Promotion of Mechanisation for Smallholder Farmers: Insights and Learnings from Zambia

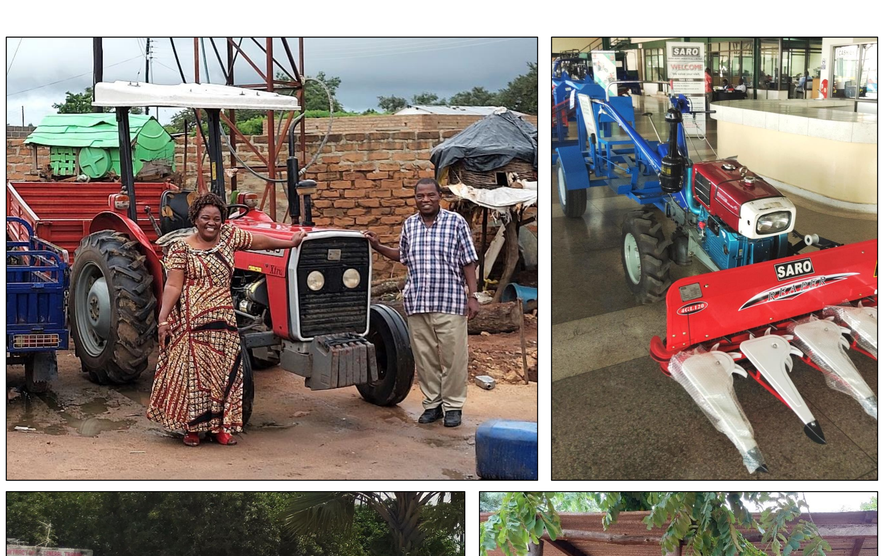
Carolin Rosenberg
Institute for Development and Peace (INEF), University of Duisburg-Essen
E-Mail: carolin.rosenberg@uni-due.de

Background

Zambia

- Poverty rate of 61%, of which 2/3 live in rural areas
- 30.9% undernourished
- 48% of the population works in the agricultural sector, which contributes 5% to Zambia's GDP
- Area cultivated by smallholders: 71% < 2 ha; 24% 2-5 ha
- Only 1.8% of farms are mechanised
- 8% of agricultural loans go to small and medium-sized farms

Research Area within Zambia



Research Questions

- How is the project a good practice example for promoting mechanisation of smallholder agriculture?
- What can we learn from project experiences and results?

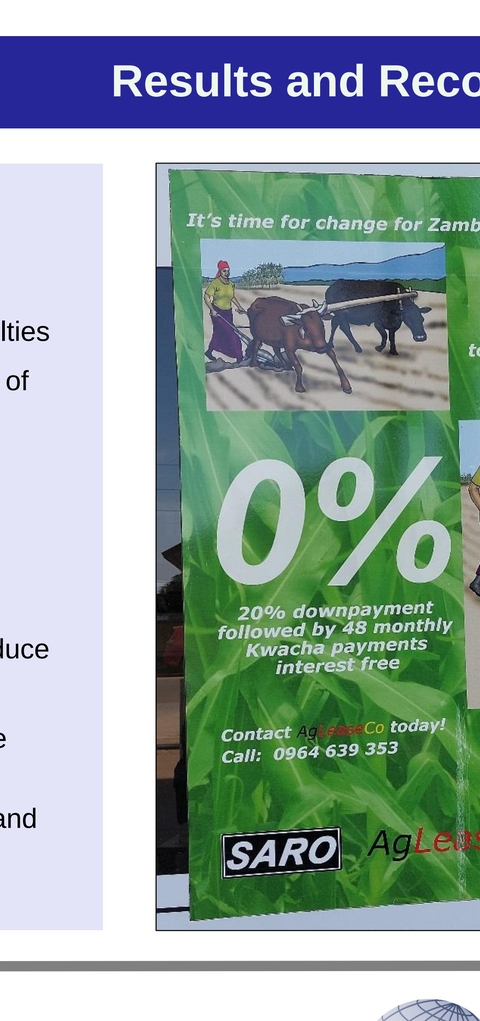
Method

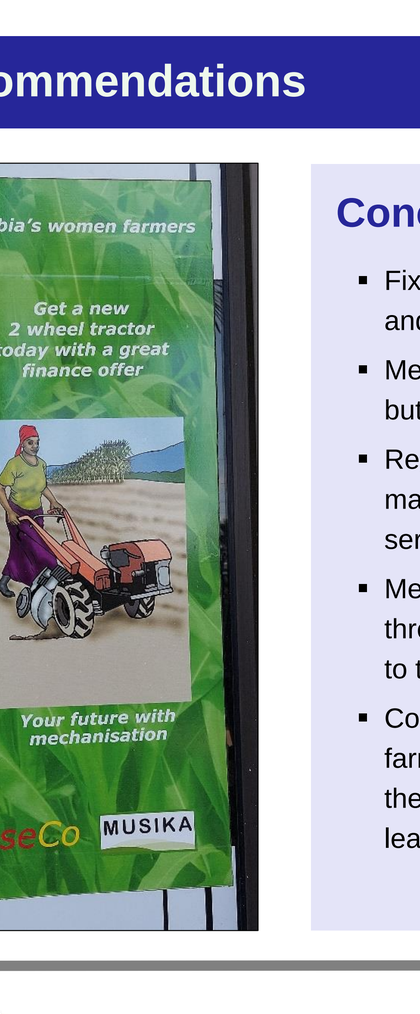
- Interviews with KfW and AgLeaseCo staff, machinery dealer SARO, local chiefs and lessees
- Focus group discussions with male and female smallholders

AgLeaseCo's Leasing Model

Objective and Activities

- Providing leasing financing for agricultural equipment in cooperation with five local machinery dealers
  - Down payment of at least 25% of the purchase value
  - Repayment period of up to four years
  - Fixed interest rate of 28% p.a.
  - No collateral; in the event of default, machinery is confiscated and resold
- Field team advises farmers on suitable equipment, associated costs and maintenance
- Farmers' ability to pay is assessed based on living conditions, agricultural productivity and local chief's recommendation
- Training in business skills, proper use and maintenance of machinery





Project Impacts

- High demand for 4-wheel tractors, but also for processing machinery (oil presses, shellers, mills)
- Mechanisation
  - Reduces workload and dependence on draft animals
  - Allows expansion of cultivated area
  - Enables timely conduct of agricultural activities
  - Allows greater flexibility in the face of climate risks
- Improved productivity leads to a significant increase in household income
- Agricultural and transport services offered with leased machinery generate an additional income
- Smallholders who cannot (yet) afford leasing also benefit from mechanisation by using agricultural services

Results and Recommendations

Challenges and Success Factors

- Low financial literacy and limited knowledge of leasing
- Marketing problems and climate risks create payment difficulties
- Damage due to improper use, time-consuming procurement of spare parts and lack of nearby repair services

- Decentralised mobile mechanic teams could help, complemented by further training of farmers in proper use, maintenance and carrying out minor repairs
- Greater promotion of affordable irrigation systems could reduce farmers' dependence on rain-fed agriculture
- Agricultural services provided by AgLeaseCo could alleviate the currently unmet demand for services, but should be designed as needs-oriented complement to existing offers and in consultation with smallholders

Conclusions

- Fixed leasing rates, different payment plans to choose from, and a down payment in instalments accommodate the lessee
- Mechanisation programmes should focus not only on tractors but also on irrigation, processing and transport equipment
- Regular training in the proper use and maintenance of machinery, and rapid availability of spare parts and repair services are essential
- Mechanisation of female smallholders should be promoted through specific support programmes and machinery adapted to their usage requirements
- Cooperative leasing models open up access to poorer farmers, but require social cohesion and mutual trust within the group along with clearly defined, fair rules for the use of leasing goods

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Publications available at: https://www.uni-due.de/inef/projekt_ave_en.php

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