains by providing a service or infrastructure to others in the value chain. Saise's seed potatoes are often of better quality than those that were previously imported from South Africa, where drought and increasing disease pressure have reduced both quality and availability of seed. The distances that these imported seeds had to travel also sometime led to quality issues. By providing higher quality seed, Saise is creating efficiency gains in the whole value chain, with commercial growers enjoying better yields. This is further enhanced by new varieties introduced, which are preferred by customers and so lead to increased demand.

INCREASED PRODUCTION LEADING TO OVERALL MARKET GROWTH

Provision of inputs can enable an increase of production, enlarge the size of the market and contribute to increased economic opportunities further along the value chain. Saise and its outgrowers produced over 1900 tonnes of seeds, which were used by Zambian commercial and smallholder farmers to grow potatoes. The increased availability of locally produced, high quality seed potatoes contributed to Buya Bamba growing by 30% in 2018 – which means that their contracted Zambian potato growers have also grown. About 40% of the potatoes produced are sold in the formal market to supermarkets such as Shoprite, with the remainder sold to the informal market. The latter are mostly traders who buy potatoes at Buya Bamba to sell on the informal market, as well as smaller entrepreneurs selling potato chips.



EMERGING SIGNS OF COMMUNITY UPLIFT

While Saise's transformational impact largely comes from crowding in within the potato value chain, there were also some signs that the investment has had an indirect economic impact on the Mbala area.

INCREASED SPENDING IN LOCAL COMMUNITIES

Investments can boost demand for goods and services both indirectly, by paying wages to employees, and directly, by spending money in local businesses.

Saise and its outgrower Katito have brought a substantial amount of money into the Mbala area where they are established. This additional spend falls into two main categories of wages and direct spending on goods and services, illustrated in Figure 3.

In 2018, Saise spent \$76k in wages, and Katito spent \$33k. Focus groups with employees suggested that this income was almost entirely spent in the local area, indirectly benefiting local businesses and entrepreneurs. Given that most of Saise's employees were previously subsistence farmers and without a formal income, this also means that their ability to purchase goods and services has been significantly improved. Employees reported spending their additional income on agricultural inputs, food products and on building materials, suggesting the kinds of businesses which may have benefited.

In addition to paying wages, Saise and Katito also contributed to the local economy by hiring local contractors (for example for construction and electrical work) and through buying inputs from local vendors. In particular, Katito spent \$130k on agricultural inputs in the Mbala area. These benefits also extend to local tourism businesses who provide accommodation to visitors to the farms (for example auditors, and to the payment of taxes through the local revenue office. Saise and Katito are also the largest local customers of ZESCO, the Zambian electricity provider, and have therefore contributed to stabilising demand in the area – even winning an award for the best local customer.

The fact that these investments are relatively new meant that, as expected, there was no clear evidence that this increased spending in the local area had resulted in new businesses being established. All indications are however that in the future this could happen as stable demand creates the right incentives.

Figure 3. Saise's impact on increased demand for goods and services in Mbala

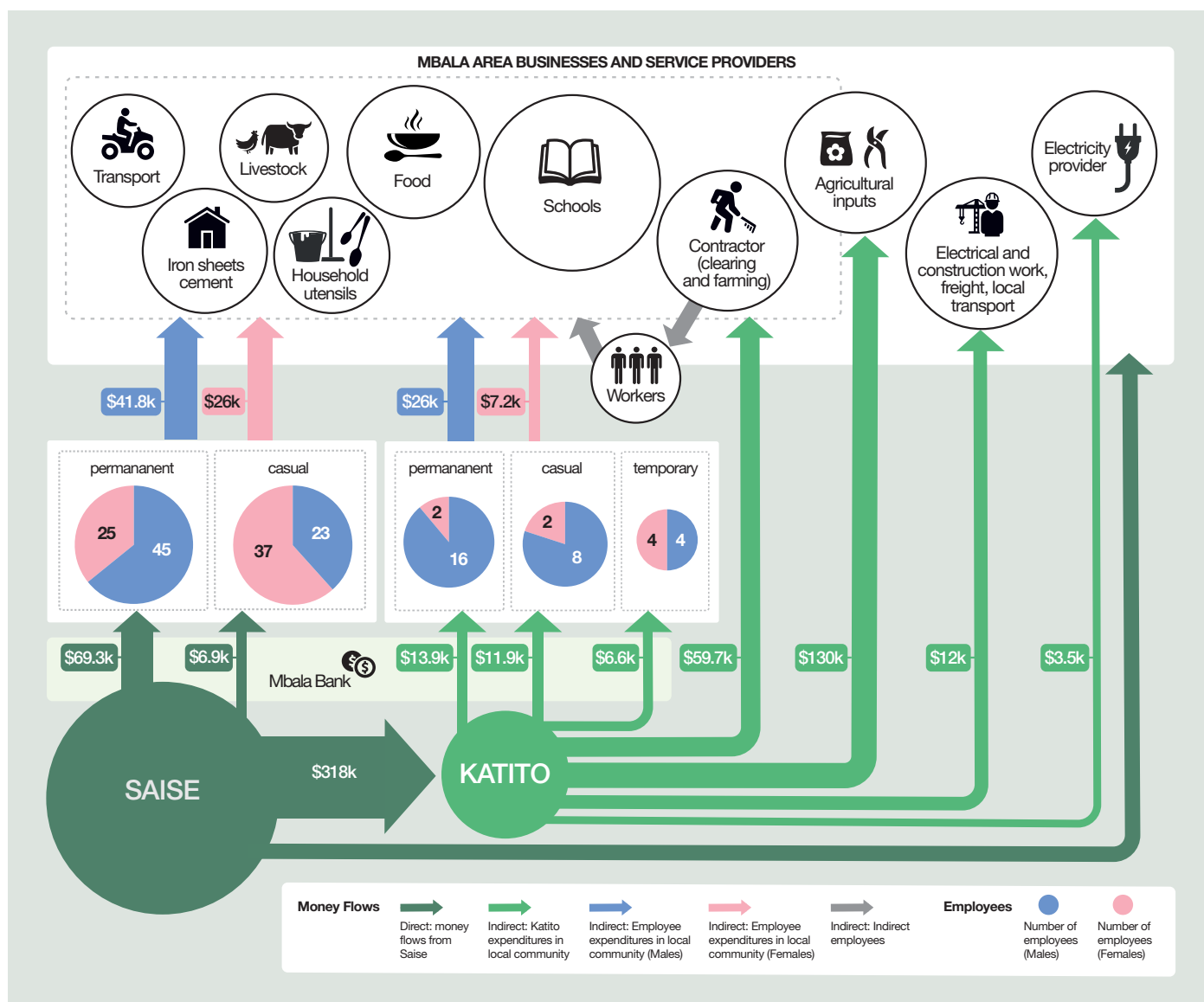


Figure 3 illustrates how the increased spending by Saise (in dark green) flows into local businesses through wages and direct spending, and how this spillover effect is amplified through Katito (in light green). It also shows who is directly affected by these increased monetary flows by representing employees and the various types of good and services purchased by them.

FORMALISATION OF PRODUCTION AND EMPLOYMENT

A movement into formal employment can have benefits other than increasing and stabilising income. By formalising business relationships, for example, investments can reduce barriers to entry for other companies. One good example of this is that the National Pension Scheme Authority (NAPSA) of Zambia is now making regular visits to the Mbala area to ensure compliance, as the number of formally employed individuals has increased. By engaging with local vendors and contractors, there was also evidence that Saise is encouraging good business practices in the area by requiring, for example, that formal invoices are issued for all purchases which was not previously the standard practice.

Is formalisation leaving women behind or empowering them?

The movement towards formal employment in rural areas is not without challenges, with some potential employees not having the required national identity cards and therefore being excluded from work – an issue that disproportionately affects women. In both investments in the area however, female employment is being prioritised due to the perception that they are more efficient and reliable workers. Saise still manages to employ 48% of women. This may contribute to the erosion of traditional patriarchal power structures where men are the only income earners, and by changing norms increase the pool of available workers for other potential employers.

INCREASED SCHOOL ATTENDANCE

Another indirect economic benefit of the income uplift provided by investments is greater school attendance. Employees reported spending on school fees as their key priority for any additional incomes, meaning that income increases have resulted into more children attending school. As a higher level of education, in the long term, can provide people with access to better employment opportunities this creates the foundation for future community uplift.

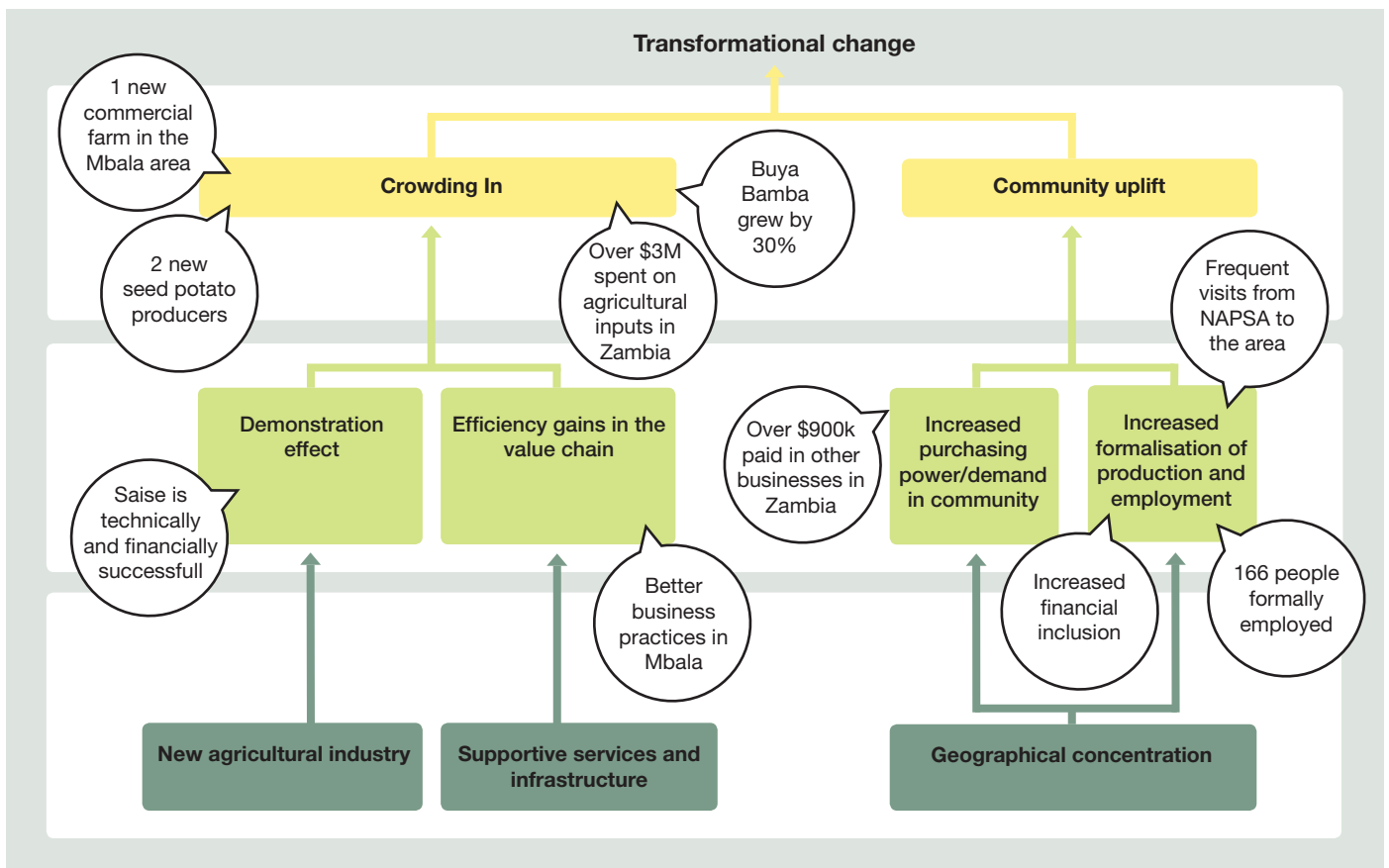
CONCLUSION

Saise is a good example of the complexity and nuance that assessing transformational change requires. Transformational change is not easy to track and attribute since by definition, the impact is only indirectly linked to the investment and cannot be controlled. However, by identifying which business level characteristics are likely to have ripple effects, it is possible to anticipate the potential impact, and take it into consideration at the selection process but also at the different stages of the project's development.

By undertaking this exercise, AgDevCo has been able to validate some of the underlying hypotheses behind the investment selection, and enhance the understanding of the mechanisms leading to transformational change. Lessons from this case study and a broader review of the AgDevCo portfolio are being used to refine the way in which AgDevCo assesses investment opportunities and tracks its impact.

Although it is only three years since the initial investment was made, there are already emerging signs of transformational change. While there is some evidence that community uplift in the Mbala area will occur in the future as Saise injects income into local businesses both by purchasing goods and services and increasing incomes, Saise's transformational impact mostly lies in the way it impacts the Zambian potato value chain. Figure 4, which summarises the logical pathway from Saise's investment level changes to the expected transformational impact, shows how by producing local inputs in a newly established industry and neglected region, Saise is contributing to future crowding-in. This can be expected to happen through demonstration effects, efficiency gains and to a lesser extent by increasing demand for agricultural inputs and services.

Figure 4. Saise's path to transformational change





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