The Impact of the EEU Access to Finance and Land Rental Interventions on Rural Ethiopian Households

(Third Round Data Collection in 2020)

NATHAN LONDON ASSOCIATES & SIAPAC

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MINISTRY OF AGRICULTURE

Contents

Acknowledgements

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Acronyms

A2F	Access to Finance
CAPI	Computer Assisted Personal Interview
DFID	Department for International Development (of the United Kingdom)
EEU	Economic Empowerment Unit (of the LIFT Programme)
GoE	Government of Ethiopia
GESI	Gender and Social Inclusion
HoH	Head of the household
LIFT	Land Investment for Transformation Programme
LR	Land Rental
MHH	Male-headed household
MoA	Ministry of Agriculture
pp	percentage points
RLAS	Rural Land Administration System
SLLC	Second Level Land Certification
SNNPR	Southern Nations, Nationalities and People's Regional State
SLRC	Standard Land Rental Contract
ToC	Theory of Change
WLAO	Woreda Land Administration Office. Generic term. In Amhara, it is known as the Woreda Environmental Protection, Land Administration and Use Office. In Oromia, it is known as the Woreda Rural Land and Environmental Protection Office. In SNNP, it is known as the Woreda Land Administration, Use and Environmental Protection Core Process. In Tigray, it is known as the Woreda Environmental Protection and Use Office

Executive Summary

LIFT's Economic Empowerment Unit (EEU) follows the 'making markets work for the poor' (M4P) approach and innovates new products that apply the second level land certificate (SLLC) in the Access to Finance (A2F), Rural Land Rental (LR), and Environment & Conservation Agriculture (ECA) sectors. This survey evaluates the impact of two specific EEU innovations:

The SLLC-linked loan introduces an unprecedented financial product to the Ethiopian market, which uses the SLLC as a form of collateral so that rural farmers can access individual credit through MFIs. Beneficiaries of this intervention will be referred to as *SLLC loan borrowers*.

The Standard Land Rental Contract (SLRC) is a formal land rental contract developed by LIFT and introduced to all 4 programme regions in combination with land rental service providers (LRSPs), who support the formal rental market by raising awareness, providing market information, and supporting the completion of the contract. This provides for more secure land rental transactions with fairer prices, especially for the typically more vulnerable renters. Beneficiaries of this intervention will be referred to as *landlords* and *tenants*.

EEU innovations are designed to have an impact on the behaviour of farmers, incentivising investment in land which in-turn should lead to increased productivity and incomes. The primary purpose of this survey is to provide evidence on how farmers change behaviour, their views of EEU interventions and the impact this has on their investment behaviour and incomes. To evaluates the impacts of LIFT's EEU market system interventions a sample of 1,343 beneficiary households was surveyed in February 2020 across the four regions in which LIFT operates including Amhara, Oromia, SNNPR and Tigray. This survey follows-up on a pervious impact survey conducted on EEU impacts in 2019 and allows for longitudinal comparisons of key indicators for 883 respondents who were surveyed repeatedly in 2019 and 2020. It also allows for cross-sectional analysis of an additional 460 respondents that were only surveyed in 2020.

The main aim of the study is to provide evidence of impacts felt by rural households 2 to 3 years after they first accessed two innovations in the access to finance and land rental markets and thereby estimate the investment and income effects resulting from EEU interventions. The survey also probed demographic and socio-economic characteristics of respondents, as well as knowledge, awareness, perceptions, and practices relating to EEU innovations. Key findings are summarised below:

Beneficiary Profiles of Landlords, Tenants and SLLC Loan Borrowers

Key Finding 1: Beneficiary landlords are predominantly smallholders and vulnerable people who may not be able to farm the land themselves; particularly female-headed households and elderly people have sought access to the SLRC.

Key Finding 2: Beneficiary tenants are comparatively younger, have a larger household, and are wealthier than landlords, but conversely have very small landholdings. The latter pushes them to seek available land to rent in to expand their agricultural production. They can do so with more human and economic resources than landlords and therefore use the land more productively.

Key Finding 3: Although land is scarce and increasingly fragmented in rural Ethiopia, landholders who rent out land are disadvantaged against tenants due to their comparatively weak social and economic situation. Landlords therefore benefit from the additional tenure security provided through a formal contract.

Key Finding 4: SLLC loan borrowers have relatively large land holdings, are more resource-rich and have better education on average. Most borrowers are however smallholder farmers, with 60% of SLLC loan borrowers holding under 2 hectares of land. Substantial heterogeneity of borrowers' profiles across gender, land sizes, and wealth levels, suggests that the SLLC loan is a very versatile financial product that addresses financial constraints and needs of different types of landholders.

Access to Finance: SLLC-Linked Loan

Key Finding 5: The SLLC loan increase financial inclusion of rural farmers. 86% of borrowers did not have access to credit prior to the SLLC loan and loan amounts of the SLLC loan much larger than available alternatives (mainly group loans)

Key Finding 6: SLLC loans are invested in productive activities and are highly additional to the households' investments across cropping, livestock, and non-farm activities. On other words, farmers would not have been able to finance the same investments without the SLLC loan.

Key Finding 7: A lot of borrowers take new loans after they have repaid their first loan in full. Repeat loans are larger and boost investments in productive activities even more, indicating a learning effect of borrowers. This is a good indication for the sustainability of the loan product.

Key Finding 8: A significant share of borrowers use the loan to diversify and invest in non-farm activities, especially females in male headed household. This contributes to the economic empowerment of female farmers.

Key Finding 9: Cropping investments support the intensification of cereal crops by financing more and higher quality cropping inputs, diversification to high-value crops, and building commercial assets. This results in an increase in gross cropping incomes that do allow borrowers to make a sizeable profit after repaying the loan in full including interest. Especially investments in livestock trading have high returns in the short run, which allow the borrower to repay the loan and make a profit quickly.

Land Rental Formalisation

Key Finding 10: The reform of land rental formalisation and introduction of the Standard Land Rental Contract (SLRC) in combination with awareness raising efforts produced an expansion of the land rental market. Over 30% of the households using the SLRC had not previously rented land (in or out). This result is backed up by 84% of landlords and 96% of tenants who stated to be more willing to rent land with the SLRC.

Key Finding 11: Access to the SLRC and information campaigns have had a sustained impact on the formal registration of land rental agreements. Only around 30% of farmers had ever registered a land rental transaction before using the SLRC. At 2-to-3 years since the first uptake of SLRC, landlords register transactions covering 91% of all the land they rent out, and tenants do so for 82% of their rented-in land.

Key Finding 12: Land rental formalisation boosts tenure security, particularly by reducing the frequency and severity of land rental disputes. About 80% of beneficiaries cite the reduction in land rental disputes as a key benefit of the SLRC. In parallel, the incidence of disputes among these farmers dropped from 32% prior to second level land certification to only 5% in 2019/20. In addition, by registering their contracts, landlords feel reassured that the tenant will return the land at the end of the land rental period.

Key Finding 13: Around 40% of landlords and 47% of tenants reported enjoying greater bargaining power through land rental formalisation. This suggests that when farmers become more aware and certain of their rights and obligations, they feel more empowered to negotiate land rental terms. As a result, the land rental market might become more competitive and efficient, as well as more equitable for those who are more vulnerable.

Key Finding 14: The greater bargaining power outlined in Key Finding 15 has allowed landlords to obtain higher rental prices in cash rental agreements. Evidence from parcel-level data shows that the rental price paid by tenants on SLRCs increased by over 30% against any verbal or written agreements signed before the first SLRC uptake (Br 1,300 to Br 1,714 per month/hectare).

Key Finding 15: The increased tenure security provided through the formal rental contract has started to shift farmers' rental behaviour. Specifically, most landlords and tenants are now more willing to engage with partners outside of their communities as well as to extend the duration of their agreements.

Key Finding 16: Landlords and tenants who use LRSPs mostly benefit from support understanding the SLRC and contract completion services, and as a result feel more secure about their contracts and find it easier to formalise.

Key Finding 17: Tenants improve their investment strategies through diversification towards commercial crops, but also by growing a larger variety of crops for food security. Tenant's incomes increase as a result of renting in more land to farm and increasing investments in cropping inputs as well as investing in new crops.

Key Finding 18: Consistent with the above results, the incomes of landlords increase as a result of using the SLRC, thereby increasing overall household income. Landlords show gradual shifts of livelihoods away from agriculture towards non-farm activities, including employment outside of the household and migration. However, for the majority cropping on the remaining land still remains the main source of income.

Key Finding 19: There is a large productivity differential between tenants and landlords. The expansion of formal land rental therefore contributes to a more productive use of rural land in Ethiopia overall, while providing income gains for both landlords and tenants.

Introduction

Aim of the Study

The UK Aid-funded Land Investment for Transformation Programme (LIFT) works with the Government of Ethiopia (GoE) to deliver Second Level Land Certificates (SLLC) to rural landholders and to create a national database to manage and update SLLC data and land related transactions, the Rural Land Administration System (RLAS). The introduction of SLLC and the RLAS is expected to improve both the administration and management of land in Ethiopia.

A better functioning land administration system creates multiple opportunities for improving the livelihoods of rural households, particularly by facilitating access to finance and improving the efficiency and equity of the land rental market. To leverage these opportunities, LIFT's Economic Empowerment Unit (EEU) has applied market systems thinking to generate innovative solutions that would have an impact on the behaviour of farmers, incentivising investment in land thereby leading to increased productivity and incomes. This report evaluates the impact of two specific innovations:

- **Access to Finance (A2F) - the SLLC loan** introduces an unprecedented financial product to the Ethiopian market, which uses second level land certificates as a form of collateral so that rural landholders can access individual credit through Microfinance Institutions (MFIs). First developed in 2016, by January 2020 eight partners MFIs had disbursed 14,738 SLLC loans through 132 branches in the Amhara, Oromia and SNNP regions.
- **Land Rental (LR) - the Standard Land Rental Contract (SLRC)** is a formal land rental contract developed by LIFT and introduced to all 4 programme regions (Amhara, Oromia, SNNP and Tigray) in combination with land rental service providers (LRSPs), who support the formal rental market by raising awareness, providing market information, and supporting the completion of the contract. This provides for more secure land rental transactions with fairer prices, especially for vulnerable landlords. By January 2020, LIFT's data shows 21,289 land rental transactions had been formalised with SLRC in 45 woredas (districts).

With an aim of investigating the impacts of the SLLC loan and SLRC, in February 2020 LIFT conducted a survey of 1343 rural households who first accessed either of these innovations in 2017 or 2018. Of these 1343 respondents, 883 have been tracked longitudinally from the first wave of the survey in 2019 and were surveyed again in 2020. As a result, this study can investigate how the economic and behaviour effects of EEU innovations develop over time. By focusing exclusively on households who took up the SLLC loan or registered land rental agreements through SLRC, the study evaluates the causal chain of changes triggered by getting a direct access to these innovations.

The Effects of the SLLC Loan

Enhancing access to finance for Ethiopian farmers is key to allow them to invest productively in their land. For example, increased access to finance gives smallholder farmers timely access to short-term finance for inputs (e.g. seeds, fertiliser, pesticides, and herbicides), and allows them to smooth cash flows. Most farmers, however, have limited access to credit from financial institutions, and those that do generally rely on group loans from MFIs. To the extent that group loans are available, they are limited in size, which restricts farmers' ability to invest productively in their land. On the supply side, MFIs face institutional and capacity constraints that limit their ability to offer individual based loan products to their clients in rural areas.

At the same time, land is often the most valuable asset and main source of livelihoods for farmers, yet land rarely meets the collateral requirement of formal lenders. Specifically, in Ethiopia land cannot be alienated from the holder by private contract.

With the introduction of SLLC, the EEU tested an output/product collateral, where the guarantee is not provided by the land but by the use rights for a limited period. More specifically, the EEU promoted a loan product that used the produce from land as collateral, with the certificate (SLLC) acting as a proxy for this produce. The intervention received support from the Amhara Regional Government of Ethiopia and the National Bank of Ethiopia, which allowed testing of the product and supported the development of an adequate regulatory framework.[1]

[1] In practice, since 2016, the Oromia and SNNP Regional Governments have accepted the SLLC loan to be piloted, however their regional proclamations have not yet been updated to formally recognise the right of use of land as a collateral in loan agreements.

After two to three years from the uptake of the first SLLC loan, borrowers will have completed at least the first loan cycle set for one to three years depending on the lending MFI. At this junction, these farmers may have taken different trajectories in terms of their financial behaviour. They may have taken up new loans, or perhaps decided to finance economic activities with own resources. It is assumed that after farmers have completed their first loan cycle, they are expected to become more confident in the effectiveness of the loan and how it could change their investments. Thus, in the second and third round of the loan cycle, beneficiaries are expected to take-out larger loans and start investing in new farm or non-farm activities, technologies, crops, which could be more transformational for their livelihoods. As a result, cumulative effects of the SLLC loan on farmers' incomes depend on farmers' propensity to invest as well as the continued relevance of the loan product in meeting borrowers' financing needs.

The Effects of the Standard Land Rental Contract

Around 41% of all smallholder farmers in Ethiopia are engaged in the land rental market, mostly through informal rental arrangements.[2] Renting land remains a key source of income for many farmers (and particularly vulnerable groups), and also a way for landless farmers and the more commercial farmers to access land to farm. The high level of informality means that the rights of landlords and tenants are not protected, with vulnerable groups suffering disproportionately from risks of contract breaching. Tenure insecurity when engaging in land rental transactions leads to higher risk of obtaining lower rental prices than the market price, risk of losing possession of land if rented for too long, or disputes due to, for example, double renting of land. These distortions also constrain the productivity-enhancing potential of shifting land from low productivity farmers to high productivity ones (land misallocation).[3,4]

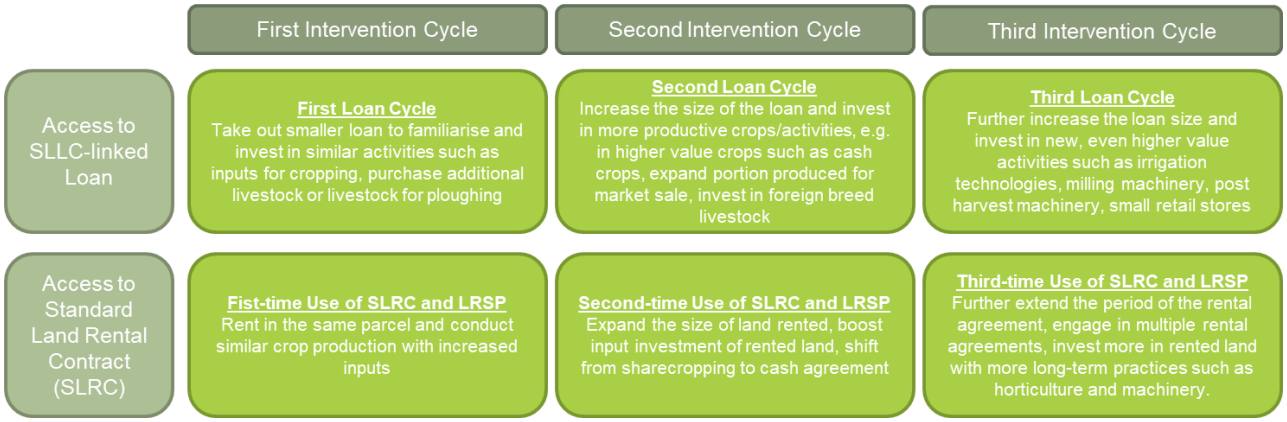
To improve the efficiency and equity of the land rental market, the EEU supports the GoE's Rural Land Administration and Use Offices to introduce and operationalise a clear and standardised process for registering land rental transactions through the SLRC. Furthermore, the EEU developed a system which generates information for farmers on the importance of formalising transactions, the land available for rent and tenants seeking land, and market pricing. To fulfil this function at a local level, LRSPs are nominated by their community and sanctioned by the Rural Land Administration and Use Offices at woreda and kebele levels.

Two to three years post the first uptake of the SLRC, landlords and tenants are expected to benefit from increased perceptions of tenure security over time as they experience fewer disputes and better enforceability of the contract. As the perceived risks from renting decrease, tenants may feel more confident to invest on rented-in land, particularly through repeated use of the SLRC over several seasons. This would increase land productivity. Furthermore, greater tenure security over time could trigger a progressive shift from sharecropping agreements to agreements to cash-based agreements, increased land rental periods, increase in the size of land rented, and with this a higher likelihood of long-term investments in the land.

The 2020 EEU Impact Survey aimed at detecting evidence for the trends described above by tracking participation in the interventions to 2020 and establishing a correlation between these behaviours and higher-level outcomes such as livelihood strategies, use of inputs, investments in water and conservation structures, as well as land productivity, incomes and consumption.

[2] ELAP baseline survey for 2013 and LIFT data from 2019 EEU Impact Survey.
[3] Deininger, K. Songqing, Mulat, Berhanu and Gebre-Selassie, *Market and Non-Market Transfers of Land in Ethiopia: Implications for Efficiency, Equity, and Non-Farm Development*. World Bank Policy Research Working Paper No. 2992. 2003.
[4] Holden S., S. Bezu and M. Tilahun (2016) *How Pro-poor are Land Rental Markets in Ethiopia?* Center for Land Tenure Studies/School of Economics and Business Norwegian University of Life Sciences, Ås, Norway.

Figure 1 - Impacts of the SLLC loan and SLRC over time



Research questions

To test the effects outlined above, this study considers the following research questions.

Demographic and socio-economic characteristics of beneficiaries

- What are the differences in LR market participation and A2F participation among sub-groups by gender, region, age, poverty status, access to land, and vulnerability criteria?

Knowledge, awareness, practices, and perceptions

- After over two years of participation in A2F and LR interventions, what are the sustainability and continued relevance of the awareness and understanding the standard land rental contract (SLRC) and the SLLC loan for beneficiaries, including for relevant sub-groups?
- After over two years of participation in A2F and LR interventions, what are the main practice and perception changes that resulted from continued access to A2F and LR interventions for beneficiaries, including for relevant sub-groups?

GESI and adverse effects

- After over two years of participation in LR interventions, what is the impact of rental formalisation on vulnerable groups, including female-headed households and women in male-headed households?
- After over two years of participation in A2F interventions, what is the impact of the SLLC loan on vulnerable groups, including female-headed households and women in male-headed households?
- What are potential adverse effects of the SLLC loan and the standard land rental contract (SLRC) after over two years, including for relevant sub-groups?

Investment and income changes

- After over two years of participation in LR interventions, what is the evidence that the standard land rental contract (SLRC) leads to a cumulative, sustainable increase of investment in land, including for relevant sub-groups? What is the cumulative, additional impact on land yields and farmers' incomes?
- After over two years of participation in A2F interventions, what is the evidence that the SLLC loan increases investment in agriculture and thereby increases yields and incomes for rural households, including for relevant sub-groups? This includes evidence from repeat loan takers and non-takers (i.e. households who do not take up another loan after repayment).
- Outcome indicator 2: What is the percentage of SLLC loan and standard land rental contract (SLRC) beneficiaries, who have increased investment in improved inputs or other income-generating activities?

Spill-over and wider impacts

- After over two years of participation in LR and A2F interventions, what is the evidence that the SLLC loan and land rental market formalisation have spill over effects beyond agricultural smallholder development? Specifically, is the SLLC loan stimulating creation of agricultural jobs by large farmers as well as investment in rural non-farm economic activities? Are new rental opportunities created by the land rental formalisation contributing to investment in rural non-farm economic activities and/or migration to cities?

Methodology

Evaluation and survey design

This study applies a theory-based contribution analysis approach to quantitative data collected from 1343 EEU beneficiaries.[5] Key indicators were developed to link the uptake of the SLLC loan or the SLRC with the expected impact of higher incomes, following a sequence of steps outlined in intervention-specific theories of change or results chains. The results chains are organised at the output, outcome, and impact levels. At the output level, the study surveys rural households' practices, behaviour, knowledge, attitudes, and perceptions in access to finance and land rental market. At the outcome level, the study links changes in output level data to measures of livelihood strategies, diversification/concentration of economic activities, investments in cropping, livestock, and rural non-farm economy activities, as well as water and conservation structures. Finally, these further changes at the outcome level are correlated to yields, incomes, consumption, and future capacity to invest.

Within this framework, the study employs before-after comparisons of key indicators as well as correlation analysis to provide evidence for the assumptions linking different levels of the theory of change. This methodology excludes a formal counterfactual to the uptake of the intervention that would allow to quantitatively isolate effects of SLLC loan or SLRC. To mitigate for this, the survey included qualitative probing questions establishing beneficiaries' intentions and self-reported experience. Furthermore, analysis of quantitative indicators was disaggregated at various sub-groups levels, including region, sex, and landholding categories. This allows to further validate the presence of effects that are expected by the theory to vary by sub-groups due to contextual or socio-economic characteristics. Finally, regression analyses were employed where appropriate to remove bias from observable characteristics and obtain more accurate estimates of intervention effects.

Data from the 2019 and 2020 waves of the EEU Impact Survey was analysed following both a panel approach and a cross-sectional approach. Panel analysis tracks performance of indicators for the 883 respondents that are surveyed in both waves, from the year prior to the first uptake of SLLC loan or SLRC until 2020. Panel respondents were initially enrolled in the 2019 survey from two cohorts of beneficiaries who had accessed interventions in 2017 and 2018, respectively. In the 2019 survey, to establish a baseline and measure before-after changes, data was collected both for the first year of the SLLC loan or SLRC, and for the year prior. To refer to different time periods this report uses the following notation:

- Y0 is the year before the SLLC loan or SLRC. This is either 2016-17 or 2017-18 depending on when the respondent took out the loan or entered in the standard land rental contract.[6]
- Y1 is the first year of the SLLC loan or SLRC. This is either 2017-18 or 2018-19 depending on when the respondent took out the loan or entered in the standard land rental contract.
- Y2 is the second or third year of the SLLC loan or SLRC. This is 2019-20 for all respondents.

The cross-sectional approach relies on both the panel sample and the additional top-up sample of 460 respondents that were enrolled in the study in 2020 from the same two cohorts of beneficiaries. This method uses a larger sample than the panel analysis and enables more statistically powered analysis at the sub-group level.

Sampling design and approach to longitudinal tracking

The 2019 wave of the EEU Impact Survey employed a stratified two-stage sampling design whereby firstly woredas (districts) and kebeles (villages) were selected purposefully, and subsequently respondents were drawn randomly from lists of A2F and LR beneficiaries maintained by LIFT. In the context of market system interventions, purposeful sampling allows to direct the research where interventions are being piloted more intensely. This way, the research can yield valuable learning to inform adaptations and scale-up of the interventions. Furthermore, with an aim to quantify early impacts on investments and incomes, the survey targeted beneficiaries who had taken up SLLC loan or SLRC at least one agricultural season prior to the 2019 survey. Finally, logistical considerations suggested to focus on kebeles where the number of beneficiaries was large enough to take a meaningful (random) sample.

[5] Stern, E., Stame, N., Mayne, J., Forss, K., Davies, R., and Befani, B., "Broadening the range of designs and methods for impact evaluations." (2012). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/67427/design-method-impact-eval.pdf

[6] Both the 2019 and 2020 surveys were carried out in the months of February and March to ensure comparability of the responses to identical questions.

The sampling process yielded a sample of 926 respondents across 19 woredas in the four programme regions.[7] To compensate for any loss of panel sample and to further boost sample sizes, in 2020 a top-up sample was established by randomly drawing 460 respondents from the original lists of beneficiaries where the names of the 2019 respondents had been removed. To improve the statistical power of female respondents' sub-group results specifically, within the landlords and A2F groups, the top-up sample was stratified by sex of the respondent and women were oversampled (i.e. sampled more than proportionally to their beneficiary share).

Throughout the report, aggregate results at regional level are obtained by weighting the panel or cross-sectional samples to reflect the actual regional and gender breakdown of the beneficiary populations in the period March 2017 to July 2018. The challenges and limitations section elaborates further on likelihood that attrition and sample top-ups yield sampling bias.

Table 1 – Number of Respondents by Beneficiary and Survey Groups, 2020 EEU Impact Survey

	EEU Landlords	EEU Tenants	SLLC loan borrowers	Total
Panel sample	245	248	390	883
Top-up sample	149	136	175	460
Total - Cross-sectional sample	**394**	**384**	**565**	**1343**

EEU Beneficiary Profiles

This section provides an overview of EEU beneficiary profiles in terms of their demographic characteristics, education, access to land, poverty, and vulnerability. The section concludes with an overview of the exposure of EEU beneficiaries to the interventions during 2016-2020. This analysis employs the full cross section of 1343 respondents interviewed in 2020.

EEU Landlords Group

Among EEU beneficiaries, landlords are found to be a relatively vulnerable and poor group of landholders who might not be able to farm the land themselves. Their age profile suggests that while they are on average the oldest group (47.4-year-old) with a large share of elderly people, they still include several younger farmers (one in four are under 35). About 35% of landlords are female-headed households overall, and this share is substantially higher than among tenants and SLLC loan borrowers. Most of these female heads are either widowed or separated. This goes some way to explain why landlords have smaller households on average than both tenants and SLLC loan borrowers (4.45 members v. 5.75 and 6.10).

In terms of access to land, EEU landlords are predominantly smallholders with only 0.81 hectares of land directly held on average. Larger holders are very rare within this group, and only 6% hold more than 2 hectares of land. Additionally, data on ownership of 32 distinct household and business assets shows that landlords might be the least wealthy of the EEU beneficiaries. Specifically, landlords have the lowest average and median values of a composite wealth index, which suggests that these households have fewer and less valuable assets. By breaking down the score distributions into four homogenous groups, it is also apparent that 53% of landlords can be classified as 'low wealth' and 18% as 'low middle wealth' (see Figure 2).

Evidence that landlords might be socially, and economically marginalised people is also attested by the relatively low levels of education reached by these farmers. Almost half of them do not have a formal education and only about 43% reported the head of the household to be able to read and write.

Finally, landlords also present the highest prevalence of households with vulnerable people (47%). In the context of rural Ethiopia, vulnerable people are the elderly (over 65), orphan or abandoned children, persons who are sick, and persons with disabilities. Disability is also a multidimensional attribute which, following the Washington Group on Disability Statistics, includes difficulty seeing, difficulty hearing, difficulty climbing steps, difficulty remembering or concentrating, difficulty in self-care tasks, and difficulty communicating.[8] Among EEU beneficiaries, landlords' households have the highest share of elders (22%), orphan or abandoned children (12%), disabled people (21%), and sick people (14%).

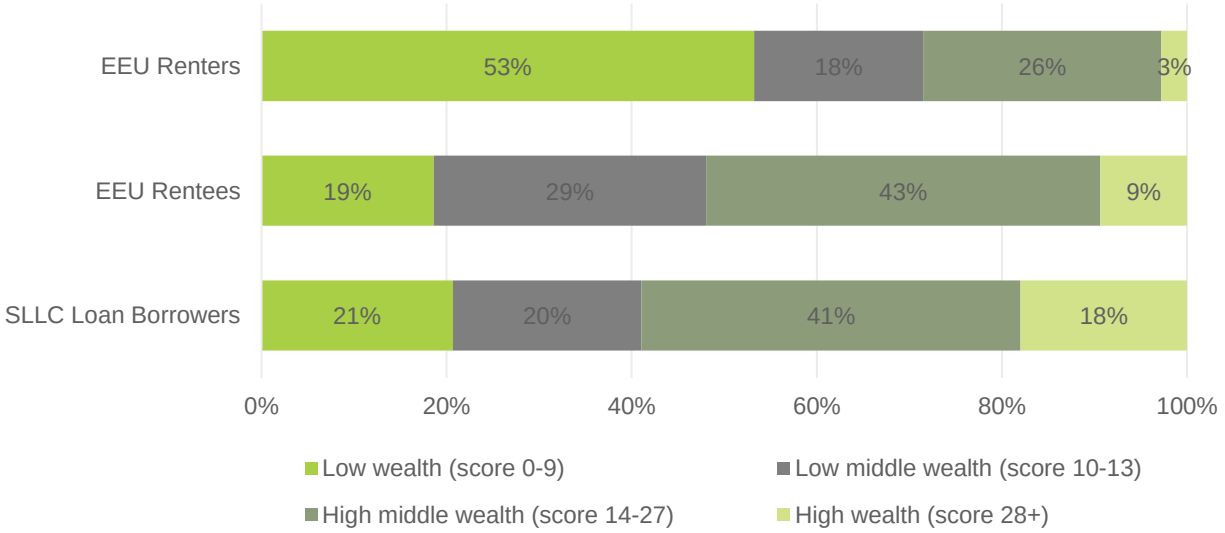
[7] In several woredas, A2F and LR interventions overlap. Among the 19 sample woredas, seven serve as both A2F and LR woredas.
[8] See http://www.washingtongroup-disability.com/about/

Table 2 - EEU Beneficiaries Key Demographic and Socio-Economic Characteristics

Variable	EEU Landlords	EEU Tenants	SLLC loan borrowers
Beneficiary group's average age	47.4	41.3	46.7
Female-headed households	34.9%	2.2%	6.4%
Women respondent in male-headed household	4.3%	1.6%	14.1%
Household head can read and write	43.2%	70.1%	55.6%
Smallholder farmers (<2 hectares held or rented-in)	94.1%	85.7%	60.4%
Vulnerable households	46.8%	24.2%	28.0%

In conclusion, because of their economic and social characteristics, EEU landlords might not hold sufficient resources and human capital to farm the land effectively. By renting out land, however, they can benefit from additional rental income or share of crop in sharecropping agreements.

Figure 2 - Wealth Index Based on Household and Business Assets



EEU Tenants Group

As compared to the landlords, the EEU tenants are younger on average (41.25 years-old) and more likely to be male. In fact, virtually all the tenants (95%) are male heads living with their wife or female partner. Their households are also larger on average (5.75 v. 4.45 members).

The key characteristic of tenants is that they hold smaller landholdings than both landlords and SLLC loan borrowers. Their average land holding is just 0.58 hectares, and one tenant out of two holds 0.46 hectares or less. By renting in land, however, their land holdings rise significantly to 1.30 hectares on average (1.01 ha median), above the landlords' average (0.84 ha). These results suggest that these farmers might have too small land holdings to sustain their households, and therefore are drawn to rent in land from others.

Furthermore, tenants rely on a richer resource base to employ on farming as compared to landlords. Specifically, wealth scores show these farmers are significantly better endowed than landlords. On a score ranging from 0 to 56 (max value achieved in the sample), they reach an average score of 16.3, while landlords only achieve 10.7 points (see Figure 2 above). Tenants also enjoy higher levels of education, although this might partly be due to their younger age. Nonetheless, about one in four tenants only have a wealth score of 10 or lower, which suggests that there might a sub-group of tenants that is not resource rich and likely dependent on renting-in for subsistence.

In terms of social drivers of vulnerability, findings indicate that EEU tenants present a relatively low prevalence of vulnerability. Particularly, the shares of tenants' households with an ill person and with a disabled person are just 6.3% and 12.3% respectively. Thus, the results are coherent with the intuition that tenants are more productive and boast more resources to employ on farming as compared to landlords.

SLLC Loan Borrowers

Borrowers of the SLLC loan are demographically and economically different from both landlords and tenants. While they are slightly younger farmers with respect to landlords, they have larger households with respect to

tenants (6.1 members). The wide range of borrowers' age, spanning from 23 to 78 years old with an average of 46.7 years, suggests both younger and older farmers have accessed the SLLC loan.

The defying characteristics of SLLC loan borrowers are their larger landholdings and richer resource base. These farmers hold on average 1.83 hectares of land which grow to 2.26 when rented-in land is accounted for. Further, their average wealth score is 18 against the 10.7 of landlords and 16.3 of tenants. These results fit with the view that wealthier households might have more bankable investment projects to finance than less wealthy households and might therefore apply more frequently for the SLLC loan.

Despite the clear messages of the analysis of averages (means), the distributions of landholdings and wealth scores reveal that a wide range of different types of farmers have obtained the SLLC loan. It is found that about one in four of SLLC loan borrowers hold less than 1.10 hectares (including rented-in land), while 40% are medium-size holders with more than 2 hectares of land. About 6% exceed the 5 hectares threshold and might be therefore classified as large farms with significant commercial potential. In addition, at least one out of five SLLC loan customers have a wealth score of 9 points or less, which places them in the 'low wealth' category (see Figure 2). Thus, the SLLC loan has probably addressed financial constraints for a variety of household types, which is reflected in the loan amounts and uses of the loan further analysed in the sections below.

Another important marker of the broad reach achieved by the SLLC loan is the share of borrowers who are females (34% according to monitoring data). A third of these are female-headed households while two thirds are women in male-headed households. Thus, MFIs have successfully targeted women, not only where they lead the household but also where they are active decision markers in male-headed households. Sections below further expand on the impacts felt by women, in terms of shifting decision making within the household or gaining access to resources for independent economic activities.

Finally, although SLLC loan borrowers' households may have a strong resource base, it is found that almost over one in four also possess at least one of the vulnerability criteria. Particularly, 13.7% of households have at least one disabled person in their household.

EEU Beneficiaries' Exposure to Interventions

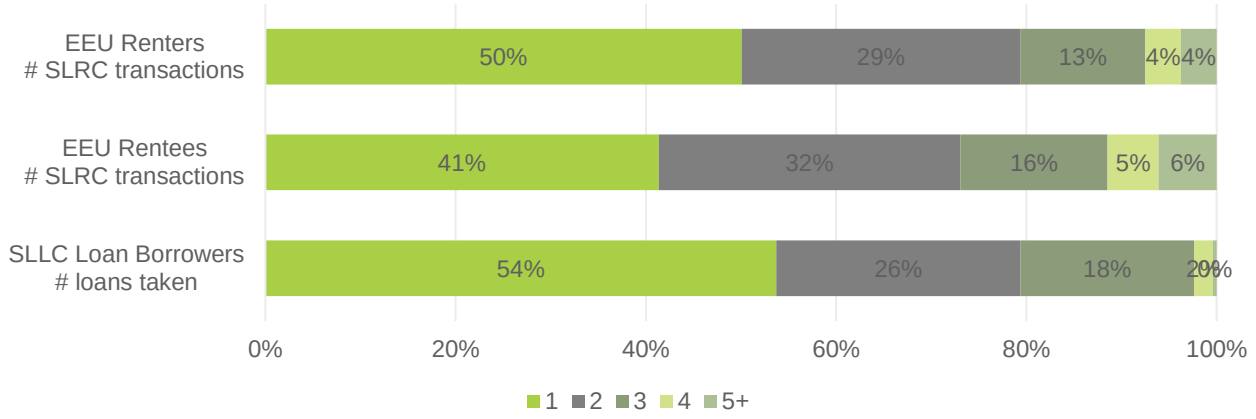
In the context of the SLRC and SLLC loan, exposure to the interventions can be measured in terms of years since the first adoption as well as number of transactions or accesses to a service. As outlined in the Introduction and Methodology, this study is designed to focus on impacts at 2-3 years since uptake. Specifically, based on the date of the SLRC transactions or SLLC loan disbursement reported by the respondent, both landlords and tenants first accessed the SLRC 2.2 years prior to the survey (February 2020), while SLLC loan borrowers took a loan 2.3 years prior. Across the three groups, the minimum level of exposure is 1.7 years and the maximum is 2.9 years.[9]

Over this period, on average landlords formalised 1.9 land rental agreements through the SLRC, while tenants formalised 2.1. The distributions of SLRC accesses, shown on

[9] Data in this paragraph is drawn from the 2019 data. The date of the first loan or SLC was not collected again in 2020.

Figure 3, suggest that a small number of farmers are responsible for a large number of transactions (up to 20 for one tenant), while about three out of four beneficiaries had one or two SLRCs only.

Figure 3 – EEU Beneficiaries' Exposure to Interventions – Number of Accesses (2017-2020)



As for the SLLC loan borrowers, some 26% of beneficiaries have accessed two loans and 20% three or more, while 54% took out only one loan (see Figure 3). As several SLLC loans cannot be taken at the same time, this is evidence that some SLLC loan borrowers actively seek and obtain finance over multiple cycles. In addition, beneficiaries with only one SLLC loan may still be repaying loans with 3-year terms and may therefore not had had the chance to apply for a new loan.

Key messages on EEU Beneficiary Profiles

- EEU landlords are predominantly smallholders and vulnerable people who may not be able to farm the land themselves; particularly female-headed households and elderly people have sought access to the SLRC
- EEU tenants in comparison are younger and have larger household; they are characterised by very small landholdings which push them to seek available land to rent in; they also have a higher economic status than landlords on average, however a small share of them might be resource-poor and rent-in land for subsistence.
- Although land is scarce and increasingly fragmented in rural Ethiopia, landholders who rent out land are disadvantaged against tenants due to their comparatively weak social and economic situation
- SLLC loan borrowers have relatively large land holdings, are more resource-rich and have better education on average. Most borrowers are however smallholder farmers, with 60% of SLLC loan borrowers holding under 2 hectares of land. Substantial heterogeneity of borrowers' profiles across gender, land sizes, and wealth levels, suggests the SLLC loan is a very versatile financial product that addresses financial constraints and needs of different types of households

The Effects of the SLLC Loan

SLLC Loan Uptake and Effects on Investments and Incomes

Key Features of the SLLC loan

Analysis of the SLLC loan features reveals significant variations in key characteristics of this instrument across the three regions where the SLLC loan is currently available (Amhara, Oromia, and SNNP). Note that this comparison employs data captured in the 2020 survey on the most recent loan taken by borrowers.

Loan amounts. While the average loan amounts across all borrowers is about Br34,976, loan amounts vary substantially both within and across regions. Specifically, MFIs disburse larger amounts per customer in Amhara against both Oromia and SNNP (+9% and 21% on average, respectively). In addition, the loans availed ranged from just Br9,000 to Br100,000 across borrowers overall with a median of Br32,000, and this distribution is somewhat similar across regions. This suggests that both large and small amounts can be made available through the SLLC loan.

Loan terms. Loan terms are, with only a few exceptions, 3 years in Amhara and 1 year in Oromia and SNNP. Longer loan terms in Amhara help to frame the larger loan amounts disbursed in that region. This also means that if borrowers in Oromia and SNNP can take loans repeatedly after each cycle, they can leverage much greater external finance for their investments than borrowers in Amhara. Conversely, clients in Amhara benefit from repaying the loan over a longer period which might lessen their loan burden.

Interest rates. Annual interest rates are very consistent both across regions and across borrowers within each region. Specifically, all SNNP borrowers reported paying 15%, while in Amhara and Oromia interest rates vary from 17% to 19% with an average of 18.4% in the former region and 17.7% in the latter.

Land area pledged by borrowers. Statistics on the land area pledged by borrowers as collateral indicate a very significant heterogeneity both among borrowers and across regions. Overall, borrowers collateralised between 0.03-16.50 hectares of land to access the SLLC loan, with a mean of 1.19 hectares. In Oromia the average land holding pledged of roughly 2 hectares is over 100% larger than in Amhara and SNNP where it is respectively 0.97 ha and 0.63 ha. This suggests that while the loan overall is targeted to smallholders, Oromia's MFIs have addressed the instrument to some larger farmers. Considering the loan amounts in SNNP are only slightly smaller than in Oromia and the loan terms are 1 year in both regions, SNNP farmers likely display a higher loan-to-land ratio than Oromia farmers. Therefore, if the land area pledged is a rough proxy of the capacity to repay the loan, SNNP farmers are likely to be under more pressure to generate cash incomes than Oromia farmers. Exposure to financial risk due to the SLLC is further analysed below.

Repayment terms. The profiles of SLLC loan repayment terms reveal that for over 90% of customers the loan is repaid in annual instalments. This means that in SNNP and Oromia, only one repayment is due at the end of the loan term (of 1 year), while in Amhara on average three repayments, one per year, are to be made.

Table 3 – Summary of the Key Features of the SLLC Loan

Region	Loan amount (ETB)	Loan amount (GBP)[10]	Loan term (years)	Interest rate (percent)	Land area pledged (hectares)
Amhara	36,929.04	903.8	3.03	18.43	0.97
Oromia	33,782.63	826.8	1.03	17.68	2.05
SNNP	30,427.86	744.7	1.22	15.00	0.63
Total	34,976.35	856.0	2.20	17.63	1.19

Financial Access and Behaviour of SLLC Loan Customers

Evidence on farmers' borrowing behaviour before and after accessing the SLLC loan suggests this new loan instrument increased financial inclusion and access to credit. In the year prior to accessing the SLLC loan, only 14% of borrowers had taken out formal or informal credit, mainly through group loans offered by the MFIs.[11] This means that 86% of customers lacked access to credit before they applied for the SLLC loan. Further, the loan amounts availed through these alternative credit instruments were on average just Br11,800, or about one third of the average SLLC loan amounts. Thus, SLLC loan borrowers had very limited access to credit prior to using the SLLC loan.

In the period between the first SLLC loan and the 2020 survey, which varies 1.6-2.9 years across farmers, SLLC loan beneficiaries took out 1.73 SLLC loans in total (see Table 4). Specifically, among those who completed at least their first loan cycle, 73% overall have reapplied and obtained another SLLC loan. Table 4 also shows that the average number of loans taken is highest in Oromia and SNNP and lowest in Amhara. This is the result of both longer loan terms (3 years against 1 year) and lower rates of re-applications for a second loan in Amhara.[12]

These results suggest that borrowers are generally successful in repaying their loans while most of them apply for a repeat loan at the end of their terms. Further, this analysis brings into focus significant differences across beneficiaries in terms of exposure to interventions, as well as their propensity to take out credit.

Table 4 – Access to Credit before and after SLLC Loan

Variable	Amhara	Oromia	SNNP	Total
Had a loan from a formal or informal lender prior to SLLC loan (%)	16%	11%	12%	14%
Number of SLLC loans taken 2017-2020 (mean)	1.21	2.49	2.14	1.73
Has an SLLC loan in 2020 (%)	81%	64%	75%	75%

Note: panel sample only

[10] Loan amounts were converted to Pounds using current exchange rate of 1 ETB = 0.0244733 GBP from www.xe.com.
[11] Both bank loans and informal loans from family, friends or moneylender were extremely rare prior to the SLLC loans (under 2%).
[12] In Amhara, 49% of those who finished the first loan cycle apply and obtain a second loan, while this rate is 86% in Oromia and SNNP.

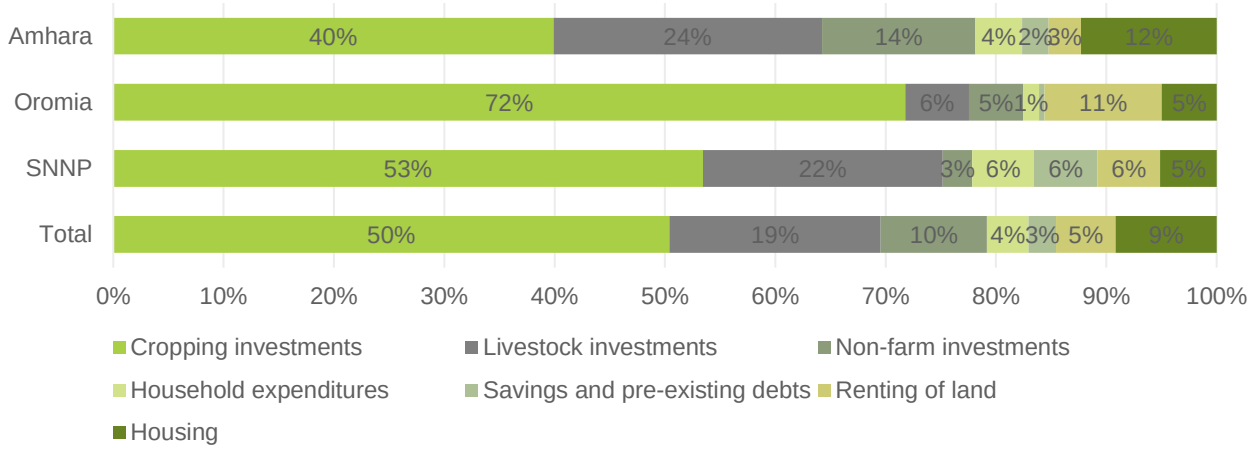
It should also be noted that during the period of this study, SLLC loan customers had virtually no resort to other forms of finance. Specifically, only about 2% of farmers in Oromia and 1% in SNNP took out credit from other formal lenders, while 3% in Amhara, 1% in Oromia, and another 1% in SNNP took credit from an informal lender, in particular from family, friends or neighbours. This finding suggests that exposure to other credit tools was negligible among SLLC loan customers and further illuminates the dearth of appropriate credit services for farmers in rural Ethiopia.

Economic Purpose of the SLLC Loan

Through the SLLC loan, MFIs introduced a new credit tool designed to finance investments in productive activities. SLLC loan borrowers might however decide to allocate the loan amounts to a range of expenditures, including productive ones like cropping investments, and unproductive ones like household expenditures. For example, in an effort to smooth consumption over the agricultural season, farmers may purposefully allocate funds to education or health, while keeping investments in productive activities largely constant over time. Consequently, providing new credit to financially constrained households could have different outcomes on their longer-term incomes, depending on the additionality of the loan to productive investments and income generation.

Some borrowers tend to spread the loan across different expenditures categories, which suggests they might pursue multiple objectives at the same time. Most investments have a productive purpose, such as cropping or livestock rearing. On average 85% of investments can be defined as productive and only 15% as unproductive. Inputs and investments for cropping particularly receive the bulk of the new finance across the three regions, and this category is more dominant in Oromia (72% overall) than in Amhara (40%) and SNNP (53%). Next inputs and investments on livestock rearing and on non-farm activities draw respectively 19% and 10% of the total amounts. Among the unproductive expenditures, housing tops the ranking with 9% of SLLC loan amounts spent, while household expenditures, including health, education, food, clothing, and others, rake 5% in total. In sum, the SLLC loan serves predominantly productive purposes, among which cropping investments are the most significant, however some farmers also carry out other types of expenditures, chiefly spending on housing and on renting land.

Figure 4 – Allocations of the SLLC Loan Amounts across Expenditure Categories[13]



Objectives of the Productive Investments Financed by the SLLC Loan

This sub-section analyses some of the key objectives that SLLC loan borrowers pursue by investing the loan on productive activities, to help assess whether these might be transformational for their livelihoods. Crucially, the statistics below are calculated based on the subgroups of farmers investing in cropping and livestock respectively – hence not an overall share across all borrowers.

Cropping Investments

In terms of investments on cropping, borrowers reported pursuing a range of different objectives, the most common of which was intensifying production of a crop they were already farming (78% overall, see Table 5). However, over one third of farmers in Oromia and SNNP also reported investing on a new crop, which might

[13] Note: household expenditures include health, education, food, clothing, and other household expenditures.

suggest these farmers aimed at diversifying their cropping activities, possibly to more high value crops. Notably, most farmers in Amhara and SNNP also invested on farming assets such as oxen or machinery, which indicates they are building up their working capital, renting machinery to help with farming, or adopting new farming technologies such as water pumps. The proportion of farmers focusing their investment on a specific parcel of land, for example to protect its soil from erosion, was minor across regions, except for SNNP where it was 21%.

In addition, about three out of four SLLC loan customers investing on cropping also reported using loan funds to purchase both a higher *quantity* and a higher *quality* of cropping inputs as compared to what they used to do previously. This is consistent with the general objectives cited above, as investing on cropping inputs is compatible with a strategy to intensify production of existing crops.

In conclusion, by investing in cropping SLLC loan borrowers mainly aimed to invest on existing crops by purchasing more and better-quality inputs, however a significant proportion of them pursued higher value investments.

While an additional investment on inputs, particularly chemical fertilisers and improved seeds, on an existing crop could result in higher land productivity and incomes within the first agricultural year, other investments such as investing on a new high value crop could take more time to pay off as the farmer updates her farming practices. This heterogeneity of objectives is evidence that the SLLC loan is used as both short-term and long-term finance.

Table 5 – Self-reported Objectives of SLLC loan-financed Productive Investments

Variable	Amhara	Oromia	SNNP	Total
Objectives of investing on cropping (if invested on cropping)				
Invest in an existing crop that you already grew before the loan	65%	98%	73%	78%
Invested in a new crop	13%	38%	34%	26%
Invested on a specific parcel or plot of land, e.g. for soil conservation	0%	7%	21%	7%
Invested on farming assets (like oxen or machinery)	73%	21%	53%	51%
Change to cropping inputs quality and input quantity as a result of the loan (if invested on cropping)				
Purchase higher quality inputs	56%	94%	73%	73%
Purchase a higher quantity of inputs	74%	96%	53%	77%
Objectives of investing on livestock (income generation) (if invested on livestock)				
Re/sell the animal at a profit	26%	59%	17%	28%
Produce livestock by-products (e.g. milk, meat, eggs, honey) for the market	82%	38%	88%	78%
Objectives of investing on non-farm activities (if invested on non-farm)				
Start up a new non-farm activity	60%	19%	33%	51%
Finance a new business asset for an existing non-farm activity	33%	31%	17%	32%
Finance the cost of regular inputs for an existing non-farm activity	22%	28%	67%	26%

Livestock Investments

Like cropping, in rural Ethiopia rearing livestock is a major economic activity that contributes to both subsistence and income generation. Here it is found that a majority of the SLLC loan borrowers investing on livestock rearing pursued income generation through their investment. Specifically, two possible income-generating activities are contemplated in the survey: animal trading, which consists in purchasing a live animal and/or fattening inputs to sell the animal at a profit later, and production of livestock products such as eggs, milk, and honey to sell on the market. Results shown in Table 5 above suggest that some 28% of these farmers invested on animal trading and 78% on livestock products. In terms of regional differences, animal trading dominated investment options in Oromia (nearly 60%), while livestock products were relatively more prevalent in Amhara and SNNP (over 80% in both).

As the one-off incomes from animal trading are relatively better suited to measurement than incomes from repeated and fluctuating sales of animal products, this report explores specifically the returns from animal trading only in the sections below.

Non-Farm Activity Investments

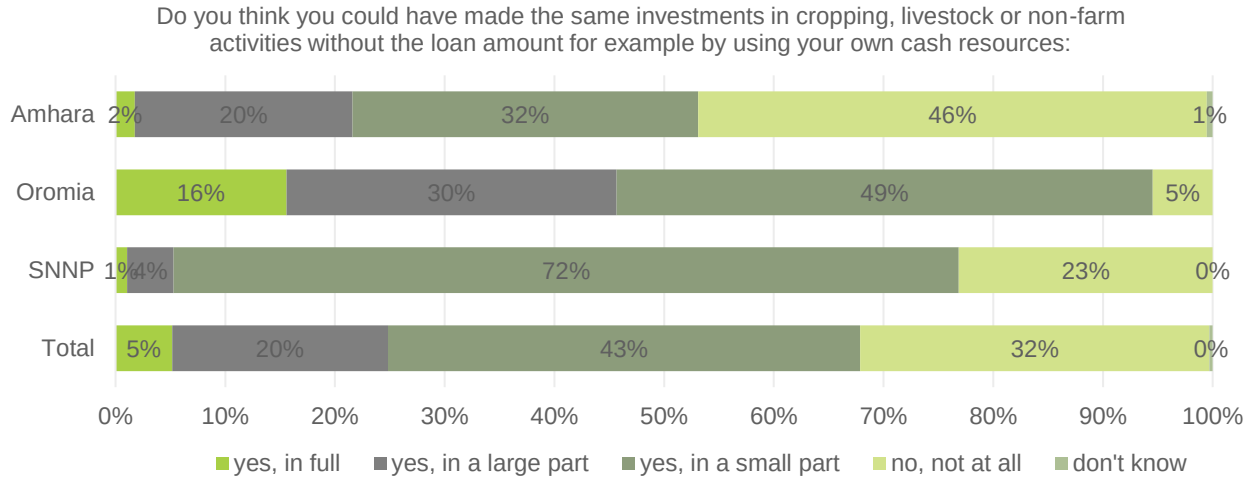
Rural non-farm economic activities support livelihoods, job creation, and broader economic growth by allowing farming households to diversify away from agriculture. While these activities attracted lower loan allocations than cropping and livestock rearing, they were still a chosen investment option for 12% of SLLC loan customers. Responses on their self-reported objectives suggest the loan supported the start-up of new non-farm activities for about half while the other half invested on existing activities (see Table 5 above). This evidence shows that the SLLC loan can support small-scale entrepreneurs to finance high upfront cost of new non-farm activities.

Non-agricultural services run from a household-owned shop and trading businesses attracted around 42% of the investments. About 13% of these customers financed a transportation business for passenger or merchandise transport, such as a bajaj or a horse cart. Challenges in classifying and surveying non-farm enterprises are evidenced by the high share of respondents who placed their non-farm in a residual group (28%).

Additionality of the Investments Made Through the SLLC Loans

An assessment of farmers' self-reported capacity to meet productive investment needs in the absence of the loan suggests that the SLLC loan has largely enabled additional investments to take place. Figure shows that only 5% of SLLC loan borrowers using the loan on productive activities could have used their own resources to cover 'in full' the productive investments financed by the loan. Instead, about one third of these farmers reported they would not have been capable to make the investment 'at all' without the loan. 43% could have used own finances to invest but would have only met a 'small part' of the investment.

Figure 5 – Additionality of the SLLC Loan to Investment in Productive Activities



It can be summarised that the productive investments financed by SLLC loans are largely additional and would not have happened without the loan. For a relatively small share of borrowers, the SLLC loan was not fully additional, suggesting that some borrowers may use parts of their loan to finance cash flows or smooth consumption.

Trends in Economic Activities Before and After the SLLC Loan

The following three sections capture the trends in SLLC loan borrowers' economic and livelihood strategies, investments on productive activities, and incomes over the period Y0 to Y2, i.e. the year prior to the first loan and the 2019/20 season. This analysis compares factual and quantitative data collected in the 2019 and 2020 surveys exclusively for those respondents that were tracked between the two surveys (panel analysis). This is meant to triangulate and substantiate results emerging from attitudinal and behavioural data reported in the previous sections. Overall a good degree of consistency of the results is found between these two approaches.

Firstly, an analysis of the economic activities carried out by SLLC loan borrowers shows a clear spike in livestock rearing and non-farm activities between Y0 and Y2 (see Table). While cropping and employment outside the household remained stable, about 50% of borrowers started engaging in livestock rearing and 22% took up a non-farm activity. These results are compatible with the self-reported objectives of the loans that showed livestock and non-farms as key targets of investments.

Repeat loans: key differences in loan features and economic purposes

A key hypothesis regarding the borrowing behaviour of SLLC loan beneficiaries is that after the first loan cycle, they might become more confident about the effectiveness of loan and decide to take out larger loans. Here evidence from the 2020 survey, where the last two loans taken by respondents were studied, shows that indeed for those who took out more than one loan, the most recent loan is about 30% larger than the previous one. This difference is starker in Amhara (+47%) than in Oromia and SNNP. Concurrently, MFIs applied the same loan terms and interest rate.

Region	Mean most recent loan	Mean previous loan	Difference	P-value
Amhara	Br45,935.70	Br 31,337.27	Br 14,598.43	0.001
Oromia	Br 34,891.31	Br 27,837.62	Br 7,053.68	0.000
SNNP	Br 27,786.04	Br 24,087.97	Br 3,698.07	0.000
Total	Br 35,692.49	Br 27,674.76	Br 8,017.73	0.000

Note: 2020 cross-sectional sample; pairwise t-tests

Table 6 – Trends in SLLC Loan Borrowers' Economic Activities before and after the SLLC Loan

Region	Variable	Proportion Y0	Proportion Y2	Diff.	p-value
All	Cropping	97%	100%	3%	0.000
	Livestock	50%	98%	48%	0.000
	Livestock other than oxen	7%	95%	89%	0.000
	Non-farm activity	8%	30%	22%	0.000
	Employment outside the household (n. of members)	0.05	0.03	-0.02	0.669

Note: panel sample only; pairwise t-tests

Over the Y0-Y2 period, cropping remained a primary source of livelihoods for virtually all the SLLC loan borrowers. Assessing patterns in intensification of production of existing crops, diversification into new crops, and degree of produce commercialisation is therefore essential to understand changes to farmers' livelihood strategies. An analysis of the number and types of crops grown and sold on the market reveals that SLLC loan borrowers overwhelmingly pursued diversification to higher value crops, which are here defined as any non-cereal crops. Specifically, across the three regions the number of crops grown rises from 2.3 to 3.7 on average, while the percent of farmland allocated to higher value crops grows from 12% to 21%. Concurrently, farmers also sold on the market more of their crops in total (from 1.9 to 3.0 on average). Thus, while SLLC borrowers continue to focus on cereals as the primary subsistence crops, over the Y0 to Y2 they specialised more on higher value crops that can contribute to both consumption and income generation. These findings are compatible with the self-reported objectives of the loans.

Table 7 – Analysis of Crop Allocations and Commercialisation before and after the SLLC Loan

Region	Variable	Mean Y0	Mean Y2	Diff.	p-value
All regions	N of crops grown	2.32	3.66	1.34	0.000
	N of crops for own consumption	1.54	2.41	0.87	0.000
	N of crops commercialised	1.88	3.06	1.18	0.000
	Pct. of farmland to high value crops	11.7%	20.9%	9.2%	0.000

Note: panel sample only; pairwise t-tests

Analysis of the crop choices by SLLC loan borrowers also reveals that between Y0 to Y2 they shifted the focus of their cropping investments from cereals such as maize and teff to high value crops, particularly vegetables (tomatoes, garlic, onion, and potato).

Investments on Cropping

Investments on cropping attract 50% of the loan amounts on average and are therefore the most prominent category of investment for SLLC loan borrowers. As seen above, by investing the loan on cropping, farmers pursue a range of objectives which include financing inputs like chemical fertilisers and improved seeds, working capital like oxen and machinery, adoption of new farming technologies such use of water pumps, and

even water and soil conservation. In the following section, the total cost of cropping inputs and corresponding yields will be compared, to capture trends in productivity relating to investments in Y0 to Y2.[14]

Cropping Inputs

For borrowers investing the loan in cropping, the average yearly expenditures for cropping inputs increased by Br8,515 between the year prior to the first SLLC loan and the 2019/20 season (see Table). This increase is statistically significant at the 1% and corresponds to about 54% of the pre-loan cropping costs. This suggests that two to three years after the first SLLC loan, cropping input expenditures are persistently higher, possibly through additional finance from repeat SLLC loans or through re-investment of extra-incomes. Intensification of crop production appears to continue at least two years after the first loan, which indicates persistence of the effect of the loan on increasing cropping expenditures.[15]

Table 8 – Expenditures for Cropping Inputs before and after the SLLC Loan

Variable	Obs.	Mean Y0	Mean Y2	Difference	P-value
Total cost of cropping inputs	241	Br15,546.3	Br24,061.4	Br8,515.1	0.000
Total cost cropping inputs per hectare	241	Br9,130.2	Br9,945.4	Br815.2	0.740
Farming land area (ha)	242	1.89	2.62	0.73	0.000

Note: panel sample only; pairwise t-tests

The hike in expenditures for cropping inputs are attributable to a combination of higher rates of input uptake, input quantities used, and the value of the inputs. Table shows that the number of farmers using improved seeds, herbicides, Urea fertiliser, and Dap fertiliser increased respectively by 50pp, 44pp, 17pp, and 6pp, with 1% statistical significance. While uptake rates of the Npc fertiliser, and large and small water pumps also rose, the differences were small and not statistically significant.

Table 9 – Uptake Rates of Selected Cropping Inputs before and after the SLLC Loan

Input type	Obs.	Proportion Y0	Proportion Y2	Difference	P-value
Chemical fertiliser - DAP	249	90%	96%	6%	0.002
Chemical fertiliser - Urea-	249	73%	90%	17%	0.000
Chemical fertiliser - Npc	249	1%	2%	1%	0.158
Improved seeds	249	29%	79%	50%	0.000
Pesticides	249	30%	28%	-2%	0.447
Herbicides	249	19%	63%	44%	0.000
Pump small scale	249	1%	4%	3%	0.109
Pump large scale	249	0%	1%	1%	0.158

Note: panel sample only; pairwise t-tests

Trends in the quantity and value of inputs used also suggest a significant intensification of cropping activities. Among the farmers that used respectively Dap fertiliser, Urea fertiliser, and improved seeds in both Y0 and Y2, both quantities and values of inputs grow substantially.

Yields, Crop Sales, and Cropping Incomes

An analysis of crop-level output and sales data reveals that gross and net cropping incomes, total and on a per hectare basis, have increased substantially between Y0 to Y2 for SLLC loan borrowers. Higher incomes overall were the result of both higher unit values fetched on the market, possibly reflecting higher quality of produce, as well as a shift towards growing higher value crops. Thus, both intensification and diversification strategies increased incomes from cropping incomes between Y0 and Y2 significantly.[16]

Where the primary crop did not change between Y0 and Y1, results show that the gross cropping incomes from the same primary crop increased by 74% on a per hectare basis, from Br42,350 to Br73,825. This change

[14] This analysis focuses on panel respondents who actively target the loan to cropping investments (68% of the total). Only farmers who report valid cropping data on both Y0 and Y2 are included.
[15] Following the World Bank's Living Standard Measurement Study, inputs covered in this analysis include fertilisers, seeds, hired labour and other key items. See http://surveys.worldbank.org/lsms/programs/integrated-surveys-agriculture-ISA/ethiopia
[16] Due to the length of agricultural surveys, annual crop-level output and sales data were collected for both Y0 and Y2 only for one primary crop per respondent. This primary crop was selected by the respondent as the crop that benefitted the most from investments of the SLLC loan.

has a high statistical significance and shows that the value of the produce has risen decidedly. This is likely to be an effect of shifting to more profitable seed varieties and higher quality of the produce, reduced crop damage, or waste.[17]

Finally, where data of farmers who invested on different crops in Y0 and Y2 are accounted for, the results show an even stronger growth in gross cropping incomes per hectare of almost 100%. This greater increase suggests that farmers who invested on higher value crops against what they did previously might have yielded additional returns against the farmers who only intensified production of existing crops.

Table 6 – Gross Cropping Incomes from Homogeneous and Heterogeneous Crops (Y0-Y2)

Variable	Obs.	Mean Y0	Mean Y2	Difference	P-value
Homogeneous crops (same crop with data in Y0 and Y2)					
Harvested produce quantity (in kg)	135	4,804	5,716	911.6	0.069
Gross cropping income from primary crop	135	Br36,205	Br78,814	Br42,608.4	0.000
Gross cropping income from primary per hectare	135	Br42,350	Br73,825	Br31,474.6	0.000
Homogeneous and heterogeneous crops (both same and different crops with data in Y0 and Y2)					
Gross cropping income from primary crop	241	Br37,360.0	Br82,876.3	Br45,516.3	0.000
Gross cropping income from primary per hectare	241	Br41,092.9	Br81,521.5	Br40,428.7	0.000

Note: panel sample only; pairwise t-tests

Investments on Livestock

Investments on livestock rearing and by-products attract 19% of the SLLC loan amounts on average and rank as the second most prominent category of investments for SLLC loan borrowers. About 30% of farmers employ the loan to finance this activity. Further analysis suggests that by investing on livestock most of these borrowers aim to increase their output of by-products, such as milk, meat, or eggs, for own consumption or sale. About 25% of these borrowers however invest on animal trading, i.e. they acquire live animals and/or livestock inputs with an aim to sell or resell livestock at a profit, after the animals have been reared and fattened. This strategy offers an opportunity to estimate the returns from the investment in a one-time ex-post survey. Specifically, as live animal sales take place on a one-off basis, the income generated is much easier to capture than in the case of many individual sales, as with for example milk or eggs sales.

An analysis of the costs and incomes related to animal trading, shown on

[17] To ensure comparability of these figures across high value and staple crops, the gross cropping income is the sum of both the value of crop sales and the value of produce consumed by the household.

Table 7, suggests that these investments are highly profitable as they generate returns on the total cost of this activity of 34% on average (30% median).[18] Costs of purchasing live animals as well as the running costs of inputs, for example animal feed and medical treatments, are accounted for in the total cost of livestock estimate.[19] As a result, most of the total cost is accounted for by the cost of live animals (Br19,387) rather than cost of inputs (Br2,312). The average net income, calculated as the gross value of animal sales minus the total costs, is Br6,670.

[18] Note that results rely on only 41 farmers pursuing the investment strategy analysed and are therefore presented in aggregate and not weighted by region or sex.

[19] Here, all figures are apportioned for the number of animals sold, which is 2.8 on average across farmers, rather than to the broader herd. Note most of these farmers invest on oxen, however a few of them focused on small ruminants such as goats and sheep. The number of small ruminants reared and traded tends to be higher than for oxen, and this skews the mean number of animals upward.

Table 7 – Net Income Analysis of SLLC Loan Investments on Livestock

Variable	Obs.	Mean	Median
Animals sold (#)	41	2.8	2.0
Gross livestock income	41	Br28,368	Br22,000
Cost of livestock inputs	41	Br2,312	Br2,000
Cost of live animals	41	Br19,387	Br15,000
Total livestock cost	41	Br21,698	Br17,400
Net livestock income	41	Br6,670	Br4,530
Return (=Net income/Total cost)	41	34%	30%

Part of these economic returns are generated by fattening the animal: based on farmers' estimates, on average the animal weight grows by around 60% between the time the farmer invests and the sale of the live animal. This production cycle may vary widely depending for example on the age of the animal. Among SLLC loan borrowers, the cycle ranges from just 2 months to up to 5 years, with an average of 11.6 months and a median of 8.2. Notably, for most farmers this is significantly less than the loan duration ranging 1-3 years. Considering that interest rates vary between 17-19% and the average return of the investment is estimated at 34%, farmers can expect to have more than enough returns on their investment to repay the loan in full. Furthermore, since return rates exceed the interest rates of the SLLC loan for some 73% of SLLC customers, most farmers can reasonably expect to make a good profit from the SLLC loan. An illustration of this is shown in the box.

Illustration of the Net Incomes from Investing the SLLC Loan on Livestock Trading

As an illustration of the final extra-income that might be generated through the loan, let us assume a farmer takes out a loan of Br20,000 to finance livestock trading. The loan has a term of one year and is fully invested on purchasing an ox and some inputs. At the end of the term, the farmer sells the ox for Br26,800 thereby realising a return on the investment of 34%. Assuming an annual interest rate of 18%, the farmer pays back Br23,600 to the MFI, inclusive of principal and interest, and makes a net profit of Br2,200.

Critically, whether an income increase attributable to the loan depends on whether it was enough for the loan availability to trigger the investment. Perhaps the farmer would have used own resources to finance the same investment. However, as shown above, most farmers have reported not being able to afford the cost of the investment without the loan. This confirms the hypothesis that the loan can help farmers make large, one-off investments that do not only allow to repay the loan with interest, but also make a healthy profit.

Key messages on the effects of the SLLC loan on investment and incomes

- 86% of borrowers did not have access to credit prior to the SLLC loan and loan amounts of the SLLC loan much larger than available alternatives (mainly group loans)
- SLLC loans are mostly used for productive purposes and are highly additional to the households' investments across cropping, livestock, and non-farm activities
- A lot of borrowers take new loans after they have repaid their first loan in full. Repeat loans are larger and boost investments in productive activities even more, indicating a learning effect of borrowers.
- A significant share of borrower use the loan to diversify and invest in non-farm activities, especially females in male headed household.
- Cropping investments support the intensification of cereal crops by financing more and higher quality cropping inputs, diversification to high-value crops, and building commercial assets. This results in an increase in gross cropping incomes that do allow borrowers to make a sizeable profit after repaying the loan in full including interest. Investments in livestock trading have especially high returns in the short run, which allow the borrower to repay the loan and make a profit

SLLC Loan Differential Effects across Borrowers' Sub-groups

To explore the differential effects of the SLLC loan on borrowers' sub-groups, this section employs a linear multivariate regression approach on a range of relevant outcomes, with sub-groups identifiers and regional controls as predictors. This approach has the advantage of capturing differences in outcomes at sub-group level conditional on all other sub-groups. Outcomes' and sub-groups' definitions are introduced in the box in green, while the box in blue presents key features and limitations of this approach.

Outcomes and sub-groups in the linear regression analysis

Outcomes: features of the most recent loan (loan amounts and land area pledged), economic purpose of the loan (percent allocation to all productive uses, as well as cropping, livestock, and non-farm investments), additionality of the loan finance to the investment. For those borrowers who allocate any loan amount to cropping investments, further outcomes include the choice of high-value v. low-value crop and changes before-after the loan (Y2-Y0) in total cost of cropping inputs and gross incomes per hectare.

Sub-groups: women in male-headed household, female head-headed households, smallholder farmers (<2 hectares), vulnerable households, households with high or mid-high wealth score, and households with repeat SLLC loans.

The full regression tables are available upon request. Only results that are statistically significant or economically important are discussed here and greater attention is given to the sign and statistical significance of the estimates, as opposed to their magnitude.

Women in Male-Headed Households and Female-Headed Households

Findings from regression analysis suggest SLLC loan finance has had a disproportionately positive effect on female-headed households' capacity to invest on productive activities. Specifically, the proportion of borrowers who report not being able to finance investments without the loan, or who could have only partly paid for investment with own resources, is 11.9 percentage points higher for female-headed households against men. Women in male-headed households instead report significantly higher loan allocations on non-farm investments (+13.4%) and lower allocations on cropping investments than men (-12.8%). Note these differences are statistically significant at the 5% level. These results suggest ways in which women benefit differently from men from accessing the SLLC loans. Particularly, female-headed households might have previously been more financially constrained, so their ability to put up collateral against the loan may have unlocked important investments in livelihoods for them. In addition, when women in male-headed households are empowered as a primary signatory to take a loan, they may take different initiatives than men in terms of investments, and specifically pursue diversification of economic strategies away from cropping and livestock, and into non-farm activities.

Furthermore, it is found that when female-headed households invest in cropping, they are less likely to target a high value production as compared to men (-16%). This could be because they need to first raise productivity of their staple crops before they can vary their crop choices. In addition, high value productions are also riskier and draw more labour inputs and attentions for the farmer.

All other gender-disaggregated results are largely insignificant, which suggests they do not vary by gender. Specifically, loan amounts, size of the land area pledged, and overall loans share allocated to productive use are likely to be as high for women as they are for men.

Economic Profile: Smallholder Households and High-Wealth Groups

Regression results also show important variations of key outcomes across the spectrum of economic profiles of beneficiaries. Firstly, in terms of loan amounts, smallholder farmers can pledge a significantly smaller land area as collateral for the loan against medium and larger farmers (-0.89 hectares on average). Possibly because of this, they also access smaller loans (-Br4,272, or about 12% of the average loan amount). In addition, borrowers with a high or middle-high wealth score access larger loans than borrowers with low or low-middle wealth (+Br6,246, or about 18% of the average loan amount). These results are compatible with several competing explanations. For one, farmers with a poorer resource base, while successfully attracted to use the SLLC loans by MFIs, may be less creditworthy and therefore obtain smaller loans. Concurrently, these poorer farmers may be present with less bankable investment opportunities, perhaps due to their inferior productive capacity. As a result, these types of farmers may only apply for smaller loans in the first place. Qualitative assessments and consultations with the MFIs carried out by the EEU team strongly support this second explanation. Whatever the reason of this finding, the evidence suggests that SLLC loan amounts can be adjusted to attract very different economic profiles of rural households, as also confirmed by findings above.

One significant difference is that higher wealth borrowers who invest in cropping, have been more likely to target a high value crop production against lower wealth borrowers (+13.7%). Notably, this group also achieves stronger growth in the total cost of cropping inputs between the year prior to the loan (Y0) and the 2019/20 agricultural year (Y2).

Vulnerable Groups

The vulnerable group identifier does not show any statistically significant effect on the outcomes of interest. Thus, the evidence does not suggest these groups experience borrowing with the SLLC loan in a different way to other sub-groups. Notably, their experience may vary depending on the other key household characteristics such as size of the landholding, gender, or household headship, however vulnerability does not explain any residual changes in the selected outcomes.

Repeat Loans

Borrowers at their second loan cycle, or higher, were found to be investing a higher share of their loan on productive expenditures (+6.8%), and specifically more on livestock investments (+11.8%) against borrowers at the first loan cycle. As shown above, loan amounts increase substantially over loan cycles for those borrowers who have had more than one by the time of the 2020 survey. Here the results suggest that borrowers who apply for a second loan are probably more entrepreneurial than others as they focus more of the loan on productive expenditures than the other borrowers.

Savings and Repayment Behaviour

This section explores a range of behaviours and attitudes of the SLLC loan borrowers around the use of financial tools, including savings, loans, and insurance. This evidence reveals additional benefits of using the SLLC loan as well as risks of default and concerns over losing the land.

SLLC Loan Borrowers' Savings Behaviour

Savings accounts are an important supplementary tool tied by MFIs to the SLLC loan. Specifically, MFIs offer to new SLLC loan clients to open a saving account where they can deposit funds for later use. Throughout the terms of the loan, MFIs further support and encourage borrowers to save regularly so they can build up deposits to repay the loan, while at the same time earning an interest. As a further guarantee to the repayment of the loan, MFIs also demand small compulsory savings be made at regular frequencies to help build up that foundation.

In addition to the compulsory contributions, 65% of SLLC loan customers also reported saving voluntarily during the term of the most recent loan they had. This proportion is highest in Amhara (85%) and lowest in SNNP (28%), while Oromia is in between (57%). In conclusion, there is evidence that through the SLLC loan, MFIs have begun to develop an active saving behaviour among their customers.

SLLC Loan Repayments and Indicators of Financial Distress

To provide insight into the sustainability of the SLLC loans, it is critical to evaluate its unintended consequences on borrowers. Specifically, while the SLLC loan might boost investments and incomes on average across borrowers, it might expose some to excessive financial risk and emotional distress. This sub-section presents the rates of loan repayment and results of both attitudinal and factual questions related to financial distress and use of various strategies in repaying the loan.

In terms of loan repayments, survey results show that the overwhelming majority of farmers have met all the repayments over the duration of the loan or loans they have taken. Specifically, only 4% of borrowers overall reported having missed any one repayment on the loan. According to these farmers, crop failure, business failure, and death of livestock were the primary reasons why they had failed to repay on time.

To further assess the presence of financial distress among SLLC loan borrowers, the survey asked borrowers to rate how easy or difficult they found it to meet the loan repayments, on a 4-points scale ranging from 'very difficult' to 'very easy'. Results from this question, reported on

Table 8, again suggest that most borrowers managed their cash flows successfully and escaped emotional distress. Yet a small proportion of customers in Amhara and SNNP stated to have found it ‘very difficult’ to raise enough cash to make repayments (6% and 7% respectively).

Table 8 – SLLC Loan Borrowers' Experience in Meeting Loan Repayments

Options	Amhara	Oromia	SNNP	Total
Very difficult	6%	1%	7%	5%
Somewhat difficult	15%	9%	23%	15%
Somewhat easy	29%	13%	37%	27%
Very easy	49%	77%	33%	53%

The Effects of Land Rental Formalisation

The Effects of Land Rental Formalisation on Tenure Security and Market Participation

Effects of Land Rental Formalisation on Entry in the Land Rental Market and Market Participation Rates

This section explores how the SLRC affects landlords' and tenants' participation in the land rental market. Household-level participation indicators were calculated on detailed parcel-level data and compared over time for the sample of respondents who were tracked between 2019 and 2020 (panel sample).

In terms of entry in the land rental market, the SLRC has drawn in first-time landlords and tenants. Specifically, in the year prior to using the SLRC, about 31% of landlords and 39% of tenants had not rented land, out or in, respectively. Furthermore, the pulling effect may have had lasting impact on land rental participation as virtually all the beneficiaries remained engaged in land rental in the 2019/20 season. Table 9 reveals that these impacts are widespread across programme regions and statistically significant at the 1% level. In particular, landlords in SNNP and tenants in Amhara might have benefited disproportionately from the pulling effect of the SLRC.

Attitudinal responses of beneficiaries confirm the notion that access to SLRC boosts rural households' confidence to engage in land rental. Overall, 84% of landlords and 94% of tenants stated to be 'more willing' to engage in land rental when they have an SLRC, as opposed to a situation where they could not formalise their contracts. This particularly includes renting in or out land that is being used directly by the landholder (see **Error! Reference source not found.**).

Table 9 – Land Rental Formalisation and Entry in the Land Rental Market

Region	Landlords			Tenants		
	% rent out prior SLRC	% rent out in 2019/20	P-value	% rent in before SLRC	% rent in in 2019/20	P-value
Amhara	85%	100%	0.001	54%	98%	0.000
Oromia	65%	100%	0.000	67%	100%	0.000
SNNP	60%	100%	0.000	69%	94%	0.001
Tigray	70%	100%	0.000	63%	98%	0.000
Total	69%	100%	0.000	61%	100%	0.000

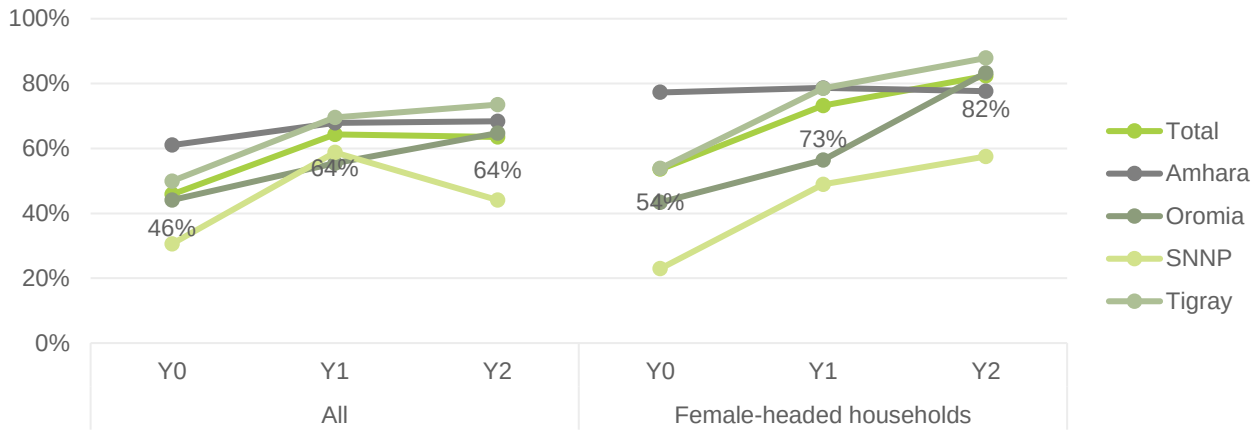
Note: panel sample; pairwise t-tests

Furthermore, at an aggregate level, the entry effect is mirrored by a raise in the land area rented out by landlords in the first year of the SLRC. Specifically, including both first timers and existing landlords, the share of landholding area that is rented out increased from 46% to 64% on average (see Figure).

The fact that some landlords retain a fraction of their land to operate directly suggest that they may have an incentive to do so. Indeed, a majority of these landlords (71%) reported that they 'prefer to farm the land themselves', which suggests they might find it more profitable than to shift their livelihoods to other options. Thus, retaining land for farming is unlikely to be driven by residual tenure insecurity. In parallel, the right-hand panel of Figure shows female-headed households rented out 54% their landholdings prior to SLRC and increased this share further to 82% in 2019/20.[20] This could be explained by fewer inputs and labour available to farm the land. Consequently, female-headed households with insufficient resources to farm the land may be especially vulnerable as they face limited opportunities to raise their incomes in the non-farm sector and benefit disproportionately more from the additional tenure security provided through the SLRC.[21]

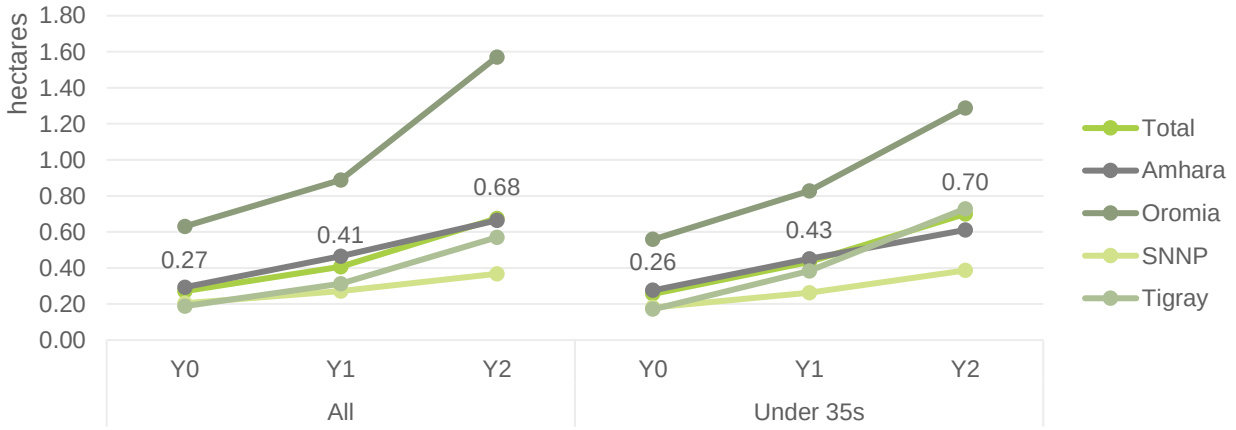
[20] Regional trends in the chart are affected by low panel sample size in the sub-groups and should be interpreted with care.
[21] Landlords reported renting out land due to a shortage of inputs including oxen (47%), a shortage of labour (37%), a need to raise cash (36%), and inability to farm the land personally because of illness, age, or disability. Only 3% reported preferring being employed in the non-farm sector. This suggests that, generally, the non-farm activities landlords have access to are not profitable enough to justify giving up on farming.

Figure 6 – Share of Landholding Rented out by Landlords



Note: panel sample only

Figure 7 - Land Area Rented in by Tenants



Note: panel sample only

By contrast, tenants with SLRC enjoyed a rapid growth in access to land until up to 2-to-3 years after the first SLRC. The land area rented in by tenants grew markedly from just 0.26 hectares in the year prior to the SLRC to 0.68 hectares in 2019/20, more than doubling the rented-in land for tenants. While part of this hike can be explained by first timers entering the market in first year of the SLRC, as shown in Figure this growth continued also after these tenants had started to rent in land in their first year with the SLRC. Figure also shows that tenants under 35 years old, who might have been excluded from accessing land previously, enjoyed equally strong growth of their rented-in land area size to the other farmers. Finally, Oromia's tenants stand out as the regional group with greater access to land of all, yet all regions followed a clear upward trajectory. This finding is consistent with the hypothesis that tenants become more credible partners when they can use a formal contract format such as the SLRC.

Trends in the Formalisation of Land Rental Agreements

Evidence from the 2020 impact survey suggests that landlords and tenants continued using the SLRC for their land rental transactions 2-to-3 years since their first uptake. Specifically, almost 50% of landlords and tenants stated to have entered in a new SLRC, or formally renewed an existing one, in the twelve months prior to the 2019/20 surveys. On average, landlords and tenants formalised 1.9 and 2.1 contracts on average since the SLRC was introduced in their areas. Regional disaggregation is available upon request.

In addition, it was found that both landlords and tenants almost exclusively use the SLRC as form of contract for all their rental agreements. For example, of all the land rented out by landlords in 2019/20, 91% is rented out with SLRC as opposed to other forms such as verbal agreements. Note these results take a snapshot of the agreements valid for each land parcel at each point in time. Thus, they are not subject to the dates and the duration of the agreements and allow to draw a realistic picture of the use of the SLRC against other contractual forms across different farmers. One relevant takeaway from Figure above is that while tenants expanded their land rented in from Y1 to Y2, they imported the use of the SLRC into new land rental relationships.

Finally, it should be noted that prior to use the SLRC, only about 27% of landlords and 34% of tenants had ever registered a land rental agreement with the land administration. Thus, access to a more comprehensive and secure land rental formalisation process has likely boosted registrations, particularly by attracting farmers who had not formalised contracts before.

Effects of Land Rental Formalisation on Tenure Security and Other Perceived Benefits

Survey results suggest that landlords and tenants using the SLRC have experienced tangible benefits from the land rental formalisation process. These benefits, self-reported by the respondents in a multiple options question, can be grouped into proxies of tenure security, changes to bargaining power, and changes in features and effects of land rental agreements.

Figure displays these results from the 2020 survey.

Tenure security. At 2-to-3 years since the first SLRC uptake, most landlords and tenants reported enjoying greater tenure security using SLRCs across a range of proxies. Specifically, about 80% of landlords and tenants experienced a reduction in the risks of land rental-related disputes, while almost 50% of landlords stated to feel more secure that the tenant will give back the land to the landholder at the end of the rental term. In addition, 35% of landlords and 42% of tenants enjoy being able to prove that the land rental agreement has taken place, for example with other members of the household or third parties. Variations of these results are observable at the regional level.

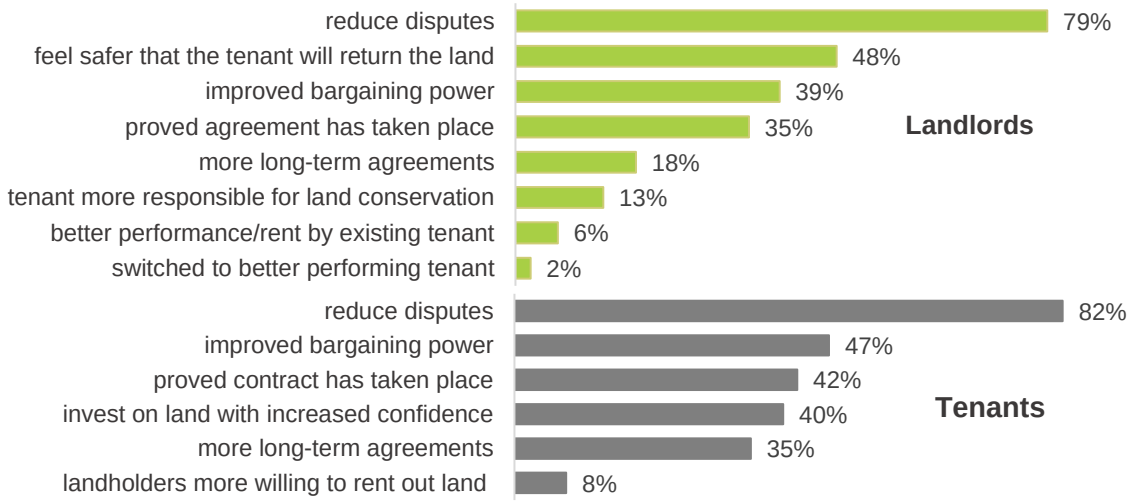
Bargaining power. Around 40% of landlords and 47% of tenants also reported that by formalising a land rental agreement, they could improve their bargaining power. This suggests that when rural households become more aware and certain of their rights and obligations under a formal land rental agreement, they might feel more empowered to negotiate better land rental conditions with their rental partners. This impact was felt disproportionately by both landlords and tenants in Oromia against the other regions.

Behavioural change and land rental practices. Using the SLRC may have pushed tenants to invest more on the rented-in land to enhance its productivity. Specifically, around 40% of tenants report that using SLRC helped them feel more confident about investing on rented-in land. This finding is also reflected in the views of landlords who stated that tenants had become more responsible for the conservation of the rented-in land, or significantly improved their productivity and, in cash rental agreements, the rental rates. Finally, formalising land rental transactions also produced concrete changes to the terms of the agreements. Most notably, for some farmers the duration of the rental agreements has increased significantly.

In sum, the formalisation of land rental agreements had the overwhelming effect of improving tenure security for both landlords and tenants. In addition to this, some farmers also appear to feel more empowered to negotiate better rental terms for them and experience greater incentives to care for and invest on rented-in land. As evidenced by the high appreciation of the SLRC among both landlords and tenants, significant benefits are perceived on both sides of the market. Thus, the demand for formalisation is strong among both landlords and tenants.

Perhaps due to their satisfaction with the SLRC, most landlords and tenants report being likely to use the SLRC again in the future. Specifically, among those who expect to enter in a new land rental agreement in the two years after the 2020 survey, 90% of landlords and 94% of tenants report being ‘very likely’ to formalise their future transaction through SLRC. While in Oromia, SNNP, and Tigray, over 90% of both landlords and tenants share this view, in Amhara about four in five landlords and three in four tenants do so.

Figure 8 – Perceived Benefits of Land Rental Formalisation

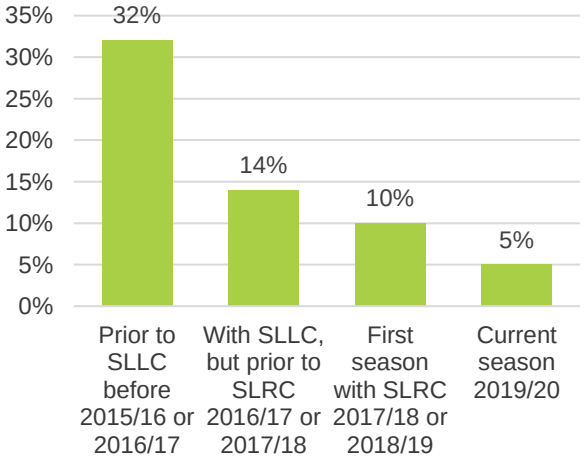


Effects of Land Rental Formalisation on the Incidence of Land Rental Disputes

The greater sense of tenure security fostered by land rental formalisation is mirrored by a substantial reduction in land rental disputes experienced by beneficiaries. The graph in Figure shows a consistently negative trend in the incidence of disputes experienced by landlords and tenants between the time prior to second level land certification (SLLC) until the current agricultural year (2019/20). This is based on factual recall of disputes, rather than respondents' perceptions. Note that due to the staggered roll-out of SLLC across woredas and gradual uptake of the SLRCs, beneficiaries in this survey sample were exposed to interventions at different times.

A clear trend in the incidence of disputes is observable over time. Results are not differentiated by landlords and tenants' groups as the results are very consistent across these groups. In particular, landlords and tenants experienced a gradual reduction in the incidence of land rental disputes over time. The introduction of the SLLC, which for these farmers took place between 2015-17, was associated with a substantial reduction in the number of households reporting a dispute (from 32% to 14%).[22] After the adoption of SLLC, the incidence rate dropped further to 10% in the first season with SLRC and to only 5% in the most recent season. Notice that these rates are captured for any type of dispute, across all the agreements, and not only for SLRC.[23] Thus, these findings are consistent with and reinforce the benefits perceived by SLRC users.

Figure 9 – Proportion of Landlords and Tenants Experiencing a Land Rental Dispute Over Time



In terms of the types of land rental disputes, a cross-section of results for the 2019/20 season shows that only 1% of landlords reported that the tenant did not give back the land back to them at the end of the rental period. This share however used to be 11% prior to SLLC. In parallel, prior to the SLLC, some 10% of tenants had reported being victim of double renting, which consists a landlord renting out the same land to two different tenants, but this share dropped to only 1% in 2019/20.

[22] The 2019 Survey also compared landlords and tenants with SLRC with a random sample of landholders living in the same communities. This comparison showed that the landlords and tenants with SLRC used to be more exposed to land rental disputes prior to the SLLC than the landlords and tenants who had not formalised land rental agreements yet. This result suggested that previous experience of land rental disputes might have pushed landlords and tenants to seek access to a formal process of land rental transactions.

[23] Respondents confirmed these trends by reporting that the likelihood of disputes had decreased as a result of using the SLRC. To an attitudinal question on this effect, 97% said that SLRC had 'decreased' the likelihood of disputes, while 3% said SLRC hat 'not changed' or 'increased' the likelihood of disputes.

Finally, land rental beneficiaries seem convinced that not only using the SLRC decreases the likelihood of disputes, but also that having one will result the swift and polite resolution of any dispute that might arise. Specifically, over 92% of landlords and tenants reported thinking that using the SLRC would more likely lead to a swift and polite resolution than if a verbal agreement with witnesses was used instead.

Effects of Land Rental Formalisation on Land Rental Practices

By securing the rights and obligations of the landlords and tenants, the adoption of formal, registered contracts could foster broader changes to land rental practices. Landlords and tenants could feel more secure in engaging in fixed cash rental agreements, setting longer durations for their agreements, or contract more with people that they do not have previous social ties to. In turn, these changes could stimulate the tenants to use the land productively, as well as improve the efficiency of the land rental market.[24]

In addition, if the market becomes more efficient, landlords can more easily approach and rent out land to more productive tenants who may pay a higher price.

The effects of land rental formalisation on the terms of the agreements are analysed in two steps. Firstly, attitudinal questions are used to assess the willingness of landlords and tenants to change their land rental practices. Secondly, actual terms of the land rental agreements are compared over time to assess the behaviour of farmers.

In terms of attitudinal changes, both landlords and tenants report their outlook on land rental terms to have changed with the use of the SLRC. About three out of four landlords stated to be 'more willing' to enter into a fixed cash rental agreement with the SLRC. Renting out for a duration of more than one year under the same contract and renting out to tenants who are not relatives or friends also might have become easier for about 60% of the landlords. In parallel, tenants seem even more confident in making these changes, possibly because they have a prior preference for these.

The predictions regarding changes to rental duration, landlord-tenant social relationship, as well as rental rates in cash-based renting are broadly borne out by the data. A comparison of the terms of the agreements arranged with a SLRC in the most recent year (2019/20) with any contract forms agreed prior to the SLRC by the same tenant reveals the following differences.

- As shown on Table , with the use of the SLRC, the average duration of the rental agreements increased from 20.1 months to 23.4 months, and this difference is statistically significant at the 5% level. This confirms the finding from the attitudinal and behaviour questions which suggested that with the use of the SLRC some farmers accessed longer-term agreements.
- On a per month/hectare basis, the rental prices were 33% higher with the SLRCs valid in 2019/20 against all contract forms valid in the year prior to the first SLRC. This difference is statistically significant at 10%. Rental prices per month, without considering the size of the rented land, also increased slightly by a non-statistically significant amount. However, the overall value of the agreement climbed by around 100% through a combination of higher rental rates per month/hectare and longer durations.
- The number of agreements stipulated between relatives or friends decreased from 48% to 36% of the total. This decline was mirrored by comparable increase in the number of agreements made between households living in different communities of the same kebele. In parallel, the number of agreements between households living in the same community remained constant at about 45% of the total.

Table 15 – Comparison of Land Rental Terms with SLRC v. Agreements Before SLRCs

Variable	Any agreement prior to SLRC		Agreements with SLRC in 2019/20		Diff.	P-value
	Count	Mean	Count	Mean		
Cash-based rental rates						
Rental rate per month hectare (Br)	174	1,300.5	235	1,714.0	413.4	0.0793
Value of rental agreement (Br)	175	5,074.5	235	9,910.2	4,835.7	0.0000
Duration of the rental agreement						

[24] Cash-based rental and sharecropping agreements carry different incentives to exert efforts and use inputs that boost productivity. Particularly, a wide literature points to the lower incentives provided by sharecropping agreements against cash rentals, leading to lower incomes for both the landlord and the tenant. See: Deininger, Klaus, Daniel Ayalew Ali, and Tekie Alemu. "Productivity effects of land rental market operation in Ethiopia: evidence from a matched tenant–landlord sample." Applied Economics 45.25 (2013): 3531-3551.

Variable	Any agreement prior to SLRC		Agreements with SLRC in 2019/20		Diff.	P-value
	Count	Mean	Count	Mean		
Duration of the rental agreement (in months)	278	20.1	381	23.4	3.3	0.0319
Landlord-Tenant Relationships						
Relatives	283	35.2%	381	31.1%	-4.2%	0.0192
Friends	283	12.4%	381	4.4%	-8.0%	0.0002
Households from the same community	283	45.0%	381	44.6%	-0.5%	0.5627
Households from same kebele but different community	283	5.6%	381	17.4%	11.8%	0.0000
Households in other kebele within the same woreda	283	0.4%	381	1.4%	0.9%	0.2085

The Contribution of Land Rental Service Provision to Land Rental Market Outcomes

These results confirm that the use of the SLRC is associated with longer durations, landlords-tenant relationships that are not based on social ties, and a hike in the rental rates paid to the landlords. The changes to the landlord-tenant relationships do not mean that the SLRC does not bring security to agreements within the extended family and close neighbours. Rather this finding suggests that the SLRC affects disproportionately relationships without a social tie, arguably because it binds strangers through a formal contract that provides clear and enforceable legal protections.

LRSPs provide important brokering services and awareness raising for land rental beneficiaries. The key services consist in providing market information and supporting the completion of the contract. This sub-section explores specifically the LRSPs contribution to land rental market outcomes.

Evidence from the 2020 survey shows that overall, about 90% of landlords and tenants with an SLRC are aware that LRSP services are available in their area. About 80% used them at least once since they were first introduced in 2016. Across the four programme regions, the proportions of farmers knowing about and using LRSPs are lowest in Amhara and highest in Tigray.

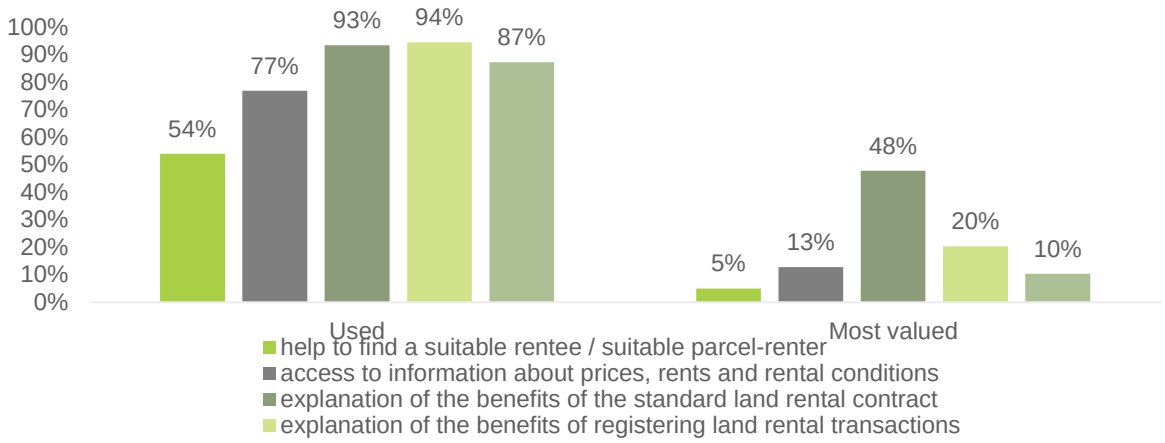
As shown on

Figure 4, access to information and assistance for completing and registering SLRCs reached virtually all the LRSP clients and were therefore the most common LRSP services accessed. In addition, these services were also the most valued by 68% of the customers. Three out of four beneficiaries also reported LRSPs provided information about the rental market in their locality, for example the prevailing rental rates, while over 50% also received matchmaking support to find a suitable tenant or plot to rent.[25] Finally, LRSPs also helped most of the LRSP clients understand their respective Region's laws and regulation governing land rental, for example related to the maximum amount of land that can be rented out.

Looking into the sustainability of the LRSP intervention and its potential if scaled-up on a larger scale, several metrics can be assessed. First, both landlords and tenants rated the service they received from LRSPs very highly. On a 4-points attitudinal scale from 'very useful' to 'not at all useful', about 90% of land rental beneficiaries rated the LRSP services as 'very useful', and about 10% as 'somewhat useful'. Not only using these services appears to have been valuable, but most landlords and tenants also reported it to be 'very likely' or 'somewhat likely' that they will seek these services in the two years after the survey (about 85%). Notice this figure also includes those who have not used the services so far, so it suggests the demand for these services continues to be strong.

[25] Here the results are shown for landlords. Tenant's data display a very similar picture.

Figure 4 – Use of LRSP Services by SLRC Beneficiaries (Landlords)



Key messages on tenure security and land rental market participation

- The reform of land rental formalisation and introduction of the Standard Land Rental Contract (SLRC) in combination with awareness raising efforts produced an expansion of the land rental market. Over 30% of the households using the SLRC had not previously rented land (in or out). This result is backed up by 84% of landlords and 96% of tenants who stated to be more willing to rent land with the SLRC. Further, 2-to-3 years since the first SLRC uptake, tenants enjoyed a rapid growth in access to land through rental, while the land area rented out by the landlords rose initially through entry of first-time landlords and then flattened on average.
- Access to the SLRC and information campaigns have had a sustained impact on the formal registration of land rental agreements. Only around 30% of farmers had ever registered a land rental transaction before using the SLRC. At 2-to-3 years since the first uptake of SLRC, landlords register transactions covering 91% of all the land they rent out, and tenants do so for 82% of their rented-in land. The repeated use of SLRCs shows these customers have bought into formalisation and might have started to crowd in this practice with new land rental partners. Also, over 90% of landlords and tenants stated their intention to use the SLRC again in the future.
- Land rental formalisation boosts tenure security, particularly by reducing the frequency and severity of land rental disputes. About 80% of beneficiaries cite the reduction in land rental disputes as a key benefit of the SLRC. In parallel, the incidence of disputes among these farmers dropped from 32% prior to second level land certification to only 5% in 2019/20. In addition, by registering their contracts, landlords feel reassured that the tenant will return the land at the end of the land rental period.
- Around 40% of landlords and 47% of tenants reported enjoying greater bargaining power through land rental formalisation. This suggests that when farmers become more aware and certain of their rights and obligations, they might feel more empowered to negotiate land rental terms. As a result, the land rental market might become more competitive and efficient, as well as more equitable for those who are more vulnerable.
- The greater bargaining power outlined in point 4 above has allowed landlords to obtain higher rental prices in cash rental agreements. Evidence from parcel-level data shows that the rental price paid by tenants on SLRCs increased by over 30% against any verbal or written agreements signed before the first SLRC uptake (Br 1,300 to Br 1,714 per month/hectare).
- Greater confidence that SLRCs are legally protected and enforceable has in turn started to shift land rental practices. Specifically, most landlords and tenants are now more willing to engage with partners outside of their communities as well as to extend the duration of their agreements. The average duration of land rental agreement increased from 20.1 to 23.4 months with the use of SLRC. The proportion of agreements arranged between households from different communities within the kebeles grew by about 12 percentage points, while a comparable decrease was observed for rental relationships between extended family or friends.
- Landlords and tenants who use LRSPs mostly benefit from support understanding the SLRC and contract completion services, and as a result feel more secure about their contracts and find it easier to formalise.

Finally, among those who reported being interested in using LRSP in the future, about 70% of tenants and 60% of landlords reported being willing to pay Br 200 in order to access the services in the future. This

difference might reflect greater capacity to pay of tenants rather than greater benefits. As revealed on **Error! Reference source not found.**, these figures vary substantially across regions, with Tigray recording the highest willingness to pay, and Amhara the lowest. LRSPs have broadly offered services on a voluntary basis until 2020, however the substantial willingness to pay recorded in the survey suggests the LRSP model may become financially viable in the future.

Table 16 - Proportion of SLRC Beneficiaries Who Would Pay Br 200 for LRSP Services

Option	Amhara	Oromia	SNNP	Tigray	Total
Landlords	26%	34%	57%	72%	57%
Tenants	47%	51%	70%	76%	68%

The Effects of Land Rental Formalisation on Land Investments, Productivity, and Incomes

This section explores the impacts of land rental formalisation on landlords and tenants' investments on livelihoods and income-generating activities, land productivity and incomes. Results are presented and discussed for landlords and tenants in turn.

Effects of Land Rental Formalisation on Tenants

Incentives to Invest in Rented-In Land

Access to the SLRC has likely boosted tenants' incentives and confidence in using the rented-in land in the most productive way. Responses from attitudinal questions suggest 80% of tenants have 'much higher' confidence to improve the productivity of the land, 69% to use more and higher quality inputs, and 60% to preserve and care for the land. Preservation of and care for the land through appropriate environmental conservation is essential to prevent soil erosion and progressive loss of soil fertility over time. Use of quality inputs that do not damage the soil and maintenance of conservation structures are critical practices in this context. Thus, these findings suggest that tenants are becoming more responsible and accountable for rented-in land and consider its long-term productivity through better incentives delivered by the formal contract. The boost to incentives and confidence has been felt most in Amhara and least in SNNP.

The SLRC's impact on incentives and confidence is reflected in the high incidence of new investments on rented-in land reported by the tenants for 2019/20 against previous seasons (see Table 17). Most tenants reported investing more on cropping inputs, both in terms of quality and quantity (60%), caring more for the land (over 50%), and investing on environmental conservation (over 35%).[26]

Further, the profiles of tenants' investments indicate significant changes have started to take place to their farming practices. Around 38%-50% of tenants reported allocating an increasing share of farmland to high value crops such as vegetables, and 13%-29% to perennial crops.

Table 17 – Self-reported Investments on Land by Tenants in the Past Two Years

Option	Amhara	Oromia	SNNP	Tigray	Total
If you had to compare your farming practices between the land rented or sharecropped in in 2018-19 and the land rented or sharecropped in in 2019-20 overall, did you:					
Invest more on cropping inputs (quantity and quality) in 2019-20	31%	81%	100%	87%	60%
Invest more on environmental conservation structures in 2019-20	38%	50%	94%	34%	47%
Care more for the land in 2019-20	85%	75%	94%	54%	78%
Increase land area allocation to high-value annual crops in 2019-20	31%	50%	88%	80%	50%
Increase land area allocation to non-high-value annual crops in 2019-20	15%	17%	18%	20%	17%
Increase land area allocation to perennial crops in 2019-20	23%	36%	0%	53%	29%

[26] Environmental conservation has been here clarified to the respondents as follows: planting trees, building/maintaining irrigation canals, well, and private ponds, levelling land and terracing, water harvesting, and similar.

Trends in Economic Activities and Livelihoods Before and After the SLRC

As in the SLLC loan borrowers' sections, the following three sections capture the trends in tenants economic and livelihood strategies, investments on productive activities, and incomes over the period Y0 to Y2, i.e. the year prior to the first loan and the 2019/20 season. This analysis compares factual and quantitative data collected in the 2019 and 2020 surveys exclusively for those respondents that were tracked between the two surveys (panel analysis). This is meant to triangulate and substantiate results emerging from attitudinal and behavioural data reported in the previous sections. Overall a good degree of consistency of the results is found between these two approaches.

Firstly, an analysis of the economic activities carried out by tenants shows a substantial rise in livestock rearing and an economically small but statistically significant increase in non-farm activities between Y0 and Y2 (see Table). Cropping also increased by a significant extent, which is expected given tenants may focus most of their resources on cropping through land rental. Indeed, consistently with the increase in land area accessed through rental, these farmers have grown their farming plot areas to 1.29 ha in 2019/20 against 0.76 ha prior to SLRC (a rise of nearly 70%). Thus, cropping remained the key economic activity of the household. See table 18 below.

Table 18 – Trends in Tenants' Economic Activities before and after the SLRC

Region	Variable	Proportion Y0	Proportion Y2	Diff.	p-value
Total	Cropping	93%	100%	7%	0.0000
	Livestock	75%	96%	21%	0.0000
	Non-farm activity	9%	18%	9%	0.0001
	Employment outside the household (n. of members)	0.06	0.12	0.06	0.0864

Note: panel sample only; pairwise t-tests

Evidence of the choice of crops farmed suggests that tenants largely pursued a diversification strategy, particularly towards commercial crops. The number of crops grown rose from 1.47 to 3.15 on average, while the number of crops that are commercialised grew from 1.25 to 2.74. The degree of growth of crops for own consumption is relatively lower (0.75 to 1.71) but still significant at the 1% level. It can be concluded that tenants employed a dual strategy of diversification of the crops and food security. See results in Table 19.

Table 19 – Analysis of Crop Allocations and Commercialisation before and after the SLRC (Tenants)

Region	Variable	Mean Y0	Mean Y2	Diff.	p-value
Total	N of crops grown	1.47	3.15	1.69	0.00
	N of crops for own consumption	0.75	1.71	0.96	0.00
	N of crops commercialised	1.25	2.74	1.49	0.00
	Farming land area (ha)	0.76	1.29	0.53	0.00

Note: panel sample only; pairwise t-tests

Cropping Inputs

As shown above, between Y0 and Y2, tenants' farmland area grew significantly by around 70% on average. Farming a much larger land area is likely to require a much higher expenditure on inputs if the intensity of production is to remain the same over the larger land area. Here it is found that the total cost of cropping inputs, including for example fertilisers, seeds, and hired labour, grew more than proportionally to the area of land farmed, so input intensity actually grew.

Table shows these results: while the total costs of cropping inputs in Birr nearly tripled between Y0 and Y2. Thus, tenants invested a lot more resources on cropping in order to farm a larger land area.

Table 20 – Changes in expenditures for Cropping Inputs before and after the SLRC (Tenants)

Variable	Obs.	Mean Y0	Mean Y2	Difference	P-value
Total cost of cropping inputs	157	Br 5,239.30	Br 15,060.1	Br 9,820.9	0.000
Total cost cropping inputs per hectare	157	Br 9,831.28	Br 10,375.5	Br 544.2	0.103
Farming land area (ha)	228	0.76	1.29	0.53	0.000

Note: panel sample only; pairwise t-tests

In parallel, tenants also shifted to using a wider variety of input types, as opposed to simply purchasing a higher quantity of the same input types. Specifically, the number of tenants using herbicides grew by 37 percentage points (pp), improved seeds 32pp, and Urea chemical fertiliser 21pp. These changes are highly significant in the panel sample (see Table 10). Finally, trends in the quantity and value of inputs used also suggest a significant intensification of cropping activities. Among the farmers that used respectively Dap fertiliser and Urea fertiliser in both Y0 and Y2, both quantities and values of inputs grow substantially (see Table 10). Most of these changes are significant at the 5% level.

In sum, different patterns of inputs use are observable in the data, including increase in total costs to allow farming of larger plots, diversification to new inputs, and intensification of the key existing inputs (namely DAP and Urea).

Table 10 – Uptake Rates of Selected Cropping Inputs before and after the SLRC (Tenants)

Input type	Obs.	Proportion Y0	Proportion Y2	Difference	P-value
Chemical fertiliser - DAP	248	76%	84%	8%	0.000
Chemical fertiliser - Urea-	248	60%	81%	21%	0.000
Chemical fertiliser - Npc	248	1%	0%	-1%	0.565
Improved seeds	248	19%	51%	32%	0.000
Pesticides	248	11%	23%	12%	0.046
Herbicides	248	10%	47%	37%	0.000
Pump small scale	248	0%	2%	2%	0.103
Pump large scale	248	0%	1%	1%	0.318

Note: panel sample only; pairwise t-tests

Yields, Sales, and Cropping Incomes

An analysis of crop-level output and sales data reveals that gross and net cropping incomes, total and on a per hectare basis, have increased substantially between Y0 to Y2 for EEU tenants. Higher incomes were the result of both higher unit values fetched on the market, possibly reflecting higher quality of produce, as well as a shift to higher value crops. Thus, cropping incomes grew through both intensification and diversification strategies.

As discussed in more detail above, the EEU Impact Survey collected only production and sales data for a 'primary crop'. For tenants, a criterion was added for the primary crop to be grown on rented-in land specifically, to better capture changes to productivity linked to rental and the SLRC.

Table 22 shows that the gross cropping incomes from the same primary crop increased by almost 100% on a per hectare basis, from Br31,701.8 to Br63,167.2. This change has a high statistical significance and shows that the value of the produce has risen decidedly. This is likely the effect of shifting to more profitable seed varieties and due to higher quality of the produce, and reduced crop damage or waste.[27] Finally, where data of farmers who invested on different crops in Y0 and Y2 are accounted for, the results show an equally robust growth in gross cropping incomes per hectare of almost 100% (Table 22)

[27] To ensure comparability of these figures across high value and staple crops, the gross cropping income is the sum of both the value of crop sales and the value of produce consumed by the household.

Table 22 – Gross Cropping Incomes from Homogeneous and Heterogeneous Crops (Y0-Y2)

Variable	Obs.	Mean Y0	Mean Y2	Difference	P-value
Homogeneous crops (same crop with data in Y0 and Y2)					
Yield (kg/ha)	158	4,596.5	5,234.3	637.9	0.265
Gross cropping income from primary per hectare	158	Br 31,701.8	Br 63,167.2	Br 31,465.4	0.000
Homogeneous and heterogeneous crops (both same and different crops with data in Y0 and Y2)					
Gross cropping income from primary per hectare	157	Br 31,871.0	Br 63,366.8	Br 31,495.8	0.000

Note: panel sample only; pairwise t-tests

Effects of Land Rental Formalisation on Landlords

Farming and Investments on Land

While EEU landlords have rented out an increasing share of their land over time, cropping of any residual land remained a key source of livelihoods in this group. Specifically, 71% of the landlords were still engaged in cropping in 2019/20 with a reduction of only 7 percentage points against the year prior to the first SLRC. Those who continued to farm land reduced the size of the area farmed from 0.88 to 0.67 hectares, however this drop is not statistically significant (see **Error! Reference source not found.**).

At the same time, investments on cropping and land may not have changed dramatically for this group. About 30% of the farming landlords stated to have increased their use of cropping inputs and invested more overall on self-farmed land. Further, only 16% reported having invested more over time on environmental conservation structures. Where these changes were introduced, most farmers attributed this to renting out with the SLRC. This suggests that land rental formalisation fosters productivity of self-farmed land for some landlords.

Table 113 – Trends in Landlords' Economic Activities before and after the SLRC

Region	Variable	Proportion Y0	Proportion Y2	Diff.	p-value
Total	Cropping	78%	71%	-7%	na
	Livestock	50%	78%	28%	0.0000
	Non-farm activity	12%	17%	5%	0.1311
	Employment outside the household (n. of members)	0.05	0.19	0.13	0.0005

Note: panel sample only; pairwise t-tests

Rural Non-Farm Activities, Non-Farm Employment, and Migration

Some landlords who stop farming, or farm a smaller plot over time, shift their productive resources to other livelihood sources. Since the first SLRC, the number of landlords with a non-farm economic activity increased only slightly from 12% to 17%, while the average number of household members employed outside the household increased more decidedly from 0.05 to 0.19 (see Table 23 above). These results are confirmed by landlords' recall of investing more on non-farm activities or of household members taking up non-farm employment. Furthermore, some 13% of landlords reported some member of the household to have migrated to a city to look for new employment.

In sum, by reducing barriers for farmers to enter the land rental market, the SLRC has enabled a small number of landlords to shift their livelihood sources away from farming their own land towards non-farm activities and employment outside the household. These effects however are somewhat tenuous in the overall sample. Furthermore, the small proportion of landlords whose family members have migrated is an important finding, indicating the possible effect of renting out more land in the future, particularly through contracts that secure tenancy rights for the landlords' household.

Incomes from Land Rental

As discussed above, landlords might have faced limited opportunities to raise incomes outside of agriculture. In this situation, the incomes from land rental are crucial for the subsistence of these households. Two mechanisms play a role in growing landlords' incomes through rental and particularly through access to formalisation.

Firstly, landlords enjoy higher returns from renting out the same parcel of land over time if the price paid by the tenant rises. In the context of cash-rental agreements, it is demonstrated above that in 2019/20 tenants paid around 33% more on a per month-hectare basis to landlords using the SLRCs, against the rental rates applied prior to using the SLRC. This finding is confirmed by landlords' self-reported benefits of using the SLRC discussed above, as well as by direct questions on the impact of the SLRC (see Table). Specifically, about half of the landlords who rented out continuously some of their land over this period reported their rental incomes to have increased. Furthermore, three out four of these landlords reported that the SLRC contributed to this increase 'a great deal' and 15% 'somewhat'.[28] As discussed above, both strategies were successfully employed by landlords.

Table 24 – Landlords' Perception of the Effect of Land Rental Formalisation on Rental Incomes

Option	Amhara	Oromia	SNNP	Tigray	Total
Compared to the 2-year period before you started using SLRC, do you think that in 2019/20 your incomes from renting out or sharecropping out 'increased', 'decreased', or 'stayed the same'?					
increased	34%	57%	72%	49%	52%
stayed the same	48%	24%	16%	26%	28%
decreased	19%	19%	12%	26%	20%
If incomes from renting out increased: Based on your experience, do you think that having the SLRC contributed to this rental income increase 'a great deal', 'somewhat', 'not very much', or 'not at all'?					
a great deal	88%	77%	76%	72%	76%
somewhat	12%	18%	10%	20%	15%
not very much		3%	12%	5%	6%
not at all			2%	4%	2%

Secondly, by shifting land to tenants, landlords can access a higher return from the land than if they had farmed it themselves. Land productivity and crop inputs data from Y0, i.e. prior to using the SLRC, reveals that, on self-operated land, tenants might be 41% more productive than landlords in terms of the gross cropping incomes measured per hectare (see Table 25).[29] Part of the tenant's productivity advantage is explained by the higher intensity of input utilisation when compared to landlords, who on average use much fewer or lower quality inputs. If input intensity is measured in terms of total costs of cropping inputs per hectare, tenants use 67% more valuable inputs than landlords (see Table).[30] This result brings into focus the potential of land rental to raise average land productivity by shifting land to more productive farmers in rural Ethiopia.

Table 25 – Gross Cropping Income and Input Intensity Differences between Landlords and Tenants (prior to using SLRC)

	Landlords		Tenants	
Key variables	**Count**	**Median**	**Count**	**Median**
Expenditures on cropping inputs per ha	133	Br3,329	215	Br5,560
Gross cropping incomes per ha	133	Br18,526	215	Br26,158

[28] In sharecropping agreements, the return to the landlord is proportional to the gross incomes generated by the tenant. Thus, if the productivity of the tenant increases on sharecropped-out land, the value of the share of crop received by the landlord will also increase. This is covered under the section on the tenants.
[29] Note that this difference is calculated from the median values of the gross cropping incomes for both landlords and tenants, with the result that the difference is likely to represent gains from exchanges of land between the typical landlord and tenant. In particular this is calculated as (Br5,560/Br3,329)-1.
[30] In particular this is calculated as (Br26,158/Br18,526)-1.

Finally, an analysis of how landholders spend the additional income from renting-out land suggests that land rental incomes are primarily allocated to household expenditures, such as food, education, health, clothing. However, around 34% of landlords use the income from renting to re-investment in livelihoods and income generation, including cropping inputs, livestock, and non-farm activities. Detailed data on the frequency of landlords allocating the rental incomes to different expenditures is available upon request.

Key messages on the effects of land rental formalisation on investment, productivity, and incomes

- The SLRC provides both accountability of the tenant which results in increased and more sustainable investments by tenants and for rental agreements that are not with immediate community members. This expands the overall land rental market in different dimensions.
- Tenants improve their investment strategies through diversification towards commercial crops, but also by growing a larger variety of crops for food security. Tenant's incomes increase as a result of renting in more land to farm and increasing investments in cropping inputs as well as investing in new crops.
- Consistent with the above results, the incomes of landlords increase as a result of using the SLRC, thereby increasing overall household income. Landlords show gradual shifts of livelihoods away from agriculture towards non-farm activities, including employment outside of the household and migration. However, for the majority cropping on the remaining land still remains the main source of income.
- There is a large productivity differential between tenants and landlords. The expansion of formal land rental therefore contributes to a more productive use of rural land in Ethiopia, while providing income gains for both landlords and tenants.

Women Economic Empowerment

This section explores the impacts of access to the SLLC loan and to land rental formalisation on women, particularly on the balance of decision-making power within households.

Access to Finance – Women in Male-Headed Households

Results from attitudinal and behavioural questions reveal that the SLLC loan has impacted on intra-household decision making in a number of ways. Firstly, it is found that for both male and female respondents, around 90% of the SLLC loans are signed jointly by the husband and wife. Joint signature of the loan is required whenever the land parcel pledged as collateral to the loan is jointly held. In combination with MFI awareness efforts, this requirement has ensured that husband and wife are largely equal partners who share decisions and responsibilities. About three out of four of the male and female borrowers perceive that, when the loan is signed jointly, both partners have equal responsibilities. In addition, over 80% of male and female respondents suggest that the joint signature requirement contributed 'a lot' to the two partners taking decisions jointly, both in terms of access to credit as well as control over households' resources.

Secondly, half of all women in male-headed households state that the loan financed a source of income that is independent and therefore they are more likely to administer directly. This result is consistent with the sub-group analysis above which found that women invest the loan finances more on non-farm activities than men do. About 9% of women in male-headed households take the loan only in their name. This might have allowed them to access finances for economic activities that are independent from the rest of the household.

Access to Finance – Female-Headed Households

As discussed above, most beneficiaries lacked access to credit prior to accessing the SLLC loan. Female-headed households are less likely to have been able to access group loans previously and if so, might have only been able to access smaller loan amounts. In fact, results from the survey suggest that around 40% of women who would have been interested to join a group in the absence of the SLLC loan reported it to be 'very unlikely' that they would be accepted.

Land Rental – Women in Male-Headed Households

When landlords and tenants engage through the SLRC, the legal requirement that both husband and wife (or both partners) need to sign the contract nudges the two spouses to take decisions jointly. Specifically, in male-

headed households, both the male heads and wives interviewed agree that this requirement incentives joint decision making within the household. Male and female respondents share this view at very similar rates.[31]

Further, wives in landlord households have likely acquired a greater say over the incomes deriving from land rental. About 91% of women in male-headed households who rent out land have perceived so. This was confirmed by 86% of husbands. Simultaneously, most of the male tenants believe that when their households rent in land, the workload of the wife increases in the household and/or in the cropping fields (50% 'completely agree' and 29% 'somewhat agree'). Thus, while wives' workload likely becomes more burdensome when land is rented in, the SLRC provides them with an enhanced role in rental decision making and greater say over the rental incomes generated.

[31] Notice that the sample of female respondents among tenants is too small to produce valid statistics.