

Role of inclusive market systems development in promoting resilience: evidence from World Vision projects

Emmanuel Tumusiime, Martha Cruz Zuniga, and Chloe Bass

Abstract: *Evidence on whether market systems development (MSD) programmes for extremely poor smallholder farmers in low-income countries are associated with resilient outcomes when shocks/stressors appear is limited. We discuss the role of the inclusive MSD (iMSD) approach to generate resilience among vulnerable populations and report empirical evidence from World Vision's project areas (with iMSD activities) and comparison communities in Tanzania and Rwanda. The panel data collected between 2017 and 2021 provide evidence on differences in household-level resilience in the face of COVID-19 shock. Descriptive estimates from the 2021 survey show project households had statistically greater food security, market participation, and perception of being fully/partially recovered than comparison households in both Tanzania and Rwanda. Integration in market systems helped buffer participants. Though food insecurity declined between survey rounds in Tanzania, it worsened in Rwanda, but more so among comparison households. Respondents in Rwanda experienced stricter COVID-19 'lockdowns' and more limited iMSD activities than Tanzanians.*

Keywords: COVID-19, inclusion, food security, market systems development, resilience, THRIVE

Introduction

Ending extreme poverty is a global priority and, understandably, the first Sustainable Development Goal (SDG) given its centrality to other SDGs, including zero hunger (SDG 2), promoting children's education (SDG 4), gender equality (SDG 5), and reduced inequality (SDG 10) (Le Blanc, 2015). Development work experiences suggest ending extreme poverty requires promoting resilient and inclusive economic growth in low-income and fragile countries. Globally, extreme poverty is concentrated in rural areas of low-income countries, and descent into extreme poverty is increasingly driven by social and political conflicts as well as climate change-related shocks, and more recently by the COVID-19 health shock (World Bank, 2020).

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The collective call to action across the donor landscape to eradicate extreme poverty in low-income countries, even before the COVID-19 pandemic, argues for market-based and market systems development approaches that can increase inclusion of the extremely poor and vulnerable groups in agricultural market systems (Campbell, 2014; The Springfield Centre, 2014; FAO, 2020). This draws on studies that suggest stable and well-functioning agricultural market systems reduce poverty (Barrett, 2008; Campbell, 2014), enhance resilience (Bronwyn and Campbell, 2015; USAID, 2018), and improve food security (Pittore, 2016; Zuniga et al., 2019). However, how to design and implement effective market-based and systems development interventions for smallholder farmers and extremely poor producers remains an active area of learning in development practice (Osorio-Cortes and Albu, 2021). More so, there is still a lack of empirical evidence that demonstrates the resilience outcomes of market-based and market systems development approaches in the face of shocks and disasters (USAID, 2018).

This paper addresses two related objectives: first, we discuss a theoretical framework showing potential pathways of how the inclusive market systems development (iMSD) approach might generate resilience in the face of shocks, including cases like COVID-19, and climatic events; and second, we provide empirical insights on whether smallholder farmers targeted in iMSD projects were relatively resilient, in the face of COVID-19 and related economic shocks, as observed through stable access to market, income stability, food consumption, and perceptions of short-to-medium term economic well-being. The empirical insights are drawn from food security and poverty reduction projects in Tanzania and Rwanda, East Africa, implemented by a humanitarian and development organization, World Vision. The projects used a mix of inclusive value chain development (iVCD) and iMSD principles.

In the last decade, a growing focus by donors and implementers on how to sustainably improve the broader market systems has given prominence to the MSD approach (Campbell, 2014; The Springfield Centre, 2014). The MSD approach in agricultural markets has its origins in the value chain development (VCD) approach, which has successfully been used by some implementers to improve the agricultural productivity and household incomes of smallholder farmers (Pittore, 2016; BEAM Exchange, 2017; Norell et al., 2017). Criticisms of the VCD approach are, however, that its outcomes are often not wide, inclusive, and sustainable (Jones, 2012; The Springfield Centre, 2014; World Vision Australia, 2018). The MSD approach is viewed as broader and is promoted to also address complementary factors to market access by vulnerable populations, including access to credit, institutions, cultural norms, multiple value chains, and power in agricultural market systems. Further, MSD programmes seek to bring about sustainable change through facilitating, changing the behaviours, and building the capacity of local private sector actors to sustainably provide services that can benefit a large number of smallholder producers (The Springfield Centre, 2014; USAID LEO, 2015; BEAM Exchange, 2017). In addition, the inclusivity focus seeks to equip MSD programmes with strategies to better target, reach, and benefit the poorest and vulnerable groups such as women smallholder producers (Campbell, 2014; USAID LEO, 2015; World Vision Australia, 2018).

Concurrently, donor strategies (Bronwyn and Campbell, 2015; USAID, 2018) and practitioners (Mercy Corps, 2017) advocate for MSD approaches for their potential to promote resilience to shocks and stressors within the market system and for households in it. Multiple mechanisms can explain how MSD could lead to market and household resilience. At the household level, common pathways include improvements in production, access to markets, and income. At the market system level, availability of and access to resources and institutions, and improvement of behaviours such as trust, cooperation, and connectivity among smallholder producers and private sector firms are increasingly accepted as drivers of resilience (Bronwyn and Campbell, 2015; USAID, 2018). However, while evidence of these changes due to MSD programming has been found (BEAM Exchange, 2017; Osorio-Cortes and Albu, 2021), the degree (or extent) to which they are associated with resilience when shocks and stressors appear is limited. Testing for resilience requires exposure to a shock and examining the response capacities to understand the relationships and effects of interventions designed to build resilience at the system and/or at the household level.

This paper demonstrates the effectiveness of World Vision's programmes and provides lessons on the role of iMSD in promoting resilience, in the face of COVID-19-related market access challenges among the extremely poor in low-income contexts. The empirical evidence suggests World Vision's programmes had a range of positive effects, particularly on buffering participants against the effects of COVID-19-related market access challenges and disruptions in livelihoods. The next section discusses the resilience generation potential of iMSD. After this section, the application of the principles in selected case study projects is presented. The penultimate section offers empirical insights and learnings are presented in the concluding section.

Conceptualizing the relationship between agricultural MSD, inclusion, and resilience

USAID (2018) defines market system resilience as the 'ability of market systems to allocate resources, draw on system-level resources (such as social safety nets, social capital, the financial system, or structures), and to adapt to solve problems in the face of the shocks'. Shocks faced in agricultural markets systems vary but are commonly classified into four categories: economic, social, environmental, and health-based (USAID, 2018). Research has documented examples of agricultural MSD interventions that can enhance or generate resilience to such shocks (BEAM Exchange, 2017). They include activities that increase: 1) skills and knowledge capacity of micro entrepreneurialism to improve income; 2) access to markets; 3) resources (e.g. financial services, inputs, social capital, networks, land rights, and secure tenure); and 4) incentives that reduce risks and initial costs for both private business and smallholder producers.

As MSD present these opportunities to improve livelihoods, we further discuss how this might generate resilience when external shocks appear. In Figure 1, we present a summary of the impact of an external shock on poverty dynamics. The left shows the impact the shock would have without market systems resilience capacities, while the right shows the impact with the presence of market system

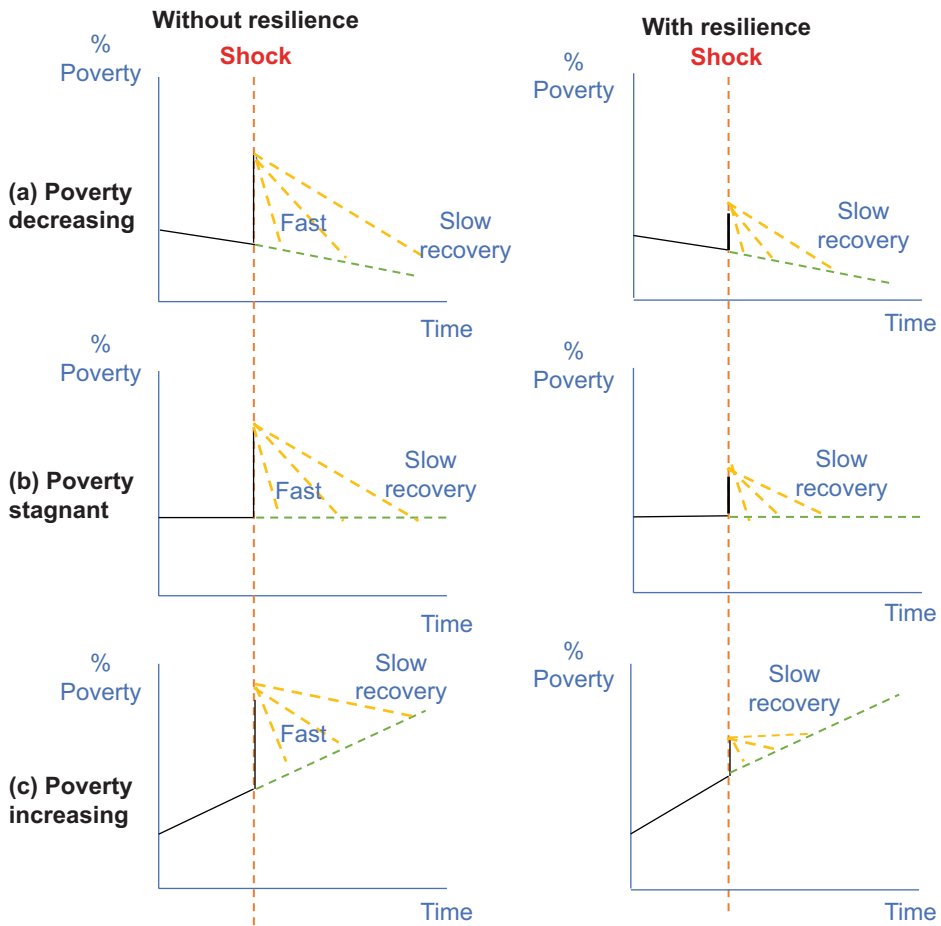


Figure 1 Impact of a negative shock on poverty

resilience capacities. The figure suggests that in the presence of resilience and iMSD, an external shock’s impact on households and market functionality would be decreased in two key aspects: 1) the spike created by the shock on a particular variable, and 2) the duration of the recovery process. In the case of a shock without the presence of resilience (and iMSD), the impact is conditioned by the trend in poverty experienced both at the household or individual level and by a country before a shock hit the economy. For simplicity, linear trends are assumed to produce three cases prior to a shock: 1) a reduction in poverty over time, 2) a stagnation in poverty control, and 3) a deterioration in poverty reduction efforts. An external shock will affect a country independently of the trend experienced in poverty reduction; however, the trend will have an impact on the recovery process. Assuming three scenarios for recovery after the impact of the shock (fast, medium, or slow), the recovery process is overall fastest in a country with a prior trend of poverty reduction versus one with stagnation or increased poverty. However,

with the presence of resilience and iMSD (right column of graphs), the external shock will hit a country with less strength because of the dynamic structures created by market systems that offer a degree of protection, especially among the most vulnerable. Given the smaller impact of the external shock, the recovery process would be shorter in any scenario (slow, moderate, or fast recovery).

iMSD and resilience

Next, we illustrate how inclusion strengthens the basis for resilience in MSD. Resilience at the system level benefits from inclusion, which requires that economically vulnerable, including the extremely poor, and/or other marginalized groups are directly targeted for MSD activities. Directly targeting these vulnerable groups – to reduce vulnerability – creates a basis and potential not just for reducing poverty at scale, but also the absorptive and transformative resilience capacities at the community level will be strengthened when the communities’ poor and majority members are benefiting from system-level change interventions. Inclusion facilitates vulnerable households and individuals to draw on support from established connections and networks that could help them cope with the impact of a shock. At the same time, the resilience of the vulnerable is more assured when they are well-integrated in stable and functioning market systems, for example, by having access to resources and networks. In the face of shocks, Figure 2 illustrates how the impact to the community (and the most vulnerable among them) will be mitigated through three key aspects inherent to iMSD: inclusion, access to resources, and the support of the community.

iMSD and resilience indicators of interest

Market system development results that can support poverty reduction and resilience of the system and among participants can be identified from the above framework, and crucially from the literature of market system and household

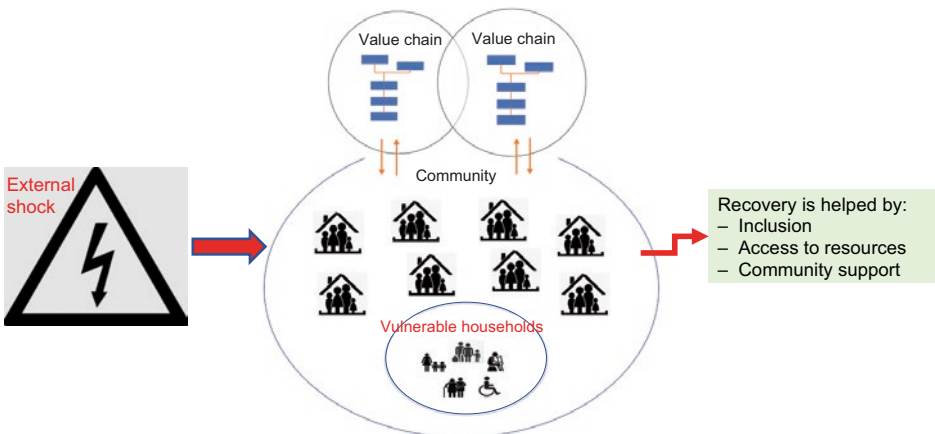


Figure 2 iMSD and shocks
 Note: Authors’ creation

resilience (Bronwyn and Campbell, 2015), and the existing monitoring and evaluation frameworks of MSD (USAID, 2018). At the household/individual level and for the context of the empirical assessment in this study, we prioritize analysis on the following outcomes of iMSD and indicators of resilience:

- Improved and stable access to or use of input and output markets, which ensure resilience through improving productivity and income growth and linkages within the market system in the presence of an external shock.
- Improvement in women's participation in economic activities and decision-making, as a driver of economic empowerment and social resilience.
- Improvement in access to resources, including use of financial services and savings growth. Availability of appropriate financial service and self-savings enable smallholder farmers and their families to start or expand investment and smooth consumption, and thus offer a degree of protection against shocks.
- Sustainable income growth from crop cultivation, including gains from engaging in high-value crop and livestock activities, improved productivity, marketing, and/or trade. Stable income is a key driver of markets access and consumption in the presence of shocks and uncertainty.
- Food and nutrition security situation under shocks and stressors demonstrate a household's ability to access nutritious food as a basic need.
- Avoidance of negative coping strategies in the face of idiosyncratic shocks to not jeopardize fast and transformative recovery.

The sufficiency or degree of success achieved in each of the above results areas will vary by the effectiveness of the MSD approach and tactics used at the project level and thus is an empirical question.

Study programmes

Empirical insights are drawn from World Vision's Transforming Household Resilience in Vulnerable Environments (THRIVE) projects in Tanzania and Rwanda. The THRIVE model is an integrated approach to building improved and resilient livelihoods among the extremely poor small-scale producers living on expenditures of around US\$1.90 a day. In both countries, project direct participants were identified through wealth and poverty ranking exercises, which identified extremely poor households with the minimum productive asset for growth potential. The project in Rwanda started in April 2017 and was designed to last 5 years until 2022. It directly supported 15,000 households in the district of Huye and Gisagara (Southern province), Gakenke district (Northern), and Rusizi district (Western province). The project in Tanzania was designed as a 3-year initiative (July 2017–September 2020), to directly support 9,000 households in Babati district, north-east Tanzania. This project had a shorter timeframe as it was a redesign of an ongoing initiative. According to the implementer, the financial investment in the Tanzania project (2017–2020) was \$2.4 m and \$10 m for the Rwanda project, which suggests the cost per participant/household in the projects ranged from \$266.70 in Tanzania to \$666.70 in Rwanda.

Conceptually, the THRIVE model promotes social empowerment and self-action among direct participants – rather than resource transfers as the primary strategy to achieve improved economic and resilient livelihoods. The model's basic activities can be grouped into three core components intended to be implemented in sequence to the same households or communities: 1) mindset and behaviour change support; 2) inclusive financial services which involve promotion of savings groups, financial literacy training, and microfinance services; and 3) inclusive VCD for prioritized value chains. Depending on the context, projects might also add two more components: on-farm and off-farm natural resource management, and/or climate change-related disaster risk reduction and management activities. The latter two components were less promoted in the study projects.

The three basic components of the THRIVE model relate to iMSD principles. The mindset and behaviour change component is relevant for the promotion of self-efficacy and addresses limiting cultural and social norms. The inclusive financial services are enabled through savings groups for the extremely poor to save small amounts regularly and to take small loans. Further, financial literacy, business skills training, and additional capital (when needed) by individuals or savings groups are provided by microfinance service providers. Project funds are used to lower initial risks for the partners for market access, including input suppliers and output market buyers, and microfinance services providers. One such microfinance service provider is VisionFund, an independently managed microfinance institution affiliated with World Vision.

Under inclusive VCD, THRIVE projects did not take a pure market-facilitation approach because of a lack of established private-sector actors, including input suppliers and off-take firms in the project areas. Instead, projects took a market orientation and linkages approach, which draws on the push/pull framework for iMSD discussed in USAID LEO (2015). This framework suggests vulnerable populations can be integrated into market systems by building capacities for market engagement (push) and expanding economic opportunities (pull) (USAID LEO, 2015). This includes organizing farmers into producer groups as platforms to aggregate demand of inputs and supply of output; facilitating their linkages to markets through developing direct supply relationships; building relationships between private sector buyers and producer groups; and attracting public and private extension systems. More so, THRIVE's inclusive VCD promotes livelihood diversification through promoting multiple value chains and off-farm activities (small-scale business), for income and resilience.

Together, these approaches appear to be valid pathways for enhancing market and participants' resilience to local social and economic stressors as discussed by Bronwyn and Campbell (2015).

Evaluation data and empirical strategy

We present project performance data and analysis of unpublished project evaluations (conducted by consultants at TANGO International). The analysis considers differences in indicators between project and comparison households, and changes over time

between baseline and midterm (Rwanda) and endline (Tanzania). Baseline data were collected in January 2018 in Rwanda, and in Tanzania in July 2017. The endline data in Tanzania was collected in February 2021, and the midterm data in Rwanda was collected between April and May 2021. Survey questions were framed to collect retrospective information about livelihoods and market access in the past 12 months before the survey, which for the surveys in 2021, covered at least an 11-month period since the onset of COVID-19 in the region. The datasets are panel, that is, households sampled at baseline were resampled in the 2021 surveys.

Propensity score analysis by TANGO International at baseline indicated the comparison samples were largely characteristically similar to the THRIVE project sample. Comparison households were selected from communities adjacent to the THRIVE project communities. Comparison communities were found to be eligible for THRIVE project activities at baseline but did not receive direct project interventions because of resource limitations. At baseline, a two-stage cluster random sampling approach was employed in both the project and comparison communities. The second stage of cluster sampling in the comparison communities identified sample households through a random transect walk process, coupled with screening questions to ensure comparability to THRIVE participants. The panel sample from Tanzania includes 357 project households and 455 comparison households. The Rwanda panel sample includes 689 project households and 719 comparison households. The surveys in 2021 were conducted in person (with due consideration and adherence to COVID-19 safety protocols).

The results claimed for the projects might be underestimated but not biased, because of possible spillover effects from project to comparison communities as they were adjacent to each other. Some comparison households might have benefited from World Vision's community-based and systems-level activities. For example, in Tanzania, community survey data revealed that in 22 per cent of the comparison communities, there were savings groups linked to World Vision activities. Ironically, spillover effects appear intrinsic to MSD approaches, which rely for scale, on business spreading across and beyond initial target communities (Osorio-Cortes and Albu, 2021).

Empirical findings

Results provide insights on differences between project and comparison households on the following outcome dimensions of resilience and market systems: financial inclusion, market participation, well-being and short-term changes in livelihoods, food insecurity, income change, and stability, and women's participation in economic activities. Empirical results align with the existing evidence showing iMSD/VCD improves smallholder farmers' access to markets, as well as food security and income (BEAM Exchange, 2017; Norell et al., 2017). The data also shows some sustained impact in the context of COVID-19 shock: livelihoods of project households show greater well-being and resilience than comparison households. COVID-19 lockdown measures reduced market access at the community level, but more so among comparison households.

Market access and participation

Small-scale market-oriented producers seek to provide marketable goods and services within a market system to improve incomes. We hypothesize that market access may not be uniform because households face different transaction costs to participate in markets. We report evaluation findings on the share of production sold across the range of project targeted value chains, as a descriptive indicator of the intensity of participation in output markets (Barrett, 2008). Share of production sold was calculated as a ratio of the quantity of the commodity produced by a household to quantity sold. We also report household revenue from selected (project-supported) value chains. Results in Table 1 show smallholder farmers engaged in iMSD/VCD projects in Tanzania have greater market participation or propensity to sell (trade) than comparison households, particularly poultry and horticultural crops (tomatoes and onions). The evaluation results show production and share of output sold for the selected value chains is relatively higher among project households in Tanzania compared to comparison households. Table 1 shows the average quantities of poultry, pigeon peas, and tomatoes/onions sold by project households were more than the average quantities of the commodity self-produced, which suggest there was trade of these commodities, in addition to selling their own production.

Market participation was also assessed by changes in revenue (growth) of selected (project-supported) value chains. Drawing on the Rwanda programme, Figure 3 shows that project participants report significantly higher revenue for the selected value chains than comparison households, driven largely by the pig value chain.

The THRIVE Rwanda project promoted pigs as a profitable value chain, with faster returns on investment than larger livestock such as cows, which are owned as a sign of wealth rather than an income-generator and often only sold as a coping mechanism. Monitoring data suggests the projects increased producers' participation in the selected value chains. The percentage of THRIVE households that reported ownership of pigs doubled from 20.6 per cent at baseline to 39.9 per cent at midterm. Likewise, household ownership of chicken/poultry increased from 17.6 per cent at baseline to 23.5 per cent at midterm.

Figure 3 also shows project households reported was higher revenue from poultry and maize value chains, but not for horticultural crops. Production in horticulture

Table 1 Average share of production sold by respondents in Tanzania, in 12 months to May 2021 survey

<i>Value chain/ Commodity</i>	<i>Comparison households</i>			<i>Project households</i>		
	<i>Quantity produced</i>	<i>Quantity sold</i>	<i>Share of production sold</i>	<i>Quantity produced</i>	<i>Quantity sold</i>	<i>Share of production sold</i>
Bananas (kg)	733.79	489.29	0.67	749.16	556.89	0.74
Poultry (#heads)	14.00	8.00	0.57	17.00	18.00	1.06
Pigeon pea (kg, HH)	457.79	626.49	1.37	556.36	807.79	1.45
Tomatoes and onions (kg)	343.5	298.96	0.87	664.32	693.18	1.04

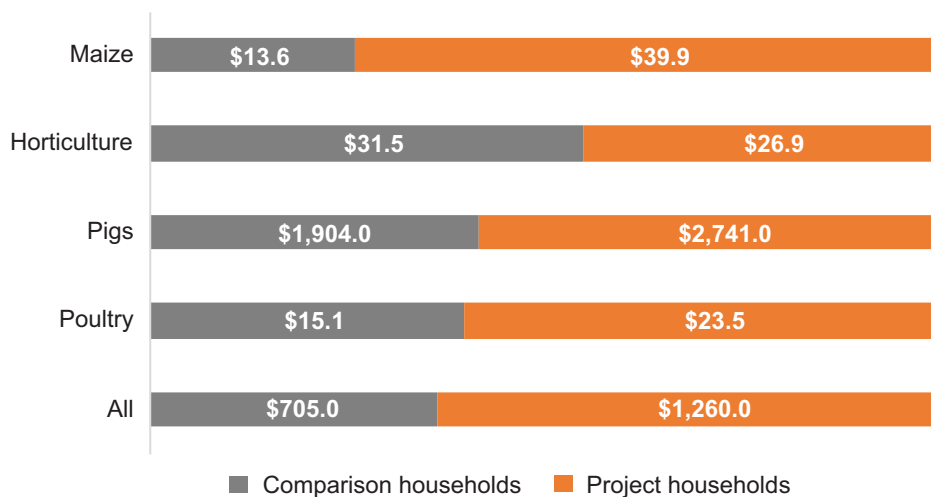


Figure 3 Average household revenue from selected value chains in past 12 months to the 2021 survey

value chains was reportedly less than expected in the past 12 months to the survey, which might reflect producers' labour and capital input access constraints and/or aversion to risks of possible post-harvest losses. Horticulture crops like vegetables are capital input-intensive and have limited shelf life after harvest, which might have made them risky to deal in given uncertainties over government restrictions on travel and access to physical marketplaces to control the spread of the COVID-19 virus. Nonetheless, the mean annual income from poultry, pigs, maize, and horticulture value chain activities for project households in Rwanda was estimated to be \$1,260.00, compared to \$705.00 for comparison households in the same value chains (Figure 3). Similarly, the Tanzania evaluation shows that 44.8 per cent of project households, compared to 38 per cent in the control subsample, reported increases in agricultural/livestock income in the 12 months prior to the survey.

Further analysis of data revealed that COVID-19 lockdown measures reduced market access at the community level, but more so for comparison households. In the Rwanda context, data from a community survey show that the percentage of households reporting selling agricultural products in the last year decreased from 60.8 per cent at baseline to 47.8 per cent at midterm, representing a 13-percentage point reduction. The mean revenue generated by traditional value chains of maize and horticulture decreased since the baseline for both THRIVE and comparison households. The mean revenue generated by THRIVE households from maize decreased by 9.7 per cent since baseline, whereas for comparison households mean revenue from maize decreased by 20.7 per cent. Mean revenue from horticulture decreased by 38.4 per cent for THRIVE households and 62.2 per cent for comparison households. This reflects the negative impact of COVID-19 on access to capital inputs and markets for output as well as agricultural labour supply to continue farming. However, it also illustrates that households integrated into market systems

gained more revenue compared to comparison households, amid market challenges experienced by both groups.

Financial inclusion and resilience

Inclusive market systems development projects work under the assumption that when income and food-insecure households are included in financial systems, there is an increased likelihood of their resilience. The findings support our hypothesis that in the wake of COVID-19, availability, and use of inclusive financial services was higher among iMSD project households compared to comparison households. Evaluations revealed the proportion of households who took out a loan (used financial services) in the 12 months prior to the survey as an indicator of access to financial services. In the Tanzania sample, 51.54 per cent of project households took out a loan in the past 12 months compared to 22.4 per cent in the comparison sample. In the Rwanda sample, 68.8 per cent of project households, compared to 40.6 per cent in the comparison sample, reported taking out loans. The majority (over 85 per cent) of the loans taken by the direct projects' participants in both Rwanda and Tanzania were taken from savings groups, and the remainder of the loans were taken from VisionFund and other microfinance institutions. Among the project participants, the majority (66.9 per cent) took loans for the purpose of buying agricultural/crop inputs (44.3 per cent) or livestock inputs (22.6 per cent), followed by loans for household consumption needs (20.5 per cent). Conversely, in comparison households, buying agricultural inputs (30.9 per cent) and household consumption needs (24.2 per cent) were the most cited reasons for taking loans. In Tanzania, 51.54 per cent of project households took out loans, compared to 22.4 per cent in the comparison sample.

Women's participation in economic activities

Targeting and empowering vulnerable populations, including women smallholder farmers and women heads of households, is an outcome indicator of iMSD (Jones, 2012; Quisumbing et al., 2015) and a driver of household-level resilience. Though often excluded in traditional agricultural market systems, women smallholder farmers are key clients in the food and household economy. The Tanzania survey data demographics show the percentage of female-headed households in the THRIVE sample increased from 15.68 per cent in 2017 to 23.31 per cent in the 2021 survey, suggesting shifts in the marital status of participants towards more women being heads of households. This trend is attributed to increasing levels of migration of males away from home to look for wages or better economic opportunities. THRIVE projects sought the meaningful participation of eligible women. Indeed, at the basic level, inclusive value chain and market-based programmes are expected to intentionally target vulnerable women as direct participants (Quisumbing et al., 2015). Monitoring data suggest THRIVE projects were relatively successful in engaging women directly in activities. In Tanzania, more females (63 per cent) than males (37 per cent) were registered as direct beneficiaries. Similar levels of participation are observed in the gender composition of

savings groups in both Tanzania and Rwanda projects. Women also benefited from improved availability of resources such as financial services. In Rwanda, estimates show the percentage of loans taken by female household members (in the 12 months to the survey) was 42.38 per cent in the project sample compared to 19.19 per cent in the comparison sample.

Food security

The ability of a household to meet food needs is a measure of a household's ability to access food and resilience. We report food security as measured by the Household Food Insecurity and Access Scale (HFIAS), which measures the prevalence of food insecurity (Coates et al., 2007). The HFIAS ranges from 0 to 27, which results from summation scores on nine questions related to experiences of food insecurity at the household level and the frequency of this experience over the past 4-week period to the survey. The higher the HFIAS score, the more food insecurity the household experienced (ibid.). Figure 4(a) shows that the prevalence of food insecurity among THRIVE households in Tanzania was 51 per cent lower in 2021 compared to 2017. More so, project households in 2021 were 40 per cent more food secure than the comparison households (differences are statistically significant, $\alpha = 0.005$). Figure 4(a) also suggests there was a decline in food insecurity in comparison areas in Tanzania since 2017 (baseline). The rate of decline is larger in the subsample of project participants compared to comparison households, which might be because of the project effects among project households. The improved food security in comparison areas reflects broader macroeconomic growth but could also be due to project (iMSD) spillover effects, which as we noted, possibly occurred.

HFIAS scores for study sites in Rwanda are summarized in Figure 4(b). While Tanzania and Rwanda share geographic proximity, Figure 4(a) and (b) show a wide difference in food insecurity situations between the countries, with sample households in Rwanda being more food insecure than households in Tanzania. This was also so, even before the pandemic, considering baseline HFIAS in Figure 4(a) and (b).

Figure 4(b) shows project households in Rwanda were relatively less food insecure at survey time in 2021 compared to comparison households. It also shows food insecurity further worsened in 2021 compared to 2018 in both project and comparison households in Rwanda. The increase in food insecurity is significantly greater among comparison households. The average HFIAS increased by 3.4 percentage points among comparison households compared to the 2018 estimate. In contrast, the average HFIAS score for project households increased by 1.8 percentage points. In addition to the existing higher vulnerability, increased food insecurity in Rwanda compared to Tanzania could be due to the governments' responses to COVID-19. Rwanda's response was characterized by stay-at-home, regional travel restrictions, and social distancing restrictions. These measures are documented to have reduced food availability and access globally, including in rural areas across sub-Saharan Africa (FAO, 2020; World Bank, 2020). In contrast, such measures were not mandated/enforced in Tanzania.

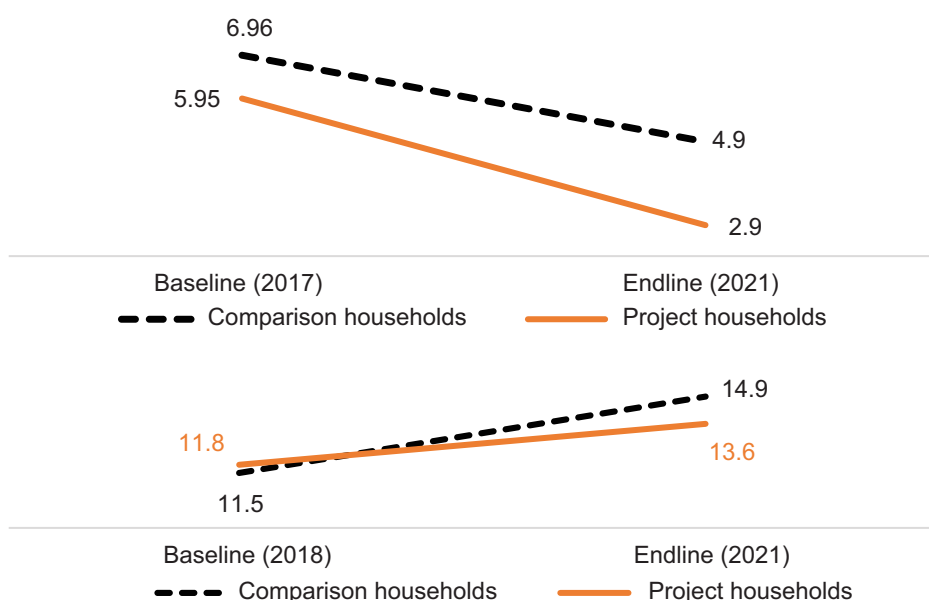


Figure 4 Household Food Insecurity and Access Scale (a) Tanzania; (b) Rwanda

Well-being, capacity to absorb shocks, and perceived recovery

We assessed well-being and the capacity to absorb shocks by examining (a) perception of short-term impact on livelihoods, and (b) perceived recovery (fully/partially) from shock experiences. The surveys in 2021 in both countries included a set of questions designed to identify the effect of COVID-related shocks on respondents’ livelihoods and perceptions. In terms of perception of changes in livelihoods, Table 2 shows that about 65 per cent of the respondents in the Tanzania sample reported a slight to a severe decrease in household income and about 60 per cent of the respondents report a slight to a severe decrease in household food consumption;

Table 2 Perceived impact of COVID-19 on income and food consumption (March 2020 to survey in 2021)

Percentage of respondents	THRIVE Tanzania				THRIVE Rwanda			
	Household income		Food consumption		Household income		Food consumption	
	Comparison	Project	Comparison	Project	Comparison	Project	Comparison	Project
Remained same	33.1	32.2	39.5	39.8	12.1	17.0	13.0	18.4
Slight decrease	41.3	42.2	39.8	40.1	24.2	34.3	28.9	36.8
Severe decrease	25.6	25.3	20.7	19.7	59.3	47.6	54.9	43.7
Don’t know	0.0	0.3	0.0	0.3	4.4	1.1	3.2	1.1
Sample size	387	289	387	289	339	359	339	359

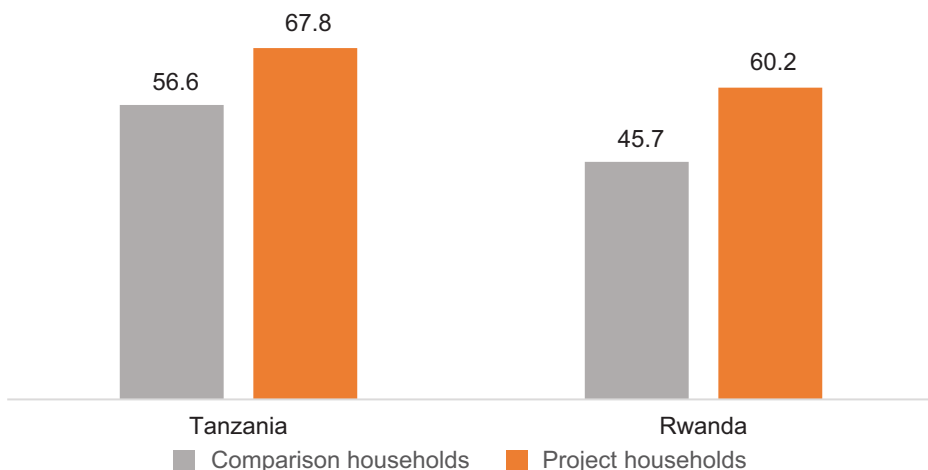


Figure 5 Percentage of households reporting recovered (fully/partially) from shocks since March 2020

differences in changes in well-being because of COVID-19 between project and comparison households in Tanzania are statistically negligible. These findings are consistent with the observations on HFIAS and perceptions that life remained near normal in Tanzania despite COVID-19. However, market system relationships that support resilience were more established in Tanzania than in project areas in Rwanda. In Rwanda, the proportion of comparison households reporting a severe decrease in household income (59.3 per cent) and food consumption (54 per cent) are significantly higher than the proportion in project households who reported severe decreases in household income (47.6 per cent) and food consumption (43.73 per cent).

Figure 5 displays results for the percentage of households who reported they had fully or partially recovered from shocks between March 2020 and the survey period. The share of households who felt they had fully/partially recovered was higher in Tanzania compared to Rwanda. Results in Figure 5 also demonstrate that more of the project households felt they had fully/partially recovered compared to comparison households in both Tanzania and Rwanda.

These results further demonstrate that livelihoods of households directly targeted in inclusive VCD/MSD showed greater well-being and resilience than comparison households not directly targeted and that COVID-19 containment measures disrupted well-being and livelihoods more in Rwanda than in Tanzania.

Conclusion

How to effectively integrate vulnerable populations in low-income countries and fragile contexts in market systems remains an area of learning in development practice. This article discusses how the inclusive market system development (iMSD) approach appears to provide potential solutions to generating resilience

among the extremely poor and vulnerable, socially marginalized populations. It provides a conceptual framework that suggests the inclusion of vulnerable smallholder farmers in agricultural market systems enhances community and household level resilience to local economic and social shocks and stressors, including cases of health shocks like COVID-19. We applied the conceptual framework to empirical cases of programmes, that is, World Vision's THRIVE projects in Tanzania and Rwanda.

The empirical findings contribute evidence on the effectiveness of World Vision's THRIVE model in terms of efficacy to ensure improved and resilient livelihoods and provide lessons on ways to better implement inclusive market-based and market systems programmes. Results show households directly targeted in THRIVE projects have statistically greater food security, market participation, and propensity to recover than comparison households in both Tanzania and Rwanda, suggesting integration in market systems helped buffer participants in the face of COVID-19 health shock and related market access challenges. Considering the iMSD/VCD tactics used in the THRIVE projects, three major insights and accompanying recommendations can be offered:

Intentionally target vulnerable populations. While agricultural market systems development interventions have gained acclamation for improving incomes and food security of the population in low-income countries, marginalized and extremely poor households have not often been included in many cases because they require additional attention and resources to 'cross the line' to become market participants. Market system development programmes in low-income countries typically focus on facilitating, enabling, and changing behaviours of formal private agribusiness actors. Our conceptual model and World Vision's iMSD experiences suggest a need to directly target extremely poor households, and vulnerable women with support to equip them with skills (e.g. business and financial literacy), linkages, and/or resources (e.g. access to financial services and social capital). Ideally, this support to the vulnerable and the extremely poor needs to be enabled by creating incentives and building the capacity of the market system and actors to provide the needed services. World Vision's THRIVE projects in Tanzania and Rwanda successfully targeted women smallholder farmers: participation rates in project activities ranged from 40 per cent to 60 per cent. Further, multiple value chains increase opportunities and pathways to reach and engage the extremely poor in market systems according to their resources and aspirations. Programmes intentionally designed to target and meet the needs of the extremely poor and vulnerable have a higher likelihood of success in reaching them with the support they need to engage in markets and build the foundation to generate resilience.

Prioritizing competitive value chains for businesses to support improvements in income for resilience. As observed in the evidence from World Vision programmes, total income from value chain activities in Rwanda is dominated largely by the pig value chain. Horticulture and poultry appeared important in Tanzania. Project households had a higher production, sales potential, and output share than households in the comparison sample. Moreover, in the face of an external

shock like COVID-19, the income of households in the projects fell less than the income for the comparison.

Financial inclusion supports resilience. Savings groups are key to financial inclusion as they are a catalyst for promoting social capital and individual savings that support consumption in times of stress. Savings groups are also key to enabling access to resources, including supporting members with timely loans to overcome difficulties from shocks and for productive use. Within savings groups, financial education and assessing individuals' readiness are fundamental to instilling habits that improve the financial health of households and savings groups. World Vision's programmes show that this requires closer and early partnership during the project cycle with financial services providers and providing incentives to the microfinance providers. Project households were able to access credit to a much larger extent than those in the comparison group. Project households utilized loans mostly to support agribusiness activities, and to a lesser extent consumption activity.

The results imply the THRIVE model was relatively effective at enabling resilience capacities. However, additional research is needed to analyse the sufficiency of the outcomes and value for money to understand whether the results achieved justify the financial investment.

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