Fund for Rural Prosperity

Learning paper
August 2020

Indirect pathways to the creation of work opportunities

The links between financial inclusion and work opportunities in the Mastercard Foundation Fund for Rural Prosperity portfolio

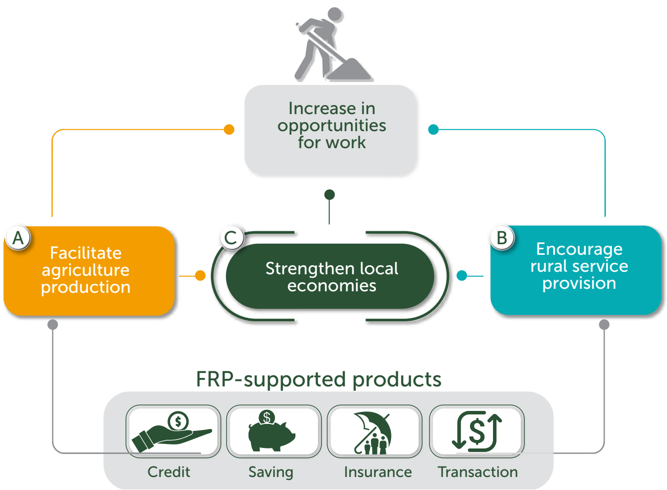
Contents

1. Executive Summary

The youngest and fastest-growing continent in the world, Africa faces an important job creation challenge. This is the context in which the Mastercard Foundation Fund for Rural Prosperity operates. This US$50 million challenge fund has a mandate to improve the livelihoods and resilience of smallholder farmers and other economically disadvantaged people living in rural Sub-Saharan Africa.

While the Fund focuses primarily on financial inclusion, there is some increasing evidence that Fund-supported products are resulting in new work opportunities.

This paper aims to explore the indirect mechanisms between financial inclusion and work creation to enable the Fund to better support participants, and work opportunities:



- **Pathway A - Facilitating agricultural production:** Fund-supported products and bundled activities can increase the yield, quality, or value of agricultural production, which can help farmers become sustainably self-employed, hire additional farm workers but also lead to work opportunities outside of primary agricultural production.

- **Pathway B - Encouraging the development of the rural services sector:** Access to financial products can enable beneficiaries grow their non-farm businesses to become self-employed entrepreneurs and hire additional labour.

- **Pathway C** – Strengthening local economies: Both pathways A and B can also lead to further work opportunities by stimulating activity in the upstream and downstream value chains, and by inducing additional employment through spillover effects as customers increase their consumption.

A mapping of Fund-supported interventions against this framework showed that most of the portfolio's impact on job creation is expected to come through the facilitation of agricultural production (Pathway A), while the potential impact of the Fund's portfolio on the development of the rural service sector (Pathway B) is weaker and less attributable. Links to strengthening the local economy (Pathway C) came mainly from agribusinesses, who tend to be involved in multiple parts of the value chain.

In fact, agribusinesses tended to have strong links to the employment pathways. This could be because agricultural production, their core business, incentivises not only on the provision of financial services but also non-financial support such as access to training, markets, or agricultural inputs. Research suggests that financial service products which combine financial and non-financial services are more likely to stimulate the creation of work opportunities.

In addition, there may also be trade-offs between job creation and overall reach. Outgrower projects working with a limited range of smallholders seem to be more likely to contribute to job creation than projects that reach a wider range of customers but with a more limited depth of impact.

Moving forward, the Fund will be working to generate more robust qualitative and quantitative data by integrating this framework into the rest of its Monitoring, Evaluation and Learning (MEL) activities. It is hoped that other rural financial programmes might also find this framework useful in understanding the transformative impacts of their work on rural economies and the employment landscape.

2. Introduction

Africa is the youngest and fastest-growing continent in the world, with the number of Africans between the ages of 15 and 24 expected to double over the next 30 years to reach 450 million by the year 2050[1]. This demographic trend presents a clear opportunity for the continent. Exponential population growth has led to a 'demographic dividend' in other low-income countries as the labour pool increases. Taking advantage of this increase however presents a major challenge, as the number of employment opportunities on the continent would need to grow by around 20 million annually[2].

This is the context in which the Mastercard Foundation Fund for Rural Prosperity operates. This seven-year initiative was designed to find, support, help to scale up, and learn from innovative ideas that expand financial inclusion to smallholder farmers and other economically disadvantaged people living in rural Africa.

The Fund has a portfolio of 38 businesses working across 15 countries, providing a wide range of innovative financial products including loans, inputs financing schemes, insurance, savings products, digital platforms, and micro-pensions. By the end of 2019, the Fund had reached over 3 million customers with over 100 different financial products.

While the Fund collects information on changes in customer income, and is conducting research into how resilience of customers is being strengthened, the programme's monitoring and evaluation (M&E) system has not been tracking the indirect creation of work opportunities as a result of accessing Fund-supported products.

Box 1. Defining work

Developing a definition for work is a major challenge in the contexts in which Fund-supported projects operate. Many of the Fund's direct beneficiaries are self-employed on their own farms, or managing their own micro-businesses, rather than in any formal employment. Where Fund beneficiaries create further employment for others, it is likely to be short-term, informal, and could even potentially be paid in non-cash products such as food. It is not likely to be a formal job, with regular payment defined on a contractual basis.

As part of its Young Africa Works strategy, the Mastercard Foundation has developed the following definition of work which has been adopted in this paper:

A formal or informal set of tasks performed for an employer or for oneself that generates income and does not violate fundamental rights.

This recognizes that work is likely to be informal in many contexts, and excludes any activities performed for non-monetary reward (such as food or lodging), as well as non-income earning household work.

Quality of work is also a significant issue. The quality of work goes beyond levels of income to encompass job security, decent working hours, adequate representation and empowerment, and capacity to combine family and personal life.

Recognising this, and the diversity of employment opportunities available, the Foundation requires work to be "dignified and fulfilling". This is defined by exploring perceptions of work within each context, to keep beneficiaries at the centre of this approach and to avoid imposing a definition of success externally.

The M&E system relies on data reported to the programme by Fund participants, who often do not have the capacity or the data to be able to accurately report on job creation within beneficiary groups. In addition, the Fund was not designed from the outset as a work creation programme, and given the indirect mechanism between financial inclusion and work creation, these issues were considered to be outside of the original remit of the programme. This learning paper aims address this knowledge gap and contribute learning to inform the implementation of the Foundation's Young Africa Works strategy, which seeks to enable 30 million young Africans to secure employment they see as dignified and fulfilling by 2030.

While working with participants and regular site visits has provided anecdotal evidence that Fund supported products are resulting in new work opportunities (for example increased on-farm employment and expansion of non-agricultural businesses such as micro-retailers), how these linkages or pathways operate have not been explored in any detail.

In order to better understand these dynamics, and to contribute to a growing body of work on this topic, the Fund has been undertaking focused research on the portfolio. This Fund Learning Paper presents some of this initial work, which had three key objectives:

1. **To develop a work creation framework,** based on evidence from Fund participants and monitoring, evaluation and learning (MEL) team observations, which maps out the impact pathways between the Fund and the creation of work opportunities.

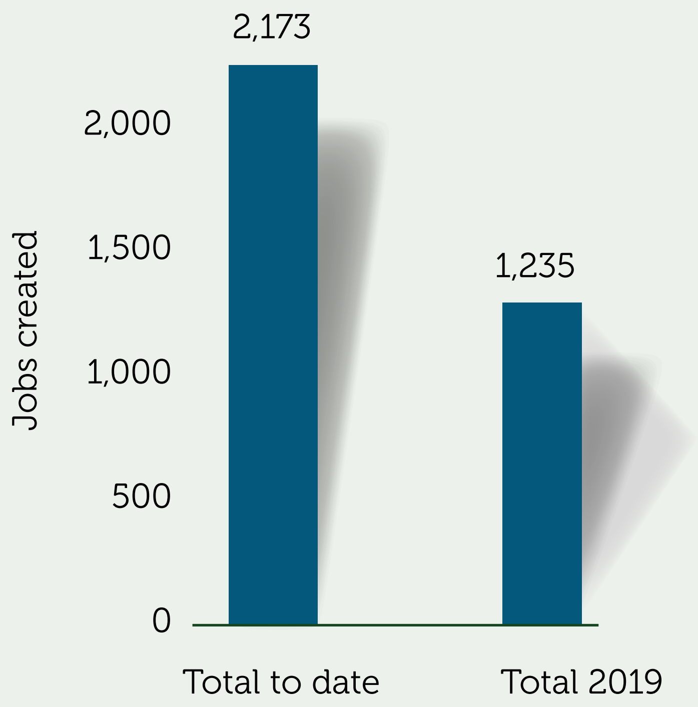
2. **To understand how the Fund portfolio is supporting the creation of work opportunities,** by mapping them onto the framework and by exploring how these impact pathways differ across participants, for example according to business model or product.

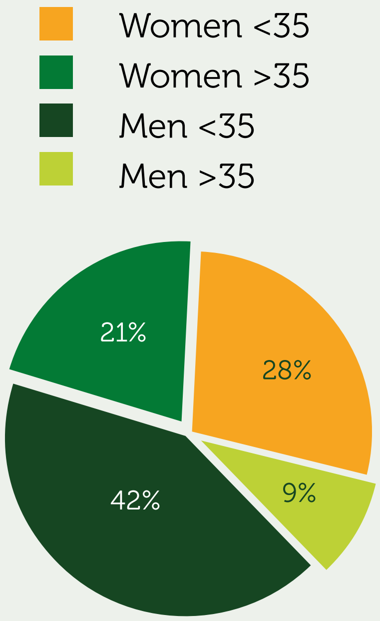
3. **To provide a foundation for generating more robust quantitative and qualitative data** on job creation within the Fund portfolio, through integrating this framework into existing MEL activities.

Box 2. Direct work creation across the portfolio of the Fund

The Fund does collect data on jobs created directly within projects supported by the programme. Whilst this mechanism of job creation is not intended as a primary objective of the Fund, it is still an important secondary benefit.

Analysis of direct job creation is not within the scope of this paper, but as context the figures for jobs created within the portfolio to date and in 2019 are illustrated below.





3. Development of the pathways to creation of work opportunities

3.1 Existing evidence

There is a large body of research suggesting that financial inclusion is a key enabler of poverty alleviation and prosperity, which is explicitly recognised in Sustainable Development Goal 8, which aims to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all". However, there is less clear evidence for the link between financial inclusion and job creation. Although the theoretical link is well established, the evidence for causality is relatively limited. Part of the problem is that financial inclusion programmes typically do not incorporate a specific focus on employment, and employment data is therefore often not adequately tracked. These issues are exacerbated when the focus is on a rural context – the research that does exist has mostly focused on the impact of financial inclusion for micro, small and medium-sized enterprises (MSMEs) in urban and peri-urban settings.

However, a review of the literature highlighted the following key themes:

- **Growth in agricultural production is expected to lead to job creation in rural areas, but this is impeded by the lack of financial inclusion**.

  Despite rapid urbanisation, the population in rural areas continues to rise in absolute terms, and an increase in agricultural production is commonly seen as needed to both feed and provide economic opportunities for the growing number of young Africans entering the labour market every year[3]. To increase their productivity and yields, farmers and small agricultural entrepreneurs need finance to invest in inputs (such as seeds and fertilisers), machinery and equipment, and value addition (such as in processing, packaging and transport)[4]. However rural areas are typically more financially excluded – although the lack of disaggregated data means that determining the differential effects of financial services on job creation between urban and rural areas is not always possible.

- **Job creation could also come from a shift away from primary agricultural production, but lack of access to finance is a major obstacle to entrepreneurship and growth in African MSMEs.**

  People living in rural areas could generate new economic opportunities by pursuing entrepreneurship-based livelihood strategies that focus on agricultural services (such as inputs, veterinary services, processing, or aggregation) or non-agricultural services (like transportation, a local shop or a mobile money agent)[5]. However, the World Bank's enterprise surveys consistently find lack of finance to be a leading constraint reported by smaller enterprises, especially in Africa. Empirical evidence suggests that improving access to finance for MSMEs does lead to more employment, although it remains quite scarce and faces methodological challenges over the direction of causality, as people already in employment are more likely to be financially included. [6 7 8 9]

- **In addition, increased economic activity in both the primary agricultural production and other sectors is likely to have a multiplier effect and lead to indirect job creation**.

  Economic theory suggests that an increase in production can have an indirect effect on job creation among direct and indirect suppliers and distributors by increasing demand and supply, as well as an induced effect by increasing incomes of farmers, business owners and their suppliers. This results in increased spending, which can in turn generate economic opportunities.[10] In a study involving 100 businesses in developing countries, MacGillivray et al. found that the indirect employment effect was 7.5 jobs for every direct job created, and that access to finance had one of the strongest effects.[11]

- **There is some evidence that access to financial services is more likely to lead to job creation when bundled with non-financial services**.

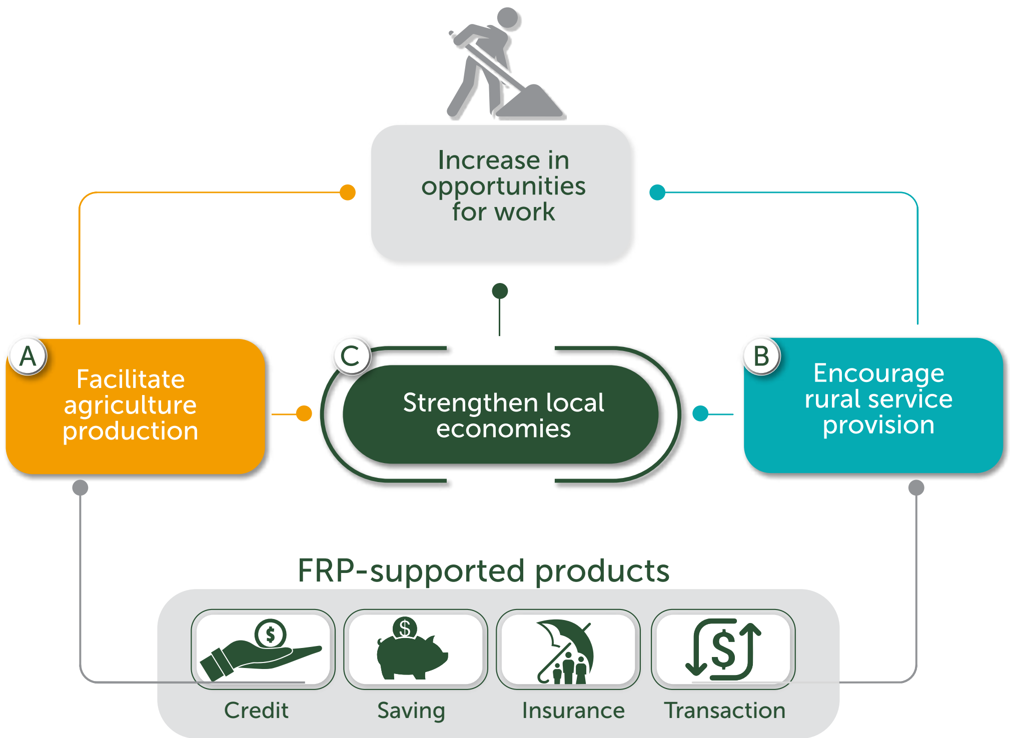
  According to the Work4Youth project of the International Labour Organization (ILO), when financial services are supplemented with financial capability and business development training there are stronger employment outcomes.[12] One example of this type of combined approach is 'Microfinance plus', where microfinance lending is accompanied by other social services.

- Some segments of the populations are more affected by others. For example, due to cultural and legal barriers, women are often less likely to access financial services. According to the **World Bank's Global Findex database**,[13] there is an 11.5% gender gap in Sub-Saharan Africa. In addition, being a young adult can also contribute to the lack of financial access, because the youth often have less financial capital than their older peers. There is an 8% gap in formal account ownership between the 15-24 age group and older adults. Finally, rural populations are particularly excluded because they are hard to reach. In Sub-Saharan Africa, 61% of people living in rural areas are unbanked.

3.2 Pathways to financial inclusion

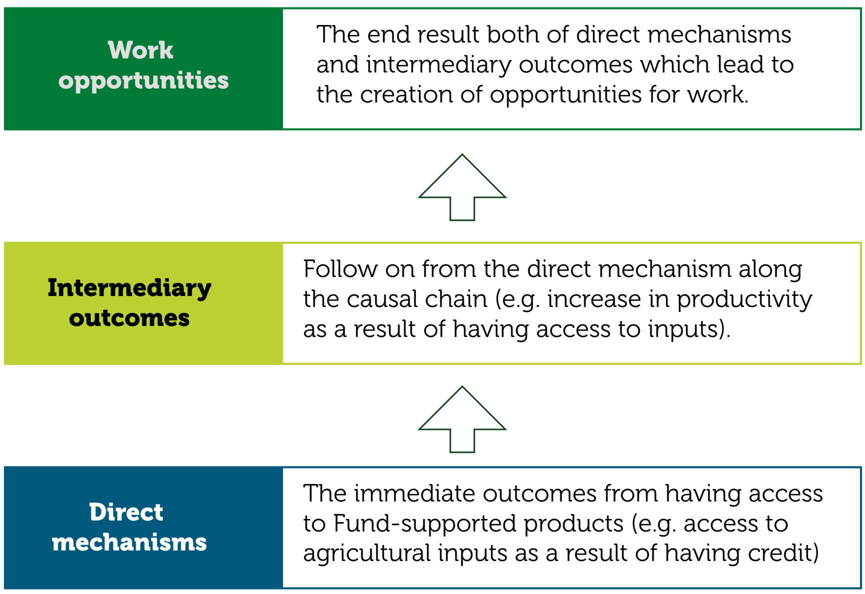
When considering the portfolio of Fund-supported products, three main pathways exist through which these projects are directly and indirectly contributing to increased opportunities for work. These are illustrated in Figure 1.[14]

Figure 1. Pathways from Fund-supported products to the creation of livelihood opportunities



Similar to a theory of change approach, the Fund identifies three distinct points on the impact pathway – direct mechanisms, intermediary outcomes, and the work opportunities being created. These are defined in the figure below. Using these three different levels, the Fund developed a framework by unpacking each pathway to identify the individual mechanisms at each step along the causal chain: linking access to the Fund-supported product to the creation of work opportunities. The following sections outline each pathway and their associated mechanisms.

Figure 2. The three levels of each pathway



3.2.1 Pathway A: Facilitating agricultural production

Fund-supported products can facilitate increases in the quantity and quality of agricultural production, leading to an increase both in agricultural and non-agricultural work opportunities. Access to good quality inputs, often bundled with information on good agricultural practices, can help farmers boost their yields and improve the quality of their production. This intensification of production and improved quality leads to an increase in price realisation for those farmers that are connected to a market, who can then afford to invest in expanding or diversifying their agricultural activities.

These can all lead to customers increasing their own agricultural production and income, often to the point that they can be considered sustainably self-employed. This means that beneficiaries are able to reliably support themselves and their families by selling their agricultural products, and so do not need to seek employment elsewhere. In addition, the increase in agricultural production can both create demand for labour and generate revenues which can be used to hire additional full-time or casual farm workers to help with various tasks such as land preparation, pruning and harvest.

Increases in agricultural productivity can also lead to work opportunities outside of primary agricultural production. These could still be linked to the agricultural activities, as customers could hire workers to help them with the marketing or processing of the agricultural products, but could also be in non-agricultural activities as additional income is invested in other businesses.

Example: Increased on-farm employment in Côte d'Ivoire

Biopartenaire is a Fund participant in Côte d'Ivoire, and a major buyer of cocoa from smallholder farmers. With the Fund's support, the business has developed a new product called the Farmer Productivity Package. This combines the provision of inputs and equipment (such as pruning implements) on credit with detailed agronomic training. Focus group discussions with Biopartenaire farmers suggest that this has led to a significant increase in productivity, and has led to an increased demand for casual labour on smallholder farms. The beneficiary model for Biopartenaire assumes that the costs of additional labour required will rise from US$0 at the baseline to US$758 per year – implying that each Biopartenaire smallholder farmer will be spending an additional US$758 on hiring additional workers as a result of the project. Biopartenaire is the subject of an impact study, which will allow the Fund to test this assumption over the next 2 years.

Within Pathway A, the Fund identified 6 direct mechanisms leading to a single intermediary outcome: increasing the yield, quality, or value of agricultural production. Both the direct mechanisms and the intermediary outcome lead to the creation of work opportunities. It is important to note that the direct mechanisms can lead to the creation of work opportunities before having an impact on agricultural production. For example, farm expansion might require additional labour before there is any increase in the yield, quality, or value of agricultural production.

Access to agricultural inputs and equipment	Accessing inputs and equipment can lead to improvements in both the yield and quality of agricultural produce.[15] The current supply gap for short-term finance for agricultural purposes, (such as working capital to access agricultural inputs), is estimated at US$170 billion in Sub-Saharan Africa.[16] Previous studies have suggested that less than 1% of farming households used credit to purchase agricultural inputs. They also found that limited access to credit constrains farmers from using agricultural inputs, and that where farmers do have access to inputs on credit, there are significant increases in yield.[17 18] This reflects what is being observed through Fund projects as well. One example is Ibero, a coffee outgrower in Uganda. The beneficiary model for Ibero estimates that access to agricultural inputs on credit is a significant contributory factor to an estimated 100% increase in yield.
Expansion of farm	Farmers are able to expand their farms either by procuring more land or by farming existing land more intensively. This leads to an increase in overall production volumes and hence income. Olam, a coffee outgrower in Uganda, is providing farmers with coffee seedlings on credit to help them overcome the start-up costs of expanding their farms and increasing their income. However, it is worth noting that access to finance is not the only obstacle preventing farmers from expanding the area cultivated. In many contexts, the complexities of land tenure arrangements make it difficult for farmers to acquire more land.
Crop diversification	Diversification can potentially lead to an increase in the value of agricultural production (if shifting to commercial crops). The importance of crop diversification both in increasing incomes and in reducing risk has been recognised in a number of studies.[19] Finance can help enable a transition to different crops (if significant start-up costs are required), as can support from agribusinesses. A Fund participant in Ghana, Prep-eez, built their original business model around crop diversification and the potential for helping cocoa farmers branch out to diversifying to plantain as well.
Cost or time savings,	When a product results in savings of costs or time, these can be reinvested into agricultural work. A study on the impact of mobile money on poverty alleviation showed that it had reduced the transaction costs of sending money over large distances, both in terms of time travelling and performing the transaction, and financial resources needed to do so.[20]
Access to information or training	Access to training and information can improve both yield and quality. Studies consistently highlight that smallholder African farmers face persistent information gaps in awareness and understanding of the best agronomic practices.[21] In the Fund, interactions with customers have highlighted how much they have valued the training provided by participants in the portfolio, and the impact that this has had on yield and quality.
Access to commercial markets	Gaining access to a commercial market can increase the sales value of agricultural produce. Globally, more than 80% of smallholders primarily sell their produce in local markets.[22] Access to regional and international markets can help smallholders achieve higher, more reliable prices, and provide a consistent source of demand. Rwanda Trading Company, as an example, is able to offer consistently higher prices to smallholders for coffee beans than local middle-men, whilst also guaranteeing demand.

3.2.2 Pathway B: Encouraging the development of the rural services sector

Fund-supported products can also encourage non-agricultural activities, leading to the growth of work opportunities in the rural services sector. This include services within the agricultural value chain (such as agrodealers, veterinarians, or the provision of transport or marketing services) and also general business activity within the community, including small shops selling household goods, food or airtime.

Access to financial products (especially credit) and bundled support can influence customers' willingness and ability to engage in work outside of agriculture, and can support micro-entrepreneurship. Financial inclusion can also make it easier to conduct business operations by facilitating business transactions and enabling saving. This can lead to an increase and diversification of these micro-enterprise activities, and the growth of the rural non-agricultural sector can in turn generate opportunities for rural workers.

Work opportunities can therefore be created for direct beneficiaries who are able to generate sufficient income to become self-employed entrepreneurs, and potentially start to hire additional labour. This pathway is also indirectly linked to Pathway A, as in many cases increased profits from farming activities can then be invested in a micro-enterprise. This type of income diversification strengthens the resilience of Fund beneficiary households.

Example: Support to micro-entrepreneurship through M-KOPA

With support from the Fund, **M-KOPA** is expanding beyond its range of solar products in Kenya to offering cash loans to customers who have demonstrated their credit-worthiness. Interviews with rural M-KOPA customers suggest that many of them are using this cash loan to invest in their non-agricultural businesses and create opportunities for work for both themselves and others. Customers the Fund has spoken to are using the loan to invest in activities as diverse as a brick-making facility, a second-hand clothing-retail business, and a rural shop selling basic products. In some cases, this is creating opportunities for work for the direct M-KOPA customer which may not otherwise have been accessible (e.g. the second-hand clothing-retail business). In others, such as the rural shop selling basic products, access to the M-KOPA loan is helping the owner expand their business and increase their demand for casual labour.

Under Pathway B, there were three direct mechanisms, all of which lead to the intermediary outcome of an increase in business activities:

Willingness to invest[23]	Access to information such as financial or business training can make people more confident in their ability to run a successful business and encourage them to invest in entrepreneurial activities outside of primary agriculture. Similarly, by reducing future risk and uncertainty, insurance products can also increase customers' willingness to invest rather than to hold liquidity. Prior research has both highlighted the impact of information and risk reduction in increasing smallholder farmers' willingness to invest in alternative income earning opportunities.
Capacity to invest	This can occur through either increased disposable income, which frees up capital for investment, or through access to credit. Site visits to Ibero highlight how farmers are investing their increased incomes from farms into other income-earning assets, such as motorbikes and micro-retail shops.
Ease of doing business	Ease of doing business captures how improved access to financial products such as mobile payment mechanisms, or access to energy, can facilitate enterprise growth.

3.2.3 Pathway C: Strengthening local economies

The growth of the agricultural and rural service sectors can strengthen and transform local economies, creating work opportunities in two ways: through indirectly stimulating activity in the upstream and downstream value chains, and by inducing additional employment through spillover effects as customers increase their consumption thus stimulating local businesses.

Both of these mechanisms can lead to the growth of existing businesses and the establishment of new ones, and the subsequent creation of work opportunities in both agricultural and non-agricultural sectors. Pathway C is linked to the 2 other pathways, as they are a necessary pre-condition, and is often measured by using economic multipliers.

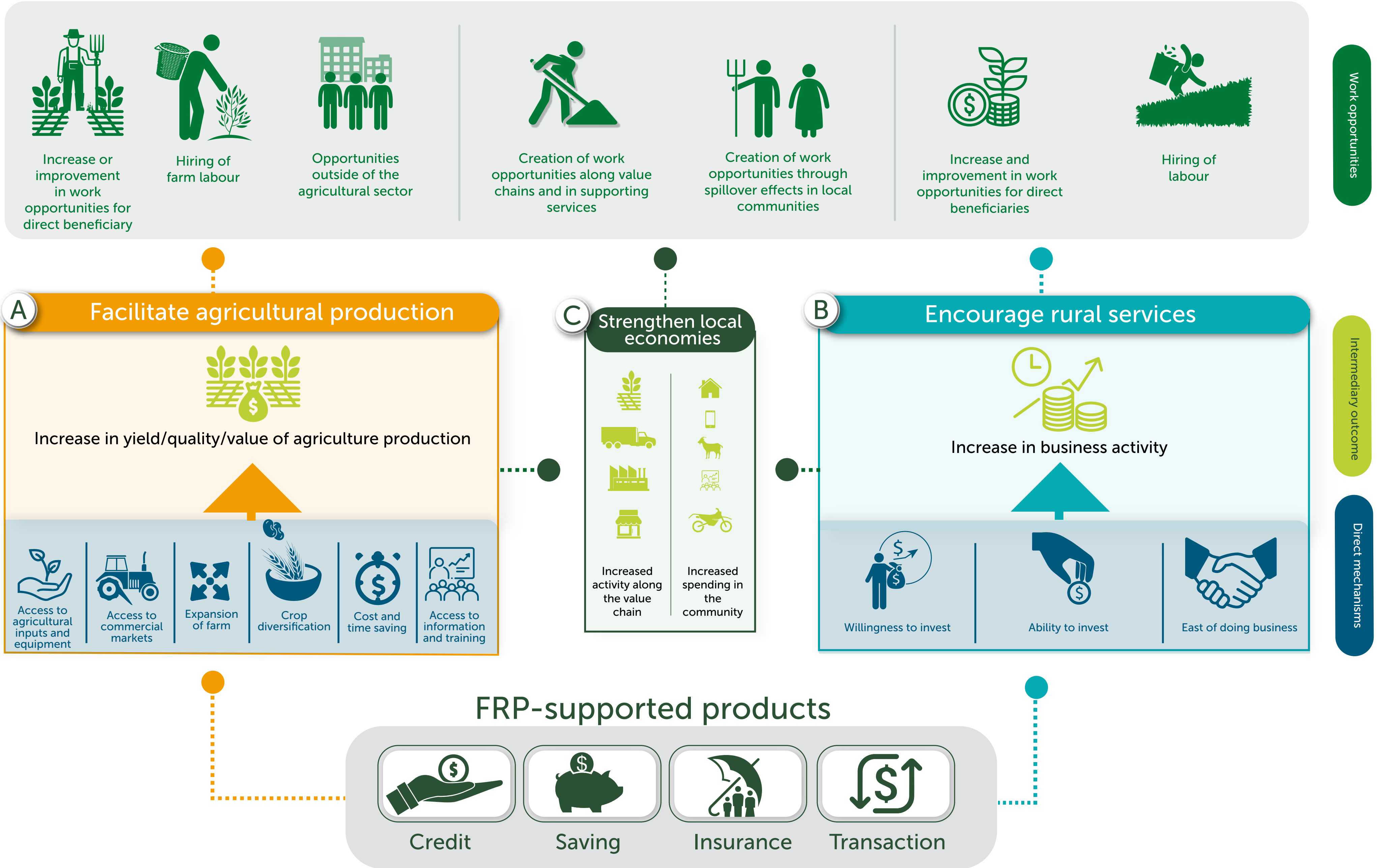
Example: Strengthening communities in western Uganda

Olam processes and sells coffee from Uganda. As part of the Fund initiative, it has developed a new programme buying coffee from smallholders in western Uganda, combined with the provision of inputs on credit and agronomic training. Within the communities that Olam works with, this has represented a significant impact on their buying power and economic activity. Olam reports that other companies, including financial service providers, are becoming more interested in expanding to these areas as a result of the increased income within the community. Olam has also had to invest significantly in their value chain to accommodate the increased supply of coffee from smallholders; in particular, they have constructed a new warehouse and wet mill processing facility.

For Pathway C, there are no direct mechanisms. This is because we expect to strengthen and transform local economies not as a direct and immediate consequence of Fund supported products, but indirectly via Pathways A and B. However, whilst there are no direct mechanisms from Pathway C, there are two separate and distinct intermediary outcomes.

Increased activity along the value chain	This increase in economic activity along a value chain is as a result of increases in primary agricultural production. Primary agriculture products often have significant value chains involved in the storage, transportation, processing, and sale of agricultural products. This is particularly true of crops with a strong value addition potential such as coffee or cocoa and can generate significant multiplier effects from investments in primary agriculture, particularly where processing happens locally. Prior research has suggested that value chain employment multipliers can be around 2x, meaning that for each job created in primary agricultural production, two jobs are created further up the value chain.[24] There are numerous examples of increased activity along value chains in the Fund, although it is yet to conduct more quantitative assessments of exact multipliers. In the case of Empresa de Comercialização Agricola in Mozambique for example, 3 years after the project started implementation, multiple seed companies have started operating in the area to supply local farmers, and the maize being produced is being transported by local logistics companies.
Increased spending in the local community	As communities increase their incomes and then their consumption, this additional spending can catalyse the emergence of new businesses and service industries in response. This means that where the Fund is contributing to significant increases in income within geographically concentrated communities, there may also be secondary effects around new businesses and new economic opportunities within the community. More broadly, increased consumption leads to additional jobs in the broader economy through multiplier effects although these are not always observable within individual projects. These types of secondary effects have been observed in case studies of how African agribusinesses can transform entire communities.[25] Within the Fund, customers have commented on how projects have had significant secondary effects. As an example, the Rwanda Trading Company (RTC) project is working with coffee smallholders from remote villages in the Rwenzori mountains in Western Uganda. Within these communities there are few other sources of income and no connections to commercial markets. Customers are reporting significant secondary economic effects, including increased transportation services to the local town, following the increase in income.

Figure 3. Detailed pathways from financial inclusion to the creation of livelihood opportunities

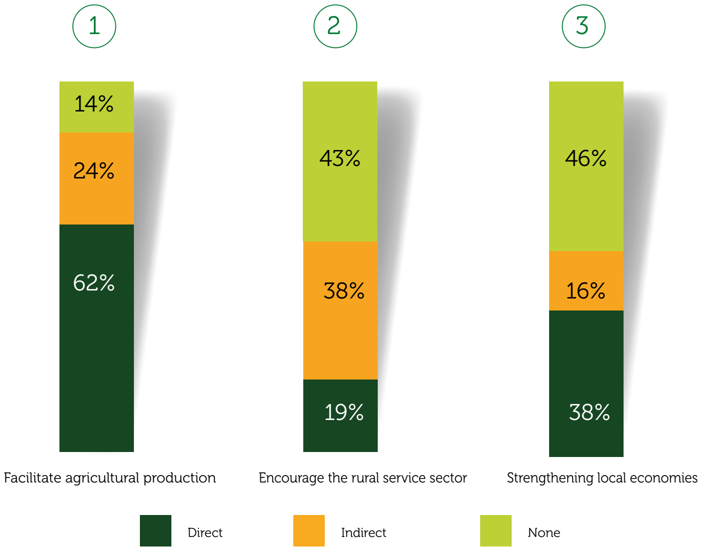


4. Portfolio mapping

In order to identify how the Fund was contributing towards the creation of work opportunities, the portfolio was mapped against this framework. (see Annex 1 for the assessment matrix)

Most of the portfolio's impact on job creation is expected to come through the facilitation of agricultural production: Pathway A. As shown in Figure 4, over 60% of projects in the portfolio had a direct link to facilitating increases in agricultural production. This is driven by the fact that more than half of the Fund's 38 participants are agribusinesses, which usually aim to increase the agricultural production of their smallholder suppliers.

Figure 4. Mapping the Fund portfolio across the three pathways



The two most common mechanisms for contributing to agricultural production were access to inputs and equipment, as well as access to information or training. Many Fund participants, both agribusinesses and financial service companies, offer inputs on credit as part of their Fund-supported projects. Embedded agronomic training is also a common characteristic of products funded through the Fund, both for agribusinesses such as Olam Uganda, and financial services companies like Musoni Microfinance.

Very few projects (22%) actively seek to promote farm expansion, which partly speaks to the difficulty of securing land rights in many of the countries in which the Fund is operating and to the fact that outgrower schemes often work with farmers already growing a cash crop. For example, the cocoa farmers that Biopartenaire works with in Côte d'Ivoire predominantly had a long history of farming cocoa; the average Biopartenaire customer had been growing cocoa for 23 years **prior** to Biopartenaire's involvement. Few projects take on the risk of engaging smallholders in an outgrower scheme in a new crop as part of a diversification strategy.

The potential impact of the Fund's portfolio on the development of the rural service sector (Pathway B) is weaker and less attributable. Only 19% of projects had direct links to encouraging the development of the rural services sector. These included four direct banking projects and two asset financing projects.

However, the largest proportion of the portfolio is not expected to generate impact through this pathway. Where projects have had an impact on the development of rural services, it tends to be indirect (38%), resulting from a spill-over effect from products aimed at supporting agricultural production, or through the provision of financial training.

Very few projects explicitly aimed to raise customers' willingness to invest outside of primary agricultural production, for example by providing training on entrepreneurship – although some have an indirect impact through risk mitigation (including insurance or basic financial training). There are also very few projects with a strong link to increasing capacity to invest, namely those which offered loans explicitly targeted at non-farmers or for non-farming uses.

Links to strengthening the local economy (Pathway C) came mainly from agribusinesses. Every project that had a strong link to increased community spending was an agribusiness. This is because these types of interventions have a strong geographic focus and lead to significant increases in income, which is then concentrated in the local community.

Agribusinesses, especially outgrowers focused on one crop, were also strongly linked to increased activity along the value chain. Of the 14 projects with a strong link to increased activity along value chains, 13 were agribusinesses. As an example, Rwanda Trading Company has set up additional washing stations as a result of their work with smallholder farmers. This requires additional both casual and technical labour, in testing the quality of coffee beans and they arrive and in processing them for transport

5. Emerging insights

The framework has been used to understand the overall structure of the portfolio to guide our work in understanding where work opportunities and economic transformation is most likely to be happening. There are however some emerging insights at this stage – these will be the focus of our analysis as additional data is collected.

5.1 Agribusinesses tend to have strong links to the employment pathways

A consistent theme across the mapping exercise was that agribusinesses had the strongest links to the employment pathways in the framework. This is perhaps not surprising, given the importance of both agricultural production within Pathway A and value chain effects within Pathway C, but the extent to which agribusinesses were more prominent than conventional financial services companies was stark.

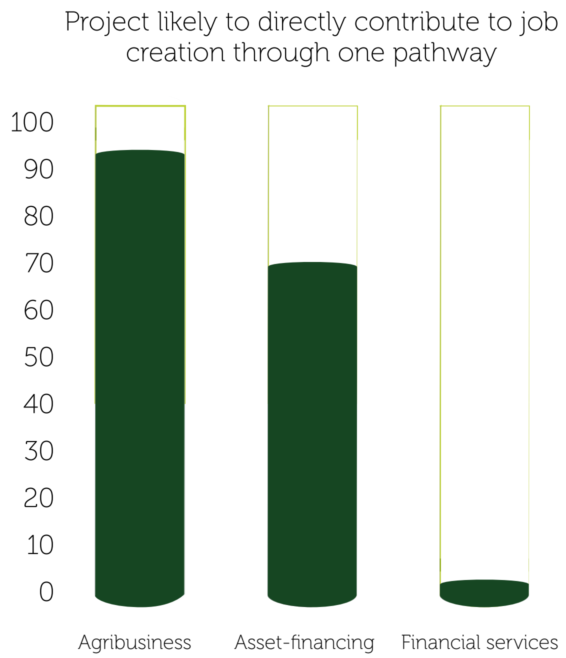
As shown in Figure 5, all but one agribusiness (out of 19) had a strong (direct) link to at least one of the three pathways, and two thirds were assessed as having strong links to two of the three pathways. In comparison, half of the financial services companies did not have any strong links to the employment pathways.

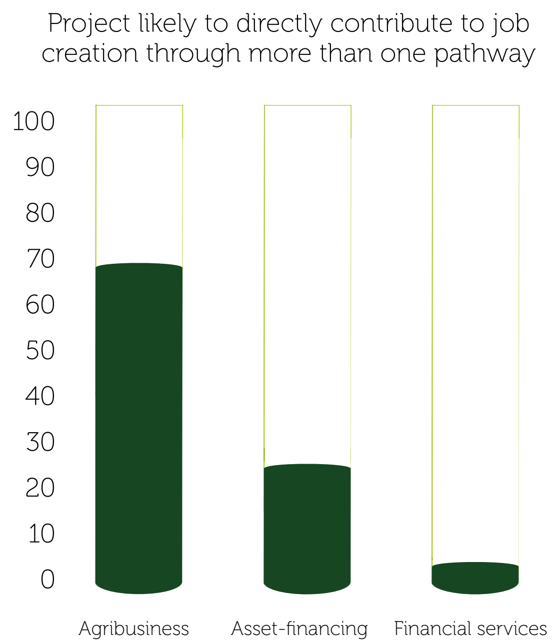
This stark contrast highlights the fact that **the core business of agribusinesses (agriculture production), incentivises not only on the provision of financial services, but also on non-financial support that can lead the generation of work**

This perhaps links back to what secondary research has suggested around the link between financial inclusion and job creation: that financial service products which combine financial and non-financial services (such as access to training, markets, or agricultural inputs) seem more likely to stimulate the creation of work opportunities. The agribusinesses supported by the Fund typically include a financial service as part of a wider product offer with their customers, either as suppliers of inputs or training, or by acting as off-takers providing links to commercial markets (or both). These non-financial services can lead to better yields and thus increase farmers' income and the need and ability to hire additional labour.

While some of the financial services companies in the portfolio embed training within their financial product, our observation is that this tends to be much more limited when compared to the agribusinesses. This could be because there are more obvious incentives for agribusinesses to provide training; for input suppliers, to ensure that customers are using their product correctly, and for off-takers to improve yield and quality. In comparison, for financial service providers the direct incentive is weaker. Whilst theoretically improved agricultural training could help repayment rates, the mechanism is more indirect and contains more dependencies.

Figure 5. Likelihood of direct contribution to pathways by type of business model





5.2 There may be trade-offs between job creation and overall reach

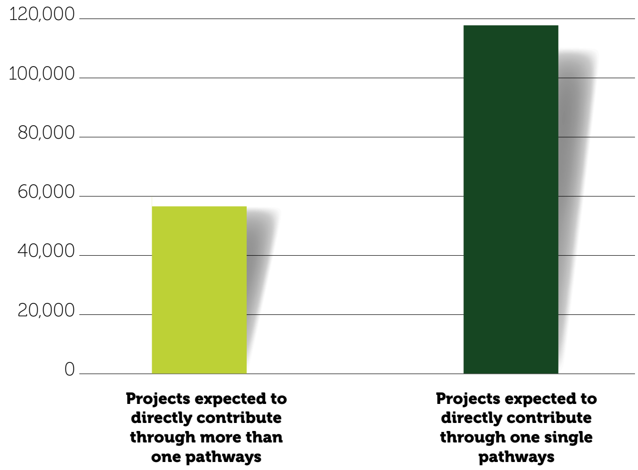
The Fund portfolio has a wide range of different projects, and the way that they interact with their customers varies significantly. Some projects, particularly outgrower projects, work intensively with a limited number of smallholders (rarely exceeding several thousand), supplying their inputs and acting as the primary buyer for their produce. In these cases, Fund-supported projects become the primary income-earning mechanism for beneficiaries, implying a high depth of impact. This often correlates with further job creation – either as a result of increased use of casual labour on farms, through value chain effects, or through increased spending and positive economic spillovers within the community. However, the overall reach of these projects is often limited – there are high transaction costs involved with scaling up and working with more smallholders, and companies may also face constraints with how much agricultural produce they can process. This means that achieving job creation at scale requires working with significant numbers of agribusinesses.

Conversely, other projects reach many more beneficiaries, but the depth of their impact is much more limited. This is particularly the case for some of the financial services companies supported by the Fund, some of whom rely upon low-cost digital solutions to quickly reach scale. However, in most of these cases the depth of impact is more limited. One example is Finserve Africa, which has trialled a low-cost mobile-based bank account for low-income rural Kenyans. By mid-2019, the company had 251,330 customers registered on the service: the third highest number of customers by project within the Fund portfolio. However, while the Finserve product provides a savings account, credit and financial education, when compared to outgrower projects which effectively provide a source of income, there is a more limited impact at the individual beneficiary level.

Similarly, these projects with high breadth and limited depth tend to have a limited impact on job creation –impact on agricultural productivity is more limited, and customers tend not to be focused within particular geographic areas or within value chains, which limits the spillover effects.

A similar trend was previously observed in the Fund portfolio at the end of 2018: projects which have a stronger impact on farmers' ability to generate income tend to reach fewer customers. Depth of impact could thus also correlate with further job creation – either as a result of increased use of casual labour on farms, through value chain effects, or through increased spending and positive economic spillovers within the community.

Figure 6. Average number of customers by expected direct contribution



The impact of the COVID-19 pandemic

The indirect employment impact of Fund-supported products are dependent on a number of external factors and the general economic climate, and so are likely to be impacted by the consequences of the COVID-19 pandemic.

For example, non-agricultural sources of income have been negatively affected as micro-retail outlets are forced to close, and when they are open have faced significant falls in demand. This is this likely to limit the job creation through Pathway B.

Agricultural production and the impact through Pathway A will also be slowed as access to markets are reduced by travel restrictions, prices for some commodities are falling, and farmers have fewer resources available to hire casual labour to work on their farms. There may also be medium term impacts as farmers are unable to afford inputs for coming growing seasons which will affect future agricultural production.

The Fund is working with active participants to address these issues through providing rapid grant support to enable the adaption of business models, secure incomes and ensure that farmers continue to be able to access credit for inputs and labour in the coming growing season.

6. Conclusions and Next Steps

From observations by the Fund management team during field visits, insights from participants and a review of programme documentation and secondary literature, an overarching framework has been developed to trace out the linkages between the Fund participants and the creation of working opportunities. This framework was partially validated by sharing it with relevant stakeholders and through piloting it on site visits to Fund projects. As the Fund continues to incorporate the framework into MEL activities, and collect more data, the it will be further iterated, and the robustness of the core assumptions tested.

Analysing the portfolio against the framework provided some insight on what impact can be expected from the portfolio in terms of indirect job creation. Most of the work-related impact from the Fund's participants is expected to come through the facilitation of agricultural production, and in particular by providing access to inputs and equipment as well as bundled agronomic and financial training. The impact of the portfolio on the development of the rural service sector is likely to be weaker and less attributable, as only a small part of the portfolio had strong links to the identified sub-mechanisms.

Agribusinesses were more strongly represented in the framework compared to conventional financial services companies, suggesting that agribusiness projects will be more effective creators of working opportunities and drivers of economic transformation. However, it is likely that there is also a trade-off between reaching large numbers of beneficiaries and creating opportunities for work: projects which focus on a greater depth of impact for a smaller number of immediate beneficiaries are more likely to generate spillover effects in the local economy and stimulate the value chains in which they work.

There is however a need for more **research to better understand the link between financial inclusion and the creation of work opportunities**. In particular, the impact of linking financial product provision to non-financial outcome targets, and the potential trade-off between breadth and depth of impact should be further explored.

The Fund has a clear opportunity to work with participants to generate more robust qualitative and quantitative data on this topic, providing more insights and enabling the strengthening and nuancing of the framework as more evidence is collected. Moving forward, the Fund will be integrating this framework into its MEL activities, to generate a deeper understanding of the indirect impact of financial inclusion on job creation, but also to capture insights on how it is impacted by the COVID-19 pandemic.

It is also hoped that **other financial inclusion programmes will draw on this framework** to themselves gather information and deepen their understanding of the broader transformative effects of financial inclusion. Having a common framework for thinking through these important issues will provide opportunities for sectoral learning and the aggregation of lessons to guide future interventions.

Annexes:

Annex 1. Methodology

The methodology used for this paper consisted of two stages, taking a bottom-up approach:

1. **Developing the pathways between Fund supported products and work opportunities:**

   The Fund has an overarching Theory of Change, but it only includes a small component on job creation within Fund participants. A first step was therefore to develop a work opportunity-focused framework which traces out the potential pathways between Fund supported products and the creation of working opportunities, especially for young people and women. This used a combination of existing learning within the Fund team (including inputs from internal learning workshops, the Fund's learning insights tracker and observations from site visits), and a desk review of both programme documentation and external literature. The Fund also drew upon the Mastercard Foundation Rural and Agricultural Finance Learning Lab (RAF LL) and ISF Advisor's research "State of the sector" work, which looks at the different transition pathways smallholder rural households may take as they pursue increased resilience and agency, and data gathered from a participant learning workshop convened by the Fund in Accra, Ghana, in September 2019.

   To validate the framework and to ensure that it is both relevant to the Fund portfolio and reflects the different mechanisms through which Fund projects create work opportunities, other Fund stakeholders were engaged (including the Mastercard Foundation, the Fund management team, and the Rural and Agricultural Finance Learning Lab). In addition, an early version of the framework was shared with Fund participants. This provided an early opportunity to feed in practical insights about the creation of work opportunities.

2. **Mapping the Fund participant portfolio:**

   In order to understand **how** the portfolio is likely to contribute to the creation of new work opportunities and which pathways were most significant for the Fund portfolio, a tool was developed to map the pathways onto each supported project. The mapping was completed using application documents, progress reports, and observations from site visits. For each pathway, the extent to which the Fund-supported projects were expected to contribute to the identified sub-mechanisms was examined: directly, indirectly, or not at all. This provided insights on the relationships between pathways and project characteristics, and enabled us to draw some preliminary findings and hypotheses to inform future data collection and research.

For each pathway and its sub-mechanism, an assessment matrix was developed using Red-Amber-Green traffic light indicators..

Table 1. Mapping criteria for the three pathways

Code	Pathway A: Facilitate agricultural production	Pathway B: Encourage the development of the rural sector	Pathway C: Strengthen local economies
Green – implying a **direct** link	Direct support to increasing agriculture production (e.g. inputs on credit, agronomy training, access to markets)	Some products are directly targeted at non-farmers for entrepreneurial use	Customers are strongly concentrated in localised geographic communities or in certain value chains with additional processing in-country.
Amber – implying an **indirect** link	Strong indirect support to increasing agricultural production - e.g. loans (not tied to a particular use) directed at farmers.	Products targeted at farmers but multiple reasons why it might indirectly encourage the development of the rural services sector (e.g. significant increase in incomes, financial literacy training, and reduced risk enabling diversification).	Some customers are concentrated in geographic areas, or there is some evidence of value-chain effects in-country
Red – implying no link	Products not targeted at farmers or limited indirect support to increasing agricultural production.	Products targeted at farmers, and limited/weak reasons why it might indirectly encourage the development of rural services sector.	Customers are widely dispersed and there is no value-chain impact

For Pathways A and B, the criteria reflected the extent to which the intermediary outcome was an explicit project target i.e. was an integral part of the product or business model.

For Pathway C, the underlying assumption is that the impact on spending at community level and activity along the value chain is likely to increase with geographic concentration, a finding from similar work by AgDevCo.

Sub-Mechanisms for Pathway A: Facilitate Agricultural Production

	Access to agricultural inputs and equipment	Access to commercial markets	Expansion of farm	Crop diversification	Cost saving	Access to information
Green	Directly facilitates access to inputs	Provides access to global value chains for commercial crops	Provides credit specifically for land purchase or provides seedlings etc.	Provides direct support (e.g. seeds, training) for farmers moving to a new crop	Directly leads to cost savings	Direct and significant provision of relevant agronomy training
Amber	Indirectly facilitates access to inputs (e.g. providing a loan)	Provides some access to global value chains or supply chains, or provides full access but for staple crops	Provides credit which could be used for land purchase or demonstrates income potential of agriculture (business case for expanded farm	Provides indirect support (e.g. credit) which could be used to move to a new crop	Indirectly leads to cost savings	Limited provision
Red	Weak link with multiple assumptions to access to inputs	Limited links to access to commercial markets	Provides limited business case, no credit to link to expansion of farm	Provides limited support or helps to formalise a farmer's production in an existing crop (e.g. outgrower scheme)	No cost savings	No provision

Sub-Mechanisms for Pathway B: Encourage the Development of the Rural Sector

	Willingness to diversify	Ability to diversify	Ease of doing business
Green	Information on running a business/entrepreneurship, or insurance for non-primary agriculture activities	Loans for non-farmers/ non-farming uses	Access to energy, savings, transactions
Amber	Insurance or financial training	Increased income	
Red	Nothing	N/A	

Annex 2. Portfolio Overview

1	Juhudi Kilimo Limited	Kenya	Juhudi Kilimo's offering is psychometric testing technology as a credit evaluation methodology to facilitate lending to farmers. Juhudi used the tool to screen for applicants with limited or new credit history. The tool was sourced from EFL who assisted in customizing it for the market
2	Kifiya Financial Technology	Ethiopia	Kifiya's proposal was to support lead buyers (large institutions that source produce from farmers e.g. Diageo, Heineken) in Ethiopia to switch from risky and expensive cash handling processes to digital payments. With this shift, and suitable financial education and literacy to the payment recipients (small holder farmers -SHF), the lead buyer would have acted as the digital ecosystem catalyst
3	Prep-eez	Ghana	Prepeez provides agricultural microinsurance and credit based on extensive profiling, which includes farmer bio-data and geomapping farms.
4	Empresa de Comercialização Agricola ("ECA")	Mozambique	ECA intended to roll out an innovative financial solution utilising a proven technology platform to provide SMS updates and mobile payments to farmers. This would result in higher crop yields, better pricing and easier and more secure financial transactions.
5	Biopartenaire	Cote d'Ivoire	Biopartenaire provided various input packages to qualifying farmers on credit, and managed transactions with outgrower cocoa farmers using a custom-built app.
6	Banque Atlantique Côte D'Ivoire (BACI)	Cote d'Ivoire	BACI aims to provide access to credit, saving, transaction and insurance products through a voice-activated banking app for the rural poor.
7	Inuka Africa	Kenya	Inuka's livestock management plan, provided on credit, aims to provide access to training and vets.
8	Compuscan Ground Up Limited	Uganda	Compuscan proposed to build a rural agricultural finance credit bureau (Ground Up) for use by MFIs in the rural financing sector to capture data on credit transactions within the agricultural and broader microfinance sector in Uganda
9	SmartMoney Uganda Limited	Uganda	This project was closed in 2018
10	Letshego Financial Services Mozambique	Mozambique	Letshego uses an agency banking model with solar-powered tablets and biometric identification to expand basic banking services to the rural poor.
11	Ibero Uganda Limited	Uganda	Ibero is a coffee outgrower scheme offering agronomic training, cash loans, inputs on credit, and financial training to smallhollder farmers.
12	First Access	Tanzania	The project aimed to create a comprehensive agricultural credit scoring engine for use by financial service providers in agricultural markets. Rather than creating a database of information anew, First Access hoped to harvest data from various sources relevant to the agricultural sector – from mobile phone data, crop and input data, to weather and warehousing data. Providing this alternative data would lead to more farmers getting access to credit products.
13	CRDB Microfinance Bank	Tanzania	CRDB's mobile banking platform that offers credit, saving mechanisms, insurance, and money transfers to rural populations.
14	Copia Global	Kenya	Copia aims to provide goods on delivery to rural areas, with products available on credit.
15	Twiga Foods	Kenya	Twiga's solution gives small fresh fruit and vegetables vendors a mobile-based ordering platform where they can purchase their stock. The platform would be upgraded to deliver credit scoring data

16	APA Insurance	Kenya	APA Insurance offers livestock insurance to pastoralists based on satellite data on vegetation coverage. The project will expand to include basic health and accident insurance, as well as crop insurance.
17	Finserve	Kenya	Finserve's mobile banking product aims to offer credit, micro-insurance, savings, and other financial products to farmers and other rural dwellers, combined with lessons delivered via mobile on financial literacy.
18	M-Kopa	Kenya, Uganda	M-KOPA is a market leader in pay-as-you-go off-grid solar systems, and will is developing an additional line in agricultural inputs on credit.
19	Musoni Kenya	Kenya	Musoni has developed a mobile-based loan product for smallholders, and aims to expand across Kenya.
20	Olam Uganda	Uganda	Olam Uganda is a coffee outgrower project which uses mobile money to process payments and offer inputs on credit.
21	Rwanda Trading Company	Rwanda, Tanzania, Uganda	RTC's model is built around developing agricultural cooperatives for smallholder coffee farmers and delivering agronomy and financial literacy classes through them.
22	Equity Bank Congo	DRC	Equity Bank is rolling out an agency banking model throughout the country.
23	FutureLink Technologies	Uganda	Futurelink's mobile banking switch enables thousands of members of SACCOs to transact with their respective SACCO accounts.
24	Apollo Agriculture	Kenya	Apollo offers a customized package of farm inputs and advice on credit to rural farmers in sub-Saharan Africa.
25	SolarNow Uganda.	Uganda	Solarnow offers an agri-finance product with a tailored, flexible payment plan scheduled to the seasonal cashflows of farmers.
26	Easy Solar (SL)	Sierra Leone	Easy Solar sells an entry-level solar lamp on a rent-to-own payment plan to build customer relations and density, and then uses this repayment history as credit scoring for the sale of more expensive products.
27	Dodore Kenya	Kenya	Dodore's Agri-wallet includes automatic savings earmarked from farm inputs, a business account, pre-payment of farmers and overdraft credit. It is restricted to farm inputs to avoid diversion of funds.
28	Farmerline	Ghana	Farmerline's 399 Services is a mobile information, credit, and savings service that helps farmers access best agricultural practices and funds for high-quality inputs.
29	Baobab + Mali	Mali	Baobab + Mali leases solar energy products on a PAYG basis, and full repayment of the products make customers eligible for a digital loan.
30	Stewards Globe	Zambia	SGL's integrated supply chain financing model incorporates input microcredit and insurance with an assured offtake market supported by a mobile platform connecting farmers to financing and buyers.
31	PULA Advisors	Malawi, Zambia	PULA is bundling agricultural inputs with insurance and agronomic advisory in a commercially viable product to cover the risks of smallholder farmers, while also increasing their ability to improve their yields.
32	Enviu BV	Uganda, Rwanda	Enviu will translate the learnings from informal micro pensions project in Ghana to East Africa, resulting in a pensions product for the informal market being pilotec within rural Rwanda.

33	Prothem	Burundi	Prothem is Burundi's largest private tea factory. Prothem partnered with SOCADE to provide agricultural and financial services to smallholder farmers (suppliers). Through formation of an outgrower scheme, farmers are trained on global GAP, have access to input credit and other investments, and a guaranteed market for the tea.
34	Savonor	Burundi	Savonor, a soap and edible oil manufacturer, provides loans and financial literacy training to smallholder farmers, using a mobile platform.
35	Lima Kwanza	Tanzania	Lima Kwanza is an avocado exporter that plans to use FRP support to enhance the design and implementation of a mobile payments and loan system in collaboration with their long-standing banking partner, CRDB. The payments system will keep track of farmers' deliveries of avocadoes, track improvements in quality and generate and process payments and loans to farmers.
36	Sprint Money	Zambia	Sprint's innovative e-commerce application offers cashless payments, credit reports, and input credit for the government's farmer input support programme through an outgrower scheme for a milling company.
37	Prosema	Mali	Prosema aims to develop a digital platform to provide a transactional account for sesame outgrowers and links to third party services providers for digital payments, savings, credits, remittances and insurance, and tailor-made financial and non-financial education
38	SyeComp	Ghana	SyeComp is a market leader in deploying satellite technology to empower agribusinesses. Mfarmpay, their core product, will address the bankability of millions of farmers in Ghana by creating a credit score rich in alternative data to enable financial institutions to lend without collateral.

References:

[1] Youth population trends and sustainable development, UNDP (2015). Available at: https://www.un.org/esa/socdev/documents/youth/fact-sheets/YouthPOP.pdf

[2] Africa rebounding, but must prepare for future: IMF official, Reuters (2018). Available at: https://www.reuters.com/article/us-africa-imf/africa-rebounding-but-must-prepare-for-future-imf-official-idUSKCN1ML1EI

[3] NEPAD, 2015, 'Agriculture in Africa – Transformation and Outlook', p8. Accessible at: https://www.un.org/en/africa/osaa/pdf/pubs/2013africanagricultures.pdf

[4] Marina Ruete, 2015, 'Financing for Agriculture: How to boost opportunities in developing countries', p2. Accessible at: https://www.iisd.org/sites/default/files/publications/financing-agriculture-boost-opportunities-devloping-countries.pdf

[5] ISF Advisors and Mastercard Foundation Rural and Agricultural Finance Learning Lab. 2019. "Pathways to Prosperity: Rural and Agricultural Finance State of the Sector Report." Washington, D.C. Available from https://pathways.raflearning.org

[6] Justin Sykes et al, 'Exploring the linkages between youth financial inclusion and job creation: evidence from the ILO school-to-worj transition surveys', Work4Youth publication series, no. 42, (2016).

[7] In order to establish causality, research would have to focus on impact evaluations, for example in the form of RCTs or longitudinal studies.

[8] Fox, L. & Kaul, U., 2017. 'The Evidence is in: How Should Youth Employment Programs in Low Income Countries be Designed." USAID. Accessible at https://static.globalinnovationexchange.org/s3fs-public/asset/document/YE_Final-USAID.pdf

[9] Piza, Caio, Craveo, Tulio Antonio, Taylor, Linnet, Gonzalez, Lauro, Musse, Isabel, Furtado, Isabela & Abdelnour, Samer. 2016. Business support for small and medium enterprises in low and middle-income countries: a systematic review (Systematic review No. 25). Accessible at: http://www.3ieimpact.org/media/filer_public/2016/07/29/sr25-cida-business-supportreview_gvw36pm.pdf

[10] Alexandra Miehlbradt et al, 2018, 'Using Multipliers to Estimate Impact'

[11] Alex MacGillivray et al, 2017, 'Measuring Total Employment Effects: a lean data methodology for a portfolio of investments in developing countries', CDC.

[12] Justin Sykes et al, 'Exploring the linkages'.

[13] World Bank, Global Findex Database 2017, accessible here: https://globalfindex.worldbank.org/

[14] In order to make the framework as user-friendly and practical as possible, the pathways are displayed linearly with clear causal pathways. In reality, the Fund is working with private sector actors in complex market systems where there are circular feedback loops and interactions between different pathways. This framework is therefore a simplified, stylised analysis of what in practice is a more complicated set of interactions and casual mechanisms.

[15] In general Fund-supported products facilitate the purchase of non-mechanised equipment such as secateurs and tarpaulin.

[16] ISF Advisors and Mastercard Foundation Rural and Agricultural Finance Learning Lab. 2019. "Pathways to Prosperity: Rural and Agricultural Finance State of the Sector Report." Washington, D.C. Available from https://pathways.raflearning.org

[17] Sheahan and Barrett, 2016, 'Ten striking facts about agricultural input use in Sub-Saharan Africa', Food Policy 67 (2017) 12-25

[18] Matsumoto and Yamano, 2011, 'The impacts of fertilizer credit on crop production and income in Ethiopia', in T. Yamano, K. Otsuka, F. Place (Eds.) Emerging Development of Agriculture in East Africa, Springer Netherlands, Dordrecht, pp. 58 - 72

[19] FAO, 'Crop Diversification increases productivity and stabilises income of smallholders'. Available from: http://www.fao.org/3/i9458en/I9458EN.pdf

[20] GSMA, State of the Industry Report on Mobile Money (2017). Available from: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/05/GSMA_2017_State_of_the_Industry_Report_on_Mobile_Money_Full_Report.pdf

[21] Brendan Brown, Rick Llewellyn & Ian Nuberg (2018) Why do information gaps persist in African smallholder agriculture? Perspectives from farmers lacking exposure to conservation agriculture, The Journal of Agricultural Education and Extension, 24:2, 191-208

[22] Committee on World Food Security, FAO, 'Connecting smallholders to markets'. Available from: http://www.fao.org/3/a-bq853e.pdf

[23] McNulty, Nielsen, and Zeller, 'Smallholder Farmers' Willingness to Invest in Irrigation Schemes in Dedza, Malawi', American Journal of Rural Development, 2016, Vol. 4 No. 2 43-48

[24] Let's Work: Value Chain Based Job Creation. 2016. Available from: https://www.jobsanddevelopment.org/wp-content/uploads/2019/03/production-selection-and-background.pdf

[25] AgDevCo: Transforming Communities in Northern Malawi. Available from: https://beamexchange.org/uploads/filer_public/ac/c0/acc0115d-5a16-4ec0-b617-85548999da95/tropha_case_study_final.pdf

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