Market Linkages to Improve Impact of Livelihood Programming for Extreme Poor Women in Zambia

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ABBREVIATIONS AND ACRONYMS

CWACs	Community Welfare Assessment Committees
FISP	Farmer's Input Support Program
FSP	Food Security Pack
FRA	Food Reserve Agency
FSDZ	Financial Sector Deepening Zambia
GEWEL	Girl's Education and Women's Empowerment and Livelihoods
GIL	Gender Innovation Lab
GRZ	Government of the Republic of Zambia
IFBSP	Integrated Framework of Basic Social Protection
LCMS	Living Conditions Monitoring Survey
MAPI	Market Access Potential Index
MCDSS	Ministry of Community Development and Social Services
NDP	National Development Plan
NGO	Nongovernmental Organization
PSP	Payment Service Provider
SCD	Systemic Country Diagnostic
SCT	Social Cash Transfer
SWL	Supporting Women's Livelihood
SME	Small and Medium Enterprise
TUP	Targeting the Ultra Poor

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1. EXECUTIVE SUMMARY

While Zambia witnessed sustained economic growth since the early 2000s, this has not translated to improved livelihoods and well-being of the poor especially in rural areas with overall poverty stagnating around 50 percent (LCMS 2015). This is likely to have been exacerbated recently with the weakening of the economy, growing at about 1.7 percent in 2019. Rural women, and female headed households, are amongst the most disadvantaged—2/3 of them belong to the poorest 50 percent of population by consumption level and only about 20 percent have more than grade 8 education (LCMS 2015). Given this, the Government of Zambia through the Seventh National Development Plan 2018 has a strong focus on reducing extreme poverty and promoting human capital development, particularly that of women. The World Bank funded, Government of Zambia implemented, Girls' Education and Women's Livelihood (GEWEL) Project, was established to do just this through its focus on adolescent girl education and women's livelihood. GEWEL's Supporting Women's Livelihood (SWL) component, is modeled on BRAC's 'big-push' Targeting the Ultra-Poor (TUP) program. SWL provides each beneficiary a bundled intervention comprising of a one-time productive grant of US$ 225, life and business skills training, savings groups facilitation and mentoring. While short- and medium-term impacts of this type of programming on productive outcomes is strong, evolving global evidence points to mixed results on longer term sustainability albeit households headed by women doing better than those headed by men. (State of Economic Inclusion Report 2020) An impact evaluation is being undertaken of the SWL initiative and while the evaluation results are yet to be determined, evidence from other similar programs is a useful indication of potential long-term sustainability of impacts. In this report, we explore opportunities for market linkages for these extreme poor women to sustain the 'big-push' provided by the SWL initiative.

Study methodology

The analysis focuses on understanding the existing level of engagement of SWL beneficiaries with markets and services, with a focus on five key commodity value chains, and across a variety of market contexts, and challenges encountered. This report summarizes findings from the qualitative field study, including focus group discussions and one-on-one interviews, complementing it with

quantitative analysis. The basis for the selection of locations for the qualitative field study is a Market Access Potential Index, created using geospatial data on market access points, spatial distribution of poverty and administrative data on spatial coverage of SWL and Social Cash Transfer program beneficiaries potentially eligible for SWL initiative. Note that the field research was conducted prior to receiving the SWL productive grant. Value chains were chosen based on their prominence amongst extreme poor women and their potential for job creation. This process was guided by an analysis of household survey data, literature review and interviews with national stakeholders operating in those value chains.

Findings

An overarching characteristic of SWL beneficiaries is that they are highly risk averse individuals. This is by virtue of their high poverty levels and low levels of education. This has serious consequences on their willingness to invest and connect with new markets for potentially higher returns. Moreover, the study found that some of these women also accumulate debts by the end of the growing season and cash flow considerations take precedence over deciding where to sell and for what price. In fact, cash flow considerations also override their decision of which crop to cultivate to the point of being indifferent to agro-ecological conditions if their produce has a buyer.

Often, these women, tend to engage in the same agricultural activities as other smallholders and to produce what most smallholders do and of similar quality, albeit in a less intensive manner. The majority of SWL beneficiaries in the selected wards farm at subsistence level and sell only a minor part of their production in local markets. SWL beneficiaries employ individual crop marketing strategies, which tend to vary according to the volume of produce to be sold. The poorest smallholders in rural Zambia, where SWL beneficiaries belong, have limited access to input markets. SWL beneficiaries also have limited access to food markets and financial service markets. They also have limited access to services aimed at improving linkages to markets. For example, financial inclusion, savings assistance and adult literacy programs are highly valued by SWL beneficiaries, however, such programs experience financial constraints which limit their coverage. At the same time, while a range of training and mentorship programs related to agriculture production and

business management have been offered by local governments and NGOs, those training programs do not always consider women's needs for such skills. Farm Input Subsidy Program and Food Security Pack, the main production support programs in Zambia, is rarely accessible to SWL beneficiaries.

Extreme poor women's chief constraint was capital, which they need for various purposes, including the renting of land and the hiring of labor. Access to land and to labor were not generally considered to be a constraint to production, as they could hire it if capital was available. Poor education and illiteracy are barriers for women's access to market-access services and it has had significant consequences for the successful development of any business activity. These women lack skills in business management and financial knowledge. Poor smallholders, especially women, have a big transport constraint to access input, financial, and food markets. The constraints and their severity varies across value chains as summarized in the table below.

Figure 0.1 Summary of specific constraints by selected value chain

	HYBRID MAIZE	GROUND NUTS	POULTRY	FISH TRADING	PULSES
PRODUCTION	**Limited access to land:** women have to rent it and need cash for that.	**Limited access to land:** women do not have cash to rent it.	**Lack of capacity to prevent disease and predation** **Lack of technical knowledge** required to produce broilers efficiently	**Household responsibilities** and absence from the household to trade fish is a constraint for female-headed households	**Limited access to land** **Lack of access to good inputs** in the form of seed
AGGREGATION	**Lack of infrastructure**: Storage facilities at village level Limited means to **transport** maize to one point	**Lack of infrastructure** necessary to support aggregation is generally not available **Variable quality** of groundnuts from different producers: growers aren't sure of aggregating volumes **Insufficient knowledge of business management** for technical and financial operation	---	**Lack of infrastructure**: cold chain facilities including both refrigerated transport and ice-making capacity. **Volumes** coming to the primary markets **are not reliable or consistent** in type or quality	**Absence of standards** increases inspection costs **Range of ecotypes** of both mixed beans and cowpea **reduces the volumes** of a given type for aggregation at any one time

VALUE ADDITION	**Processing of locally produced maize is not a priority**	**Mechanical shelters for shelling** (first stage in value addition of groundnuts) is **not cost effective at scale of operation**	**Limited access to improved breeds** main constraint for poor households wishing increase productivity from village chickens	---	Soya value addition and processing mixed beans and cowpeas are **capital intensive activities**
MARKETING	**Small volumes to sell** Women can easily sell small volumes in local markets or bigger traders coming to village once a year. As they need fast cash, no incentives to take production to urban or larger markets	**Small volumes** to sell and transport hence, high transport and marketing costs. Women prefer to sell in lower priced local markets	**Lack of critical mass** of production in local areas	**Limited market information** can often lead to over- or under-supply	Poor women faced **no absolute constraints** to effective marketing

Recommendations

SWL, while being agnostic to value chain and market density, already provides a comprehensive package comprising of a livelihood grant, life and business skills training, mentorship and savings group facilitation, which can help overcome some of the barriers extremely poor women face in better linking to markets. Nevertheless, the study recommends some programmatic pathways through which to improve the sustainability of program impacts, which could be incorporated into SWL or by other complementary projects and initiatives in Zambia. These recommendations include (i) Engagement of upstream value chain actors to build stronger and longer-term buyer-seller arrangements, (ii) Increased emphasis on collaboration and trust building towards greater aggregation amongst beneficiaries, (iii) Initiation of strategic partnerships with private sector actors, particularly payment service providers (PSPs), to provide a larger array of market access services to beneficiaries; and (iv) weather indexed insurance schemes or disaster risk financing components to support the extreme poor.

2. INTRODUCTION

1. **Although there is sustained economic growth in Zambia since early 2000s, rural poverty remains stubbornly high.** According to the Zambia Systematic Country Diagnostic (SCD) (World Bank, 2018), GDP growth averaged 7.4 percent between 2004 and 2014. At the same time, the Living Conditions Monitoring Survey (LCMS) 2015 estimates incidence of poverty in Zambia is 54.4 percent, with rural poverty rising slightly from 73.7 percent in 2010 to 76.7 percent in 2015. More recently, growth has slowed to 1.7 percent of GDP in 2019 which is likely to have worsened the situation of poverty and vulnerability across the country, particularly in rural areas. The slow agricultural growth, one of the reasons for persistent rural poverty, has been largely driven by a limited number of commercial producers, while a vast group of smallholder farmers live in semi-subsistence conditions with low access to key productive assets.
2. **Women tend to be more disadvantaged and poorer than the overall population.** Women face more challenges than men because of sex-specific social barriers and gender inequalities. Female Head Households disproportionately belong to poorer consumption quintiles than male headed households—66 percent versus 47 percent below to the poorest 50 percent of population. (LCMS 2015) Moreover, they also have very low levels of education—only 21 percent of female headed households versus 40 percent of male headed households have more than grade 7 level of education. In rural Zambia, most women are mostly involved in subsistence level farming and generally sell a lower share of crops produced but instead consume it at home.
3. **Government of the Republic of Zambia (GRZ) has put in place strong a policy foundation to maximize the impact of social protection on reducing extreme poverty and promoting human capital development with a focus on women.** This includes the GRZ's National Social Protection Policy (2015–2019); a draft Social Protection Bill, which is expected to be enacted by Parliament; and, more recently, the Integrated Framework of Basic Social Protection Programmes (IFBSP) 2018, which moves the sector (a) in the direction of layering a floor (basic social assistance) together with ladder programming (livelihoods and empowerment) to achieve greater impact and (b) from programming in silos to a more complementary and comprehensive approach to reducing extreme poverty and promoting human capital development.

4. **Accordingly, the GRZ launched the Girls Education and Women's Empowerment and Livelihood (GEWEL) Project to improve the productive capability of poor women.** The Supporting Women's Livelihood (SWL) initiative as part of the GEWEL Project is an adaptation of the BRAC Targeting the Ultra Poor (TUP) program. SWL, specifically, provides a US$ 225 grant to each beneficiary, life and business skills training, savings group formation support and ongoing mentoring. This 'big-push' design is based on extensive rigorous experimental evidence showing the impact of the package on consumption, broadening livelihood opportunities, incomes, asset accumulation, savings and psychosocial outcomes. (Banerjee et al 2015; Bandiera et al 2017; Sedlmayr, Shah, & Sulaiman 2018; Bedoya et al 2019)
5. **In line with policy developments, the GRZ has adopted a 'cash-plus' approach to programming in the social protection sector.** The foundation of this 'cash-plus' approach is the GRZ's social safety net, the Social Cash Transfer (SCT) program, which provides regular cash transfers to smooth the consumption of extremely poor and vulnerable households and which enable them to make human capital and livelihood investments through layered empowerment interventions. Hence, starting in 2020 the SWL initiative will select beneficiaries from among SCT households to provide the economic inclusion package.
6. **Sustainability is increasingly a priority in the GEWEL Project considering emerging evidence on the tapering impacts of productive inclusion interventions over time, signaling a need for continued complementary support.** In West Bengal, the pilot Targeting the Ultra-Poor (TUP) project showed multiplicative impact on economic wellbeing and psychosocial outcomes seven years after the intervention ended (Banerjee et al 2016). Whereas, in Bangladesh's TUP project, Misha et al 2019 find a reversal in job opportunities initially obtained by beneficiaries after 9 years—beneficiaries who initially worked as beggars and maids were less likely to sustain their small businesses, with female headed households slightly less likely to switch back than male headed households. These long-term results imply a need for exploring other complementary mechanisms to help beneficiaries sustain the short and medium-term impact of the 'big-push' package.
7. **This study aims to provide an analysis of constraints and pathways to link the SWL beneficiaries to productive and profitable markets.** In that way, this work contributes to the

growing body of evidence which analyzes how market engagement has the potential to broaden income opportunities and to improve livelihoods. (Ahsan 2016) The study involved two main components: i) quantitative analysis using household surveys and geospatial data to identify geographic areas and commodity value chains for further qualitative assessments and a preliminary list of constraints faced by households with a similar demographic profile as SWL beneficiaries.; (i) a field-based qualitative study to further understand these constraints, parsing out differences and commonalities based on value chains and geographic locations.

8. The present study is organized as follows: Section 3 describes the study methodology, including methods to select wards and value chains where the field study took place. Section 4 presents the SWL Beneficiaries' profile, an analysis of their current level of market linkage, and the lay of the land with respect to services for market linkages. Section 5 details the constraints that SWL beneficiaries face in engaging with markets, the common constraints and the specific ones related to the selected value chains. Section 6 introduces pathways to tackle the constraints for market linkage in the context of the SWL component of the GEWEL Project.

3. METHODOLOGY

9. As mentioned above, the qualitative methods used in the study, including focus group discussions and one-on-one interviews are complemented by an analysis of Living Conditions Monitoring Survey 2015 and FinScope 2015 data. To select locations for the qualitative field study, an analysis of geospatial data was undertaken on market access points from Financial Sector Deepening Zambia and administrative data from the Ministry of Community Development and Social Services (MCDSS) on spatial coverage of SWL and SCT beneficiaries. Further, literature review was undertaken to highlight broader trends in market access and assist with the selection of wards and choice of value chains for the field study.

3.1 SELECTION OF WARDS AND VALUE CHAINS

Selection of wards:

10. In order to select wards, the study created an index of Market Access Potential at the ward level using 2015 FSDZ geospatial data on market access points (see Annex 1 for key results of the geospatial data analysis), road network data from Global Roads Inventory Project, and number of households from Sub-National Poverty Maps 2015 (De la Fuente et al 2015). We expand on the location-based analysis using agro-processing firm locations by Merotto 2017 to look at a broader set of markets to build this index of market density.

11. Market Access Potential is the density of agricultural and financial markets in a given ward. This is a supply side construct in that it speaks to the availability of markets and roads to access them. The higher the index, the higher the potential for market access. The demand side of access to markets is then studied through the field-based study. Agriculture market includes input markets, processing markets and output market, whereas financial markets include commercial banks, microfinance institutions, mobile money agents, bank agents and, savings and credit cooperative organizations. We do not include size of markets (e.g., in terms of sale volumes) due to lack of such data consistently across the types of agriculture and financial markets.

Market Access Potential Index (MAPI):

1. Agricultural Market Density= $\frac{\text{Number of agricultural markets in the ward}}{\text{Number of Households in ward}} \times 100$

2. Financial Market Density= $\frac{\text{Number of Financial Market Access Points in the ward}}{\text{Number of Households in ward}} \times 100$

3. Road Density = $\frac{\text{Length of Roads}}{\text{Area of ward}} \times 100$

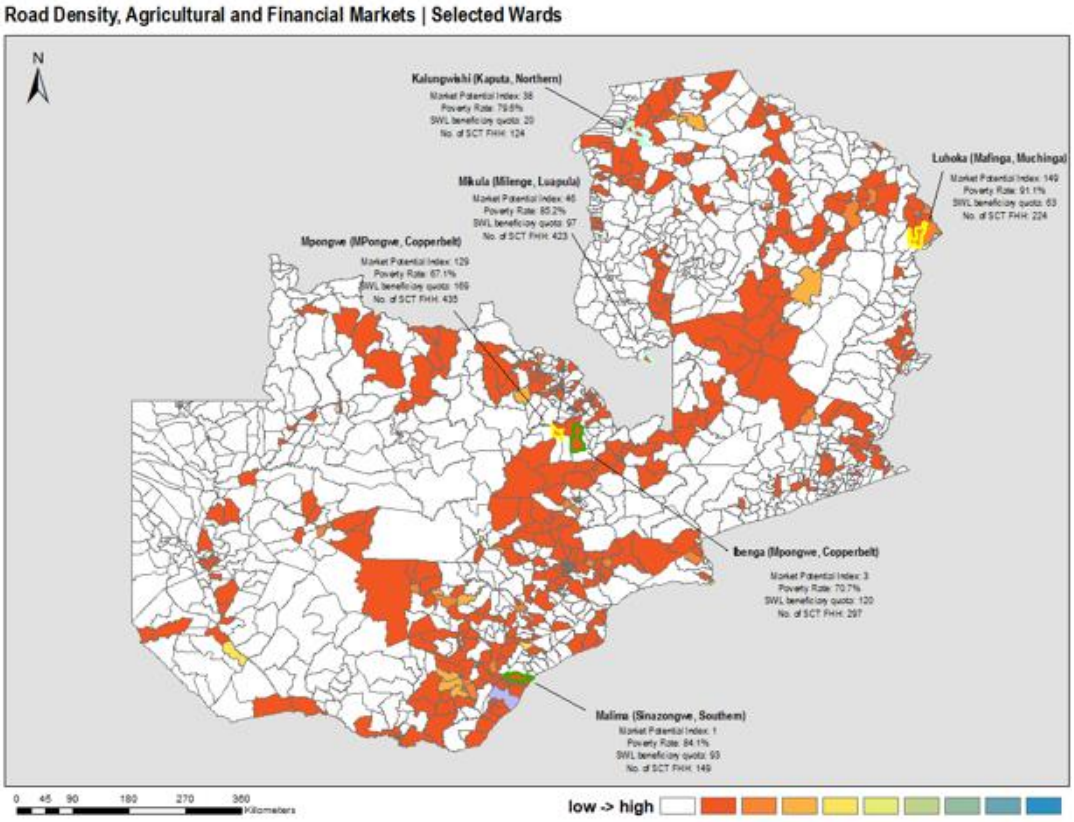
4. Market Access Potential Index = Agricultural Market Density X Financial Market Density X Road Density

12. In selecting the wards, four main variables were considered: 1) Poverty rate, 2) MAPI, 3) Number of SWL beneficiaries, and 4) Number of female-headed households enrolled in the SCT program (to reflect move to 'cash-plus' approach). Selected wards needed to be rural, have a substantial number of SCT/ SWL beneficiaries to interview, have geographic representation and show variations in terms of Market Access Potential (High, Medium and Low). While poverty rate was used in order to identify the general market and socio-economic dynamics in a ward, there wasn't substantial variation across the selected wards. See Table 1 for the final list of six targeted wards with high poverty rates, over 60 percent poverty rate, and represented a variety of market access potential, and represented the Northern, Central and Southern regions of the country. (Table 1 and Figure 1)

Table 1. Selected wards: Targeting indicators, 2019

Province Name	District Name	Ward Name	Poverty Rate	MAPI	SWL Beneficiary Quota	# of female headed household in STC
Muchinga	Mafinga	Luhoka	91.1%	149	63	224
Cooperbelt	Mpongwe	Mpongwe	67.1%	129	169	435
Luapula	Milenge	Mikula	85.2%	46	97	423
Northern	Kapula	Kalungwishi	79.6%	38	20	124
Copperbelt	Mpongwe	Ibenga	70.7%	3	120	297
Southern	Sinazongwe	Malima	84.1%	1	93	149

Figure 1. Zambia MAPI and Selected Wards



Source: Author's analysis

Selection of value chains

13. Considering that every commodity has its own market dynamic on production, processing, aggregation and marketing, the study involved a step of selecting value chains that were relevant to the selected wards and relevant to socio-economic profile of SWL beneficiaries. This was done using a mix of literature review (which identified poultry and aquaculture value chains as having the highest potential for employment creation), analysis of LCMS 2015 (which identified groundnuts, mixed beans, cassava, maize and hybrid maize as commodities in which a large share of poor women operate) and information from district officials about the most

prominent agricultural commodities produced in each ward[1]. Table 2 presents the selected value chains and their presence in the six selected wards.

Table 2. Selected value chain commodities by ward

	Ibenga	Kalungwishi	Mpongwe	Luhoka	Malima	Mikula
Maize	✓	✓	✓	✓	✓	✓
Ground nuts		✓	✓	✓		
Pulses				✓ Soybeans Beans	✓ Cowpeas	
Fish Trading					✓	✓
Poultry					✓	

3.2 FIELD STUDY

14. The qualitative field study was undertaken within the context of the two existing (GRZ) initiatives, the SCT program and the SWL initiative. While the study is intended to inform the SWL initiative, in the context of cash-plus type programming wherein SWL beneficiaries will be selected from SCT households, a subset of SCT beneficiaries (female headed households with 3+ children) were included. The field study consisted of a series of interviews of key government officials at the national level and district level, focus group discussions with SWL and select SCT beneficiaries, and other local ward-level stakeholders in each value chain—processors, wholesalers/ retailers, exporters, and traders. Association representatives and exporters were also interviewed.

15. The study was designed to answer the following broad questions:

(1) What is the extent of SCT and SWL beneficiaries' linkages to value chains, markets, and market access services?

[1] Mpongwe (Groundnuts, hybrid maize, goats); Ibenga (Vegetables, cassava, Maize and goats); Kalungwishi (Fish, goats, cassava, hybrid maize, traditional maize and groundnuts); Mikula (Fish, Charcoal and traditional Maize); Malima (Fish, traditional maize, cow-peas, cotton and poultry); Luhoka(Soya beans, beans, groundnuts, sunflower, Hybrid and traditional maize)

(2) What is the potential to enhance such linkages?

(3) What are the mechanisms to trigger this potential?

(4) In each value chain, what are the effects of market density and poverty?

To answer those research questions, the following areas were explored:

(a) Poor women's decision-making processes when investing in production

(b) The access of poor women to finance and/or inputs necessary for production/business

(c) The ability of poor women to access markets and constraints, specifically those that gender may place upon them

(d) The potential for selected sub-sectors/ value chains to enjoy sustained growth in a way that can be inclusive of poor small-scale producers

16. This study has three main limitations: i) Small sample size – given the limited resourced available for data collection in extensive rural areas, a sample of six wards could be considered a small sample. However, the six wards selected represent the range of conditions and the diverse degrees of market linkage existing in rural Zambia; ii) Respondents' bias regarding market linkage services – we found providers have a natural bias to report high levels of support to women though beneficiaries tend to report low or non-existent support from those services. To overcome this potential bias, responses were contrasted with information from observation and detailed interviews with GRZ staff, and iii) The market access index used for ward selection is based on 2015 geolocation data and 2010 ward level poverty data and in addition, does not capture volume of sales in markets.

4. FINDINGS: ECONOMICS OF PRODUCTION OF SWL BENEFICIARIES

17. This section presents the economics of production of SWL/ SCT type households. It also undertakes an in-depth analysis of their current level of engagement with markets or linkages to markets. The analysis presented here uses a mix of secondary quantitative data analysis,

literature review and findings from the qualitative field study. In this section, we first present the characteristics of SWL beneficiary households, followed by key features of their access to markets and market access services (i.e., services aimed at improving access to markets).

SWL Beneficiaries' Demographic and Economic Profile

18. **SWL beneficiaries belong to households with large dependency ratios and low levels of education and literacy, but largely young.** According to the Africa Gender Innovation Lab (GIL) 2019, the average age of SWL beneficiaries is 35 years and they have 3.8 children on average. A common household has 3.5 dependents (children under 18 years and elderly over 64 years) for 2.2 adults (18-64 years). Other relevant characteristic of this population is their lack of human capital, only 22% of them are literate and the average years of schooling is 5.6 years, roughly primary school.

19. **SWL beneficiary households are extremely poor, and are the breadwinners of their households, reporting a high level of autonomy.** According to Africa GIL 2019, 91% of the surveyed households were identified as extremely poor. According to LCMS 2015, about 23% of rural agricultural households are headed by females and they tend to be poorer than male headed households (55 percent of female headed households belong to poorest 40 percent compared to 36.6 percent of male headed households). SWL beneficiaries belong to the poorest of these female headed households. Approximately 82% of SWL beneficiaries are the breadwinners in their households. Many of them report being the breadwinner because of the husband's excessive alcohol consumption or unwillingness to work. On the other hand, according to Africa GIL 2019, SWL beneficiaries report a high level of autonomy. They mentioned they can decide by themselves, if they're the head of the household, or jointly with their husbands, if married. The areas where they were found to exert lowest control is livestock rearing, condom use, and children's education.

20. **Similar to the bulk of poor women in rural Zambia, SWL beneficiaries are engaged in small-scale farming and informal enterprises.** More than fifty percent of them are unpaid family

workers. Some of these women either work as agricultural labor, mainly weeding and harvesting, or do domestic work such as looking after children, cleaning or laundry for better-off households. Women usually also have small enterprises engaged in retail marketing of a wide range of horticultural and agricultural produce, and sometimes sale of fritters or other simple fast food.

21. **The risk aversion of SWL beneficiaries limits their willingness to invest, and to connect with new markets to generate larger profits.** The field study included an assessment of the propensity of SCT and SWL beneficiaries to assume risk. It was found that the majority of SCT and SWL beneficiaries preferred to take no risk at all. Beneficiaries were asked two questions to understand their risk preferences: (a) if they preferred a very low amount of money compared to a lottery with a higher expected payoff, and (b) if they preferred a lumpsum grant compared to an equivalent amount of transfer paid out in equal installments for a certain time period (predictable income/ consumption support over time). (see Annex 4 for detailed questions). Most women preferred the sure-shot outcome in both scenarios—they explained this saying they preferred what they could see than what they could not. This phenomenon has been documented and analyzed in a seminal paper by Weeks 1970 that examines the impact of poverty on investment. Women feel more comfortable to sell in the local market than distant unknown markets even if potential gains are higher. The implication is that they had very little capacity to accept the potential downside of the investment and would risk resources on an uncertain enterprise (such as crop production) only to the least extent possible.

22. **In general, poor households reported that they would have accumulated debts by the end of the growing season and cash flow considerations took precedence when deciding where to sell and at what price.** Indeed, a large proportion of respondents noted that ongoing debt was a constant aspect of their existence. Households faced with such circumstances, were under significant pressure to raise cash to pay off debts as soon as they could. Hence some crops such as groundnuts, soya, chickpea or mixed bean would be sold as soon as possible after harvest. This meant a) that households would tend to be at a disadvantage when negotiating prices, and

b) that produce from some households could be sold before it had been properly dried, posing significant problems of aflatoxin contamination.

Poor Women's Existing Engagement with Markets

23. **Poor women, SWL beneficiaries, tend to engage in the same agricultural activities as other smallholders and to produce what most smallholders do and of similar quality, albeit in a less intensive manner.** We find that Maize was predominant in the wards in central and southern areas of the country, while rice and cassava were the main crops in wards from Luapula and Northern Provinces. If any activity could be considered universal, it would be the production and marketing of groundnuts. However, it is performed in small scale. Most buyers reported no significant difference in the quality of commodities sold to them by men or women.

24. **In the selected wards, the majority of women reported planting as much as half of their land to maize, rice or cassava, either alone or in mixture with other crops,** a further quarter to a legume such as groundnuts or a pulse, and the last quarter to another cash crop such as cotton or soya. In some cases, a small area of vegetables would also be produced. The production of groundnuts has always been considered a woman's crop along with the raising of poultry.

25. **The ease with which a crop could be marketed was widely observed to be a critical factor in crop selection and could over-ride agronomic considerations.** The lack of a market was reported as a constraint to the increased production of some commodities such as poultry. For example, in Mpongwe, SWL beneficiaries were producing soya which is considered an input intensive crop, on an extensive basis, and obtaining sub-optimal yields as a result. Nevertheless, they were happy to be able to sell the crop easily to traders or agents of mills who were readily available at markets. Similarly, groundnuts were considered to grow only moderately well in the area but were widely produced for sale to aggregators who would visit each village, or if there were large production volumes, for direct sale in terminal markets.

26. **Access to land and to labor were not generally considered to be a constraint to production.** Instead, focus groups reported that land was available for women to rent in almost all areas, but at a price ranging from US$50-80 per ha per year. Only in Southern Province (Sinazongwe) was it reported that while land per se was readily available, it could be harder for women to obtain additional fertile areas of deep soil. In a similar manner, labor was not considered to be a constraint either. Labor was reported to be available to prepare land and to weed and harvest crops, provided it could be paid for.

27. **The majority of SWL beneficiaries in the selected wards farm at subsistence level and sell a minor part of their production in local markets.** Africa GIL 2019 reveals that access to markets is challenging in rural communities. Only 1 in 3 CWACs have access to food markets that are closer than 10 km. Yet, they are enterprising with 73 percent of women going outside their own CWACs to sell (two-thirds of which in CWACs in own district). The lack of means to connect to markets is also reflected in the fact that only 1 in 5 households in the surveyed CWACs own a mobile phone, and the financial literacy among the respondents and their access to financial services was low overall.

28. **SWL beneficiaries reported that absence of trust inhibits aggregation and bulk marketing.** The study found that different strategies were employed for the marketing of crops depending upon the nature of the crop and the economic status of the household. Cost of transport was reported consistently as a factor that restricted the marketing of small volumes of produce and limited producers to local markets where their negotiating position was often weak when few buyers were present. The strategy of cooperative or bulk marketing as a means of reducing price risk and transport overheads, and attracting potential buyers, is not at all well developed in any of the wards under analysis. Focus group respondents repeatedly emphasized that the level of trust required to enable the cooperative or bulk marketing of produce on either an informal or formal basis did not exist amongst individual producers.

29. **The poorest smallholders, including SWL beneficiaries, also have limited access to input markets.** High costs, long distances to markets, and limited access to capital are the main constraints to access to inputs. Rural Agricultural households use fertilizer, bags, and seeds as key inputs in crop production. Female-headed households are more likely to source fertilizer from cooperatives. According to LCMS 2015, on average, 81 percent of rural agricultural households use input markets. However, only 63% of households in the bottom 10 percent of the income distribution, where most of the SWL beneficiaries belong, have access to inputs. Cost is a bigger constraint to the use of input markets for female-headed households. Likewise, the average distance to input markets which is 21.5 km on average also constitutes a key constraint. The poorest quintiles and female headed households primarily access input markets on foot. Finally, only 10% of interviewees in the Africa GIL 2019 reported to be part of the Fertilizer Input Support Program (FISP), the largest Government program for inputs assistance to producers in Zambia.

30. **SWL beneficiaries also have limited access to food markets and financial service markets.** According the LCMS 2015, the average distance to food markets is 11km among rural, agricultural households. Foot and bicycle transport are the most popular means to travel to food markets. In the bottom 10 percent of lowest income households, 73 percent of households say they get to these markets on foot, compared with 53 percent of top decile households who are most likely to use public transport or a personal vehicle. Regarding the financial services markets, only 34 percent of rural households use banks, with a higher share of wealthier using them. Among households headed by females that access is only 27% compared to 36 percent for male headed households. The average distance to banks is 31km among rural, agricultural households. Households who save, do so in the form of cash at home or with family/friends. (FinScope 2015)

31. Finally, another relevant component in the analysis of market linkages is the access of SWL beneficiaries to market-access services in their wards. This aspect was investigated in detail during the field study and the following section outlines key findings.

Existing Levels of Access to Market-Access Services

32. **While in the six wards analyzed, numerous market-access services were operating and available for poor women, in practice, the study showed that most women have limited access to those services.** As shown in table 3, poor women have limited access to most market-access services, especially to the ones provided by the government, mainly because those programs do not fit poor women's needs. Likewise, many of these programs are financially constrained, limiting their coverage. These constraints do not allow these programs to play an effective role in improving the potential of poor women to engage productively with markets. See Annex 2 for more details on specific programs.

Table 3. Market-access Services' supply and constraints in the selected wards

Implementer/ Types of Market Linkage services	*Financial Services and saving Assistance*	*Training, mentorship, and peer support related to agribusiness*	*Production and marketing support programs*	*Basic needs support programs*
GRZ	*Village Banking Program* ●●		*FISP* ●●●	*Adult literacy program* ●●● *FSP*
Local Government Programs		*Training and demonstration on crop production and management* ●●●	*Marketing Support* ●●●	
NGOs	*Saving Groups Schemes* ●	*Training on agriculture processes, and marketing* ●	*Pass-on Programs*	
Private Sector			*Out grower schemes* ●●	

Legend:

- ● *Poor women have limited access to the program*
- ● *Program does not fit poor women needs, characteristics or dynamics*
- ● *Program faces financial constraints*

33. **Financial inclusion and savings assistance programs are highly valued by SWL beneficiaries; however, such programs experience financial constraints which limit their coverage.** The GRZ

implemented Village Banking program has experienced an increased demand for loans since its launch in 2015, but the capacity of this program to provide seed capital is becoming more limited over time. Due to fiscal challenges affecting Government programs, the budget for Village Banking program reduced from US$928k in 2018 to US$144k by 2019. Beyond that, in some villages, repayment rates have been low leading to issues with sustainability. Savings groups are largely implemented by NGOs. In the field study areas, savings groups were largely considered to be effectively implemented. By design, saving groups differ from the GRZ-supported Village Banks in that no initial capital is provided and all loans are provided solely from the savings of members.

34. **While a wide range of training and mentorship programs related to agriculture production and business management have been offered by local governments and NGOs, those training programs do not always consider women's needs for such skills.** In the selected wards, Local Governments and NGOs have been offering training programs from crop production, agriculture processes to marketing and business management. The field study finds that women have limited participation in public trainings because these programs do not consider the specific needs of women, and particularly as women do not feel comfortable studying in mixed classes. Considering this, District Officers and NGOs have started to provide sessions exclusively for women, thereby, reporting higher interest and participation from this group. The main constraint that District Officers pointed out to implement training sessions was lack of resources.

35. **Farm Input Subsidy Program (FISP) and Food Security Pack (FSP), the main producer support programs in Zambia, are rarely accessible to SWL beneficiaries, whereas, production and marketing programs by NGOs and Local Governments are offered in some wards but are limited in scope.** SWL beneficiaries, who tend to be the poorest among the poor, are not able to pay membership fees to join cooperatives or clubs which receive the subsidized inputs through FSP. Usually, women group together and pool their resources in order to be able to afford a single membership subscription of FSP and then, they share among all members. FISP,

on the other hand, has minimum land ownership requirements that poor beneficiaries cannot meet.

36. Some Local Governments have implemented support to marketing programs where a marketing officer identifies and, in some cases, coordinates potential buyers. Most women who participated in the field study were unaware of such a program. The field study also identified Pass-on programs, frequently livestock based, which are implemented by NGOs in the selected wards wherein they transfer livestock to select households. The main issues with effectiveness of such a program is the lack of training on caring for livestock. Additionally, the beneficiaries sometimes sell the livestock when an emergency arises. Finally, while the private sector offers out-grower schemes for a range of commodities, they tend to not target the extreme poor households as operational efficiencies are higher when working with more productive smallholder farmers.

37. **The Adult Literacy program whose main objective is to help beneficiaries acquire basic education is also financially strapped and lacked local resources to implement it.** In the wards under analysis, the adult literacy program was scarcely mentioned by SWL beneficiaries. Respondents reported that classes were generally sporadic or in some cases had been discontinued altogether. This was primarily due to the lack of financing for such programs given Government's fiscal challenges. It was left to the communities to mobilize an instructor and pay him/ her for their efforts. These findings were in line with Moonga 2017 which finds that the planning of the adult literacy program was mainly top down and lacked collaboration with staff at lower levels and with learners, and that implementation was left mainly to volunteer facilitators with little assistance or oversight from Department of Community Development staff. Sichula 2018 echoes these findings and further added that (a) majority of teachers were untrained volunteers, (b) classes were largely not based on needs of learners, and (c) classes had little impact on the literacy of those who attended them.

5. FINDINGS: CHALLENGES SWL BENEFICIARIES FACE IN ENGAGING WITH MARKETS

38. This sub-section presents the main constraints faced by poor women with respect to operating in the selected value chains under analysis. These constraints explain some of the trends observed in terms of access to markets and services, as highlighted above. We first delve into the common constrains across the selected value chains across wards. Thereafter, we include a synthesis of the specific constraints experienced in each selected value chain.

5.1 COMMON CONSTRAINTS

39. **SWL beneficiaries' women chief constraint was capital, which they need for various purposes, including the renting of land and the hiring of labor.** Among others, limited capital obligates poor women to use home-saved seed, minimal agrochemical inputs (including fertilizer), intercropping, and maximal manual labor. Access to new land and timeliness of cultivation are also compromised. During the focus groups, respondents recognized the potential benefits of fertilizer and other inputs but lacked the capital to obtain them. respondents almost universally reported crop production practices designed to achieve the maximum benefit from the minimum capital input. This generally involved: i) use of untreated, home-saved seed – a major cost saving for the production of many crops, but bringing with it the risk of disease, ii) very limited use of chemical fertilizer or of organic manure (except for ash), iii) mixed cropping, especially of maize and pumpkins and maize/sorghum and chickpea, and iv) manual land preparation.

40. Limited access to capital affected market linkages in the five value chains analyzed in this study. In the case of ground nuts, pulses, and maize production, women are unable to rent land, pay for labor to cope with weed infestation, or to purchase good seeds. This limits their capacity for aggregation and value addition in these value chains. As a result, yields are suboptimal, or smallholders cannot obtain economic benefits from their production. In poultry, capital is

necessary to construct appropriate housing and facilities. Limited capital prevents households from engaging in the most efficient levels of small-scale poultry production. Similarly, capital constrains, for example, restrict the volume of fish that can be purchased, the distance that can be travelled to sell it, and this also constitute a constraint for aggregation.

41. **Poor education and illiteracy are barriers for women's access to market-access services and it has clearly had significant consequences for the successful development of any business activity**. Poor women are less likely to be literate and/or numerate than men. During the field study, district staff reported that the proportion of SCT beneficiaries that could not sign but used a thumb print exceeded 60 percent, and that amongst SWL beneficiaries the proportion was slightly less than 50 percent.

42. **Women lack skills in business management and financial knowledge.** During the field study most women reported their limited knowledge on business management, and they recognized the importance of this kind of training. Likewise, most women declared to have significant debts that they sometimes could not manage to repay. This fact could be interpreted as low knowledge in financial management.

43. **Poor smallholders, especially women, have a big transport constraint to access to input, financial, and food markets**. Given the substantial transport overheads faced by poor women producing small volumes, transaction costs within the different value chains could be substantially reduced through product aggregation.

44. **Limited access to entitlement of land and technical trainings are gender disparities affecting women' engagement with markets.** In the field study**,** poor women regularly reported that female-headed households and single women were less entitled to land than better off, male headed households. Likewise, the field study informed that women are less likely to be included in technical training sessions – which are most frequently attended by men who are expected to bring the knowledge back to the whole household. Conservation Farming Unit (CFU) trainers

report that attendance at women-only training sessions is strong and the level of attention is noticeably higher than that for men.

5.2 CONSTRAINTS BY SELECTED VALUE CHAINS

45. Although there are common factors limiting the market linkage of the five value chains under study, there are some constraints which particularly affect production, aggregation and marketing of each commodity (See Table 4).

46. **In the case of the maize value chain, the limited access to land, low productivity, and lack of infrastructure for aggregation are the main factors behind poor market linkage.** In the six selected wards, an important part of women's production comprises of maize; however, they have limited access to land. This factor combined with a limited access to capital for renting land contribute to low production. Another constraint for connecting women with profitable markets is the lack of infrastructure needed for aggregation. This constraint includes, among others, lack of storage facilities in the villages, and limited access to transport. As a result, women and other smallholders tend to sell in local markets or to big traders visiting their villages at less profitable prices.

47. **Regarding the ground nuts value chain, lack of infrastructure, variable production quality, and lack of shelling machines prevent women from selling these products in markets.** Although in this case women also have limited access to capital for renting land, it is the variable quality of production, the small amounts produced and lack of shelling machines, that prevent women and other smallholders from deriving maximum value from the market. Big traders demand significant amounts of ground nuts with same standard. Likewise, investments in shelling machines require larger volumes of production to be financially prudent.

48. **In poultry, technical knowledge is key for production, and access to improved breeds essential to increase productivity but women and smallholders do not have access to either.** Producers

need knowledge about preventing diseases and predation, and expertise to produce broilers efficiently. The study found that women have limited knowledge about those matters. Furthermore, for those wishing to progress on hybrid poultry production, limited access to improved feed and few veterinary services are significant constraints.

49. **In the fish trading value chain, lack of cold chain facilities, and non-standard type or quality of fish are the main constraints for those women in the business.** Lack of infrastructure include both lack of refrigerated transport and low ice-making capacity. The need to be absent from the household to trade fish is also a constraint for female-headed households who might consider purchasing fish for sale in remote markets. Each cycle of purchase and sale can require women to be away from their families for up to three weeks. The study also revealed women purchasing directly from fishermen or trying to enter this business face the risk of sexual exploitation. Additionally, lack of availability of suitable sites for ponds and cash to construct them were also reported as a major constraint to entry into small-scale production.

50. **Finally, in the case of pulses, the limited access to good seeds, and absence of standards constitute the main constraints to allocate women's products in the markets**. Mixed beans are produced almost exclusively by small scale producers in Central, Machinga and especially Northern Provinces. Such producers include poor women who grow mixed beans for both cash and food security purposes. The crop is comprised almost exclusively of traditional varieties. Modern varieties do exist, but growers are reluctant to use new varieties that may not be preferred in the marketplace (Sichilima et al 2016) and given the ease of access, most growers use home-saved seed. Lack of standards increases costs and reduces production volumes for every type of pulse product. Furthermore, adding value in this value chain demands intensive capital investment, which is a key constraint to increase women and other smallholders' profits.

Table 4. Summary of specific constraints by selected value chain

	HYBRID MAIZE	GROUND NUTS	POULTRY	FISH TRADING	PULSES
PRODUCTION	**Limited access to land:** women have to rent it and need cash for that.	**Limited access to land:** women do not have cash to rent it.	**Lack of capacity to prevent disease and predation** **Lack of technical knowledge** required to produce broilers efficiently	**Household responsibilities** and absence from the household to trade fish is a constraint for female-headed households	**Limited access to land** **Lack of access to good inputs** in the form of seed
AGGREGATION	**Lack of infrastructure**: Storage facilities at village level Limited means to **transport** maize to one point	**Lack of infrastructure** necessary to support aggregation is generally not available **Variable quality** of groundnuts from different producers: growers aren't sure of aggregating volumes **Insufficient knowledge of business management** for technical and financial operation	---	**Lack of infrastructure**: cold chain facilities including both refrigerated transport and ice-making capacity. **Volumes** coming to the primary markets **are not reliable or consistent** in type or quality	**Absence of standards** increases inspection costs **Range of ecotypes** of both mixed beans and cowpea **reduces the volumes** of a given type for aggregation at any one time
VALUE ADDITION	**Processing of locally produced maize is not a priority**	**Mechanical shelters for shelling** (first stage in value addition of groundnuts) is **not cost effective at scale of operation**	**Limited access to improved breeds** main constraint for poor households wishing increase productivity from village chickens	---	Soya value addition and processing mixed beans and cowpeas are **capital intensive activities**
MARKETING	**Small volumes to sell** Women can easily sell small volumes in local markets or bigger traders coming to village once a year. As they need fast cash, no incentives to take production to urban or larger markets	**Small volumes** to sell and transport hence, high transport and marketing costs. Women prefer to sell in lower priced local markets	**Lack of critical mass** of production in local areas	**Limited market information** can often lead to over- or under-supply	Poor women faced **no absolute constraints** to effective marketing

6. PATHWAYS FOR IMPROVED MARKET LINKAGES

51. This section presents pathways for improved market linkages, based on the constraints and discussions in the previous sections, with a view either to their operationalization through the SWL component of the GEWEL Project or by other complementary projects and initiatives in Zambia. Table 6 summarizes how the SWL initiative tackles key constraints detailed above and

areas where SWL, in its current design, is not enough to tackle these constraints effectively and sustainably.

Table 5: Role of SWL initiative in releasing key constraints

Key Constraints	SWL's role
Lack of access to financial services and more broadly, government assistance programs and technical training programs – only 10 percent had access to FISP	Savings Group + Life and Business Skills Training, help improve local access to financial services and improve human capital and technical skills; linked to PSPs who offer a variety of individual and group loans for productive endeavors, though rarely accessed
Lack of capital a major constraint to operating at larger scales	Productive Grant allows for investments in existing or new enterprises
Huge transportation costs	Productive Grant could reduce some of these costs at least in the first instance, but recurring transportation costs require more sustainable income/ cash flow
High risk aversion, particularly, given their vulnerability to shocks and low consumption levels	Consumption Support provides some form of basic minimum income, but may not be enough to reduce risk averse market behaviors, considering little assured end-market linkages
Limited extent of cooperative marketing or aggregation	Savings Group + Mentoring, help improve cohesion among beneficiaries but little explicit focus on end-market linkages

52. Some pathways for further enhancing the program to respond to the constraints faced by beneficiaries in engaging with markets include:

I. **Engagement of upstream value chain actors to build stronger and longer-term buyer-seller arrangements.** Doing so would allow SWL beneficiaries have a relatively more assured end-market for their farming produce. This would, in turn, reduce their risk aversion with respect to investments in their farm, raise their scale of production and help them attain a more sustainable livelihood path. Some of this needs to be undertaken at the strategic level. For example, national level Ministries aligning with each other's programmatic vision to either link their beneficiaries through value chain linkages or providing a logical exit/ entry point for

beneficiaries on one program to also benefit from another program. On the other hand, this will also require local-level due diligence and opportunity seeking by beneficiaries themselves but also potentially by local implementers, such as CBVs, CDAs and DCDOs in SWL. For example, the DCDOs may choose to set up 'networking fairs' to bring together beneficiaries and upstream value chain actors in the district to interact and identify synergies. Such a collaboration may require additional technical training of women in the commodities they produce, e.g., on appropriate post-harvest handling or sowing techniques to ensure quality and improve productivity. This may be done through collaboration with Ministry of Agriculture extension services or upstream value chain actors may decide to provide it themselves, including at a minimal cost.

II. **Increased emphasis on collaboration amongst beneficiaries but also within the broader community for economic activities.** Being part of savings groups help beneficiaries learn certain collaborative behaviors that can be built upon to separately form producer groups or productive alliances among beneficiaries or with others in the same or nearby community. For example, community members producing the same commodity may decide to market their produce in groups so that the buyers benefit from aggregation (Mwansa 2013) and the community members benefit from better bargaining power on prices and a stable demand. In SWL, the CBV could potentially be involved in undertaking local due diligence, encouraging collaboration and facilitating transactions. As part of the program, all CBVs receive bicycles and this makes them specially well placed to link markets to the more remote beneficiary communities. They also tend to be more educated and can, therefore, be more effective negotiators and account keepers.

III. **Initiation of strategic partnerships with private sector, particularly payment service providers (PSPs), to provide a larger array of market access services to beneficiaries.** By virtue of receiving payments in the form of mobile money and through bank accounts rather than in cash, SWL beneficiaries are already 'on-the-grid' with respect to financial inclusion. While receiving money electronically by itself does not improve usage of financial services more

generally, this is an area where SWL can strengthen ties with the PSPs and motivate beneficiaries to encourage the provision of and usage of a wider array of financial services. MTN is already offering micro-credit to beneficiaries based on their usage and repayment patterns. This deepening of financial service usage among beneficiaries, and eventually others in their community also makes it more economically viable for PSPs to provide these services.

IV. **Develop risk financing initiatives to ease beneficiaries' high risk-aversion.** This is particularly important given the various weather-related shocks but also health shocks, such as COVID-19, which are expected to adversely affect their economic outcomes. Introducing such a solution may require liaising with stakeholders in the social insurance sector, and which this study did not due to the defined scope. Nevertheless, two ideas for such an insurance mechanism are: (i) input insurance, enough to cover the costs of inputs lost as a result of crop failure. It is recommended that the FISP experience with crop insurance should be closely reviewed and consideration given to the use of a similar insurance system for SCT and SWL beneficiaries. And, (ii) an emergency fund, constituting 25% of the programme value set aside to be drawn upon by beneficiaries who have suffered crop or business failure. These could be indexed to weather or other shocks.

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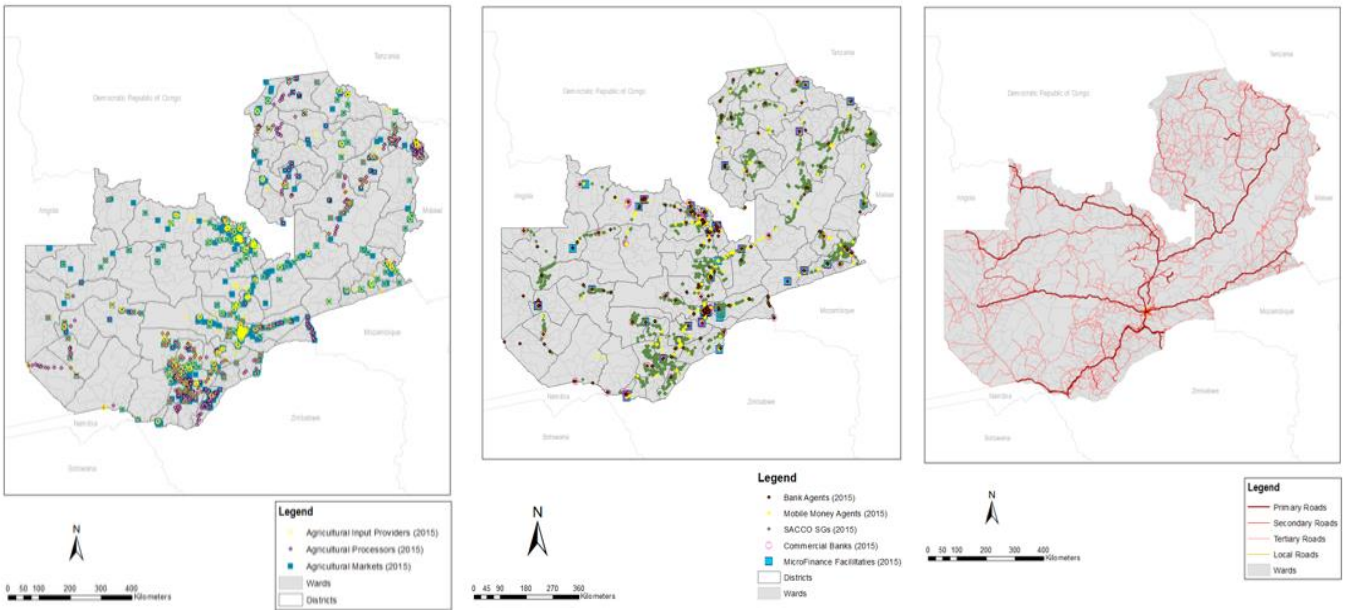
ANNEX 1: Geospatial data analysis

According to the spatial data analysis undertaken for this study, a large share of Zambia is not connected to either Agricultural or Financial markets**.** The spatial distribution of both types of markets tend to overlap and tend to be along the primary road network in Zambia. Secondary and tertiary roads too play an important role in enabling the establishment of these access points. These are the macro settings where smallholders, including the SWL beneficiaries, have to navigate. As we could see in following maps, the selected six wards where this study took place are geographically located in areas with different degree of access to the primary network in Zambia. Consequently, they represent a variety of market linkage conditions of the SWL beneficiaries who live in them.

Connectivity agricultural input and output markets, financial services, and roads in Zambia



Annex 2: Analysis of market-Access services in selected wards

This annex presents in detail the results of the field study regarding the market-service programs in the six wards under analysis. The SWL program was not included in the field study exploration.

a. Financial services and saving assistance

Village banking: This public program facilitates savings and provide loans/credit to low-income groups, such as women, poor farmers, orphans and youths, without collateral requirements. Village Banks have been developed and implemented by the Ministry of Community Development and Social Services, since 2015. They associate 10 to 30 people, and those members elect a management committee which manages savings and loans. The members' contributions are accumulated along with the seed funding provided by the Government to be allocated as loans. Those loans have to be repaid with 20% interest over six months, and the accumulated interest covers the cost of the Village Bank and the balance is paid back to members at the end of each year. All transactions are carried out at meetings, in presence of the members. In the last years, average loan sizes have increased reaching the maximum amount permitted under the scheme, US$143.

Village banks are very popular among people in districts where they operate, almost half of the 117 Districts in the country. Nevertheless, government capacity to provide seed capital is currently limited. The budget line for 2018 was capped at US$923.2K and has been reduced to US$143.1 by 2019. At the same time, the effectiveness of Village Banking is yet to be proven. In some Village Banks, loans have been repaid and the Village Bank's capital increased. In other Village Banks, repayment rates have been less than necessary to achieve sustainability. Finally, supporters of saving groups suggest that providing a seed capital could be counterproductive because the loans could be seen as grants elevating the level of default. This kind of market linkage service has been mentioned in only two of the wards under analysis as an alternative to overcome capital constraints, in Malima and Mpongwe.

Saving group schemes: a large number of NGOs working in the wards under analysis offer savings support to poor women. These include World Vision Zambia (WVZ), PAVIDIA, Heifer International, Land-O-Lakes, Zambia National Farmers Union (ZNFU), Conservation Farming Unit (CFU), United Nations Development Program, World Food Program, Oxfam, Plan International, Kaluli Development Foundation, IFAD and CARE.

Savings groups implemented by NGOS are based upon self-selected groups of women. They were mentioned in most focus groups and were generally considered to be effective. While savings groups can allow members to access finance for investment in small business ventures, amongst poor women they function primarily as a mean for affording large expenditure items (such as school fees) and/or as insurance in the event of unexpected financial need. They are widely implemented by different NGOs which can vary in their name and details of implementation, but they are fundamentally similar in operation.

b. Training, mentorship, and peer support programs

Training meetings and demonstrations by Local Governments: District administrations offer a series of training meetings on diverse topics, from crop production, post-harvest management, processing, and business management to nutrition. That kind of services has been provided in almost all the districts under analysis in the last decades. Nevertheless, the field study found that women were often in the minority of participants at those training sessions, and contents have not considered their needs for knowledge. Social conventions require that the most important members from the community, usually old men, validate and legitimate the training meetings and contents, this can explain in part the mismatch for women participation. There are other personal barriers which limits women participation in those events. It was reported that some women participants do not feel at training sessions unless they are amongst their peers. Under that evidence, District Officers and NGOs implementing this type of programs started to provide sessions exclusively for women, thereby, reporting higher interest and participation from this group.

In every district under analysis were also reported the availability of programs to support aquaculture, horticulture (including micro-irrigation), beekeeping and small ruminant production, but these were less evident in discussion with officers as well as being generally less available to poor women by virtue of their capital requirements. The main constraint that District Officers pointed out to implement the training sessions was lack of resources to meet their responsibilities, including manpower, finance and especially transport.

Finally, one topic nonrelated with production was nutrition sessions. The widespread presence of nutritionists was noted by many focus group respondents, who reported that they had received training on the effective use, preparation and preservation of food. In the respondents' point of view, this kind of sessions had a positive impact in their lives.

Training sessions by NGOs and international cooperation agencies: The study found that NGOs are providing numerous training session covering different topics to enhance livelihoods, including training in crop production, post-harvest handling, processing, financial management, saving, business management, functional literacy, disaster management, nutrition, irrigation, sanitation, and other activities. Among those topics, Nutrition-focused interventions are well appreciated by poor women who mentioned them during the focus group discussions. The interventions were generally based around training in the basic principles of nutrition, food preparation, and sanitation. In most cases, there was a strong focus on mother and child nutrition.

c. Production support programs

Farmer Input Support Program (FISP): This program which provides subsidized inputs (mainly maize seed and fertilizer) to smallholders of 0.5 to 2.0ha is implemented by the Ministry of Agriculture across rural Zambia since 2002. In 2017/18 the introduction of electronic vouchers dramatically changed the program' operation rules. Under the new e-FISP system, smallholders are required to contribute ZMK400 to activate an e-voucher worth ZMK2,100. From that amount, ZMK100 is set aside for a weather index Insurance. The insurance pays out up to a maximum of

about ZMK1,700 in the event of crop failure caused by drought, as indicated by weather satellite data. By 2019, the e-FISP program covers 113 Districts with a budget line of ZMK1.43 billion. By policy design, those smallholders who cannot access the FISP are expected to be supported either by the FSP program or the STC.

The FISP has had a significant impact on smallholder production, but it has not always as accessible and effective as desired. First, the introduction of the e-voucher has led to concerns that not all smallholders were properly targeted and led to delays with strong negative effects. For example, respondents mentioned that some registered outlets did not receive their inputs on time. Consequently, smallholders had to purchase inputs at a non-subsidized price or risked delaying their planting. As response, the redesign of the program was rolled back so that 40% of beneficiaries could be covered under the old system. Second, FISP' design involves economic barriers for poor smallholders to access. The process of acquiring the subsidized inputs from the program has been implemented through cooperatives or clubs which have grouped smallholders for administrative purposes. Membership of these cooperatives or clubs requires a subscription of US$4 to US$14. This goes beyond the reach of many poor women. Consequently, they group together and pool their resources in order to be able to afford a single membership subscription and then, they share among all members. Although the e-FISP is beyond the reach of most poor women, it is an important program due to its inclusion of insurance within the inputs package.

Support to Marketing: **This service is provided by District marketing officers, who respond to requests from buyers by identifying, and in some cases coordinating, potential sources of demand.** Nevertheless, these officers perform a reactive and no proactive strategy to seek out markets for commodities produced locally. While interviewees at District level regularly mentioned the activities of District Marketing Officers, they were not a priority as far as focus group respondents were concerned. The majority of poor women (or at least all those canvassed) did not interact with these officers.

Pass-on Programs: The field study identified that NGOs has been providing pigs, goats and chickens (two of each) to women, who were expected to pass two offspring of the first generation of each on to other women. This kind of program, which is promoted by NGOS, are mainly based on specific crops, whereby seed is provided to one group of beneficiaries who produce a crop and repay the loan by passing on seed to other women. However, they are more frequently livestock based. These programs could become a low-cost effective alternative to poor women. Nevertheless, it is important to consider that while training can be provided to ensure that women know how to look after their livestock, the animals may be lost if beneficiaries are so poor that they cannot afford the necessary livestock feed, or if an emergency expenditure arises so that animals must be sold.

Out-grower schemes: No further successful evidence was found in the areas under analysis. These schemes led by the private sector involve the coordination of production by smallholders of a range of commodities including cotton, sugar, soya bean, oil palm, moringa, ground nuts and livestock. The history of such schemes has been mixed. On one hand, they offer the potential win/win situation of guaranteed product for commercial buyers and guaranteed market for smallholders. On the other hand, problems of quality management, exploitative pricing and side-selling have always been inherent to their implementation.

d. Basic needs support services

Adult Literacy program: This program has implemented literacy centers in every district of the country. However, the actual access to this program is not that extended. According to the GRZ statistics, by 2016 there were 12,591 Adult Literacy Centers with 41,614 learners, these number is far below the current demand for the service. In Zambia more than 1.2 million people 15 years and older are illiterate. In the areas under analysis, beneficiaries considered that this program has marginal relevance. The adult literacy program was scarcely mentioned by any poor women interviewed. The topic was mentioned only after prompting that it would be agreed that some sort of interventions might be available. In that light, respondents reported that classes were generally sporadic or in some cases had been discontinued altogether. Other studies in part of these areas

have found that untrained volunteers and a curriculum that does not fit learners' needs are main causes for the program's lack of effectiveness.

Despite the fact that interviewed women do not show interest for literacy programs, they consistently requested more training, especially in financial and business management. This apparent disconnection between the significance of these two aspects of learning to poor women could merit further analysis.

Food Security Pack (FSP): In the areas under analysis, FSP is currently limited to only 40 beneficiaries per ward, less than 25% of its original design (20% of the vulnerable households). This program managed by the Ministry of Community Development, and Social Services was designed to assist vulnerable households, by a woman, elderly person or child, who have no other sources of income and have less than one hectare of land, providing productive inputs and improved agricultural practices in order to achieve sustainable food security. In practice, FSP provides small packages of seed and fertilizer, which are enough for 0.5 hectares of maize or rice and 0.25 hectares of legumes. After the harvest, beneficiaries are expected to repay 10–20 per cent of the costs of the packs. In some cases, beneficiaries also receive chickens and goats.

ANNEX 3: Main characteristics of the selected value chains

VALUE CHAINS	MAIZE	GROUND NUTS	POULTRY	FISH TRADING	PULSES (Soya Beans, Mixed Beans and Cowpeas)
MAIN CHARACTERISTICS	▪ Production is driven by three main factors: a) Weather, b) Subsidize inputs of FISP, c) FRA purchase activities ▪ Maize is produced mainly by smallholders (2.0 MT/ha average). In women's case, 1.25ha on average. Thus, commercial surplus is minimum. Women sell for fast cash and could have to purchase later in the season. ▪ Maize is susceptibility to drought	▪ Production is low input/labor intensive and driven by two main factors: a) the weather, b) growing domestic and export markets. ▪ Production and marketing almost exclusively by smallholders and mainly by women. ▪ The market is largely informal and not well developed. ▪ Poorest women in remote areas tend to grow smaller areas of groundnuts expecting only to sell limited amounts. The crop was primarily grown for nutritional purposes.	▪ Most widespread of all agricultural activities with the possible exception of maize production. ▪ Small scale producers generate only 3% of egg production, but 65% of meat production. ▪ small scale producers buy pullets or point-of-lay birds from intermediaries who specialize in the rearing of day-old chicks. ▪ Smallholders are mainly women ▪ Widespread production system using village chickens derived from local stock. Slower growth rate than that of commercial hybrid birds.	▪ Informal fish processing and trading is a significant source of income for some poor women living near natural water bodies. ▪ Women travel to fishing areas to buy smoking, drying or salting fish) then, they transport this to primary market, where it can be sold to wholesalers, retailers or sold directly. The poorest women tend to sell their fish in nearby markets. ▪ Increasing penetration of lower priced imported fish.	▪ Soya beans: Proportion of the national crop coming from smallholder production has increased from 20% to as much as 40% over the last five years. ▪ Mixed beans and cow peas have always been almost completely restricted to smallholder production. ▪ Cowpea is more of a domestic staple. Only 30% of the crop is sold.

ANNEX 4: Questionnaire for Assessing Risk Behavior

Part 1: <u>Long-term constant fixed transfers</u> VERSUS <u>short term fixed transfer plus lump-sum</u>

1.	Which do you prefer?	A (ZMK 100 for 4 years)	B (ZMK 100 for 1 year + ZMK 3600)
1a.	If A, what do you intend to do with the money every month? Why do you prefer it?		
1b.	If A, then how much more lump-sum should we pay for you to switch to B?		
1c.	If B, what do you intend to do with the lump-sum amount? Why do you prefer it?		
1d.	If B, then how much of a reduction in lump-sum would make you switch to A?		
2.	Which do you prefer?	A (ZMK 100 for 4 years)	B (ZMK 100 for 2 years + ZMK 2400)
2a.	If A, what do you intend to do with the money every month? Why do you prefer it?		
2b.	If A, then how much more lump-sum should we pay for you to switch to B?		
2c.	If B, what do you intend to do with the lump-sum amount? Why do you prefer it?		
2d.	If B, then how much of a reduction in lump-sum would make you switch to A?		
3.	Which do you prefer?	A (ZMK 100 for 4 years)	B (ZMK 100 for 3 years + ZMK 1200)
3a.	If A, what do you intend to do with the money every month? Why do you prefer it?		
3b.	If A, then how much more lump-sum should we pay for you to switch to B?		
3c.	If B, what do you intend to do with the lump-sum amount? Why do you prefer it?		
3d.	If B, then how much of a reduction in lump-sum would make you switch to A?		

Part 2: Sure-shot outcome versus lottery

1. Which do you prefer?
   A. ZMK 50 for sure
   B. ZMK 500 if coin tosses heads and ZMK 0 if coin tosses tails

2. Which do you prefer?
   A. ZMK 100 for sure
   B. ZMK 500 if coin tosses heads and ZMK 0 if coin tosses tails

3. Which do you prefer?
   A. ZMK 150 for sure
   B. ZMK 500 if coin tosses heads and ZMK 0 if coin tosses tails

4. Which do you prefer?
   A. ZMK 200 for sure
   B. ZMK 500 if coin tosses heads and ZMK 0 if coin tosses tails

5. Which do you prefer?
   A. ZMK 250 for sure
   B. ZMK 500 if coin tosses heads and ZMK 0 if coin tosses tails

6. Which do you prefer?
   A. ZMK 300 for sure
   B. ZMK 500 if coin tosses heads and ZMK 0 if coin tosses tails

7. Which do you prefer?
   A. ZMK 350 for sure
   B. ZMK 500 if coin tosses heads and ZMK 0 if coin tosses tails

8. Which do you prefer?
   A. ZMK 400 for sure
   B. ZMK 500 if coin tosses heads and ZMK 0 if coin tosses tails