

# Rural Transformation in Ayeyarwady & Yangon: Emerging evidence

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# Outline

- The Food Security Policy Project (FSP)
- Myanmar Aquaculture Agriculture Survey 2016 (MAAS)
- Migration, mobility and wages
- Mechanization
- Credit
- Off-farm Employment & Rural Non-Farm Economy
- Farm productivity

# Food Security Policy Project (FSP)

- USAID & LIFT funded partnership implemented by MSU, CESD, and IFPRI – October 2014-2019

## **Objectives:**

- Generating and disseminating new knowledge to address evidence gaps and inform better agricultural policy
- Capacity building and strengthening for research and policy

## **Components:**

- Agricultural value chains and livelihoods research
- Policy advising
- Training and outreach

# Myanmar Aquaculture Agriculture Survey (MAAS)

- Builds on earlier qualitative study of aquaculture value chain

## Aims

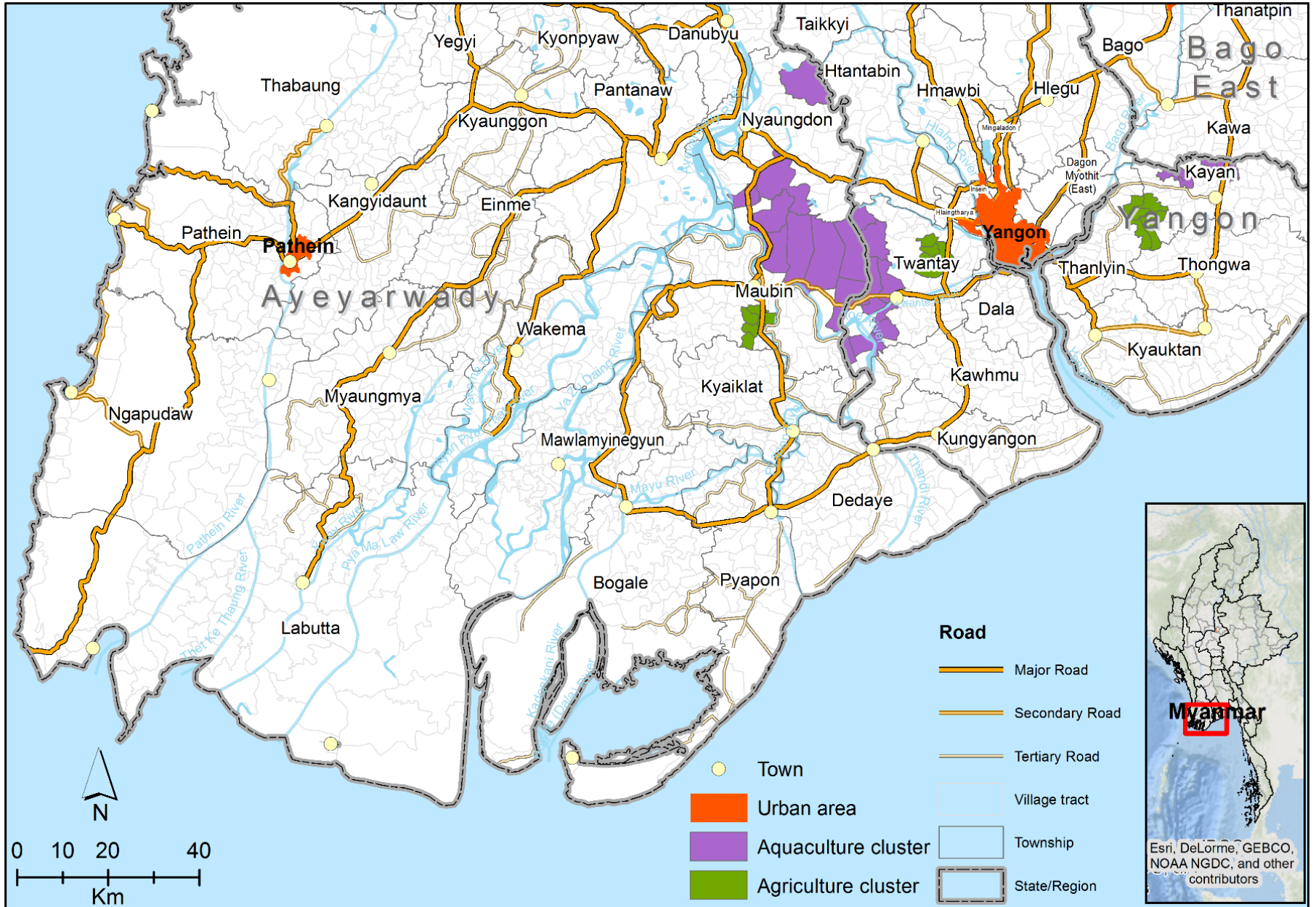
- Generate a baseline of information on fish and crop farming sectors
- Understand and quantify relative advantages of, tradeoffs between, and spillovers from aquaculture and agriculture
- Entry point into new areas of research (e.g. mechanization, credit)

# Myanmar Aquaculture Agriculture Survey (MAAS)

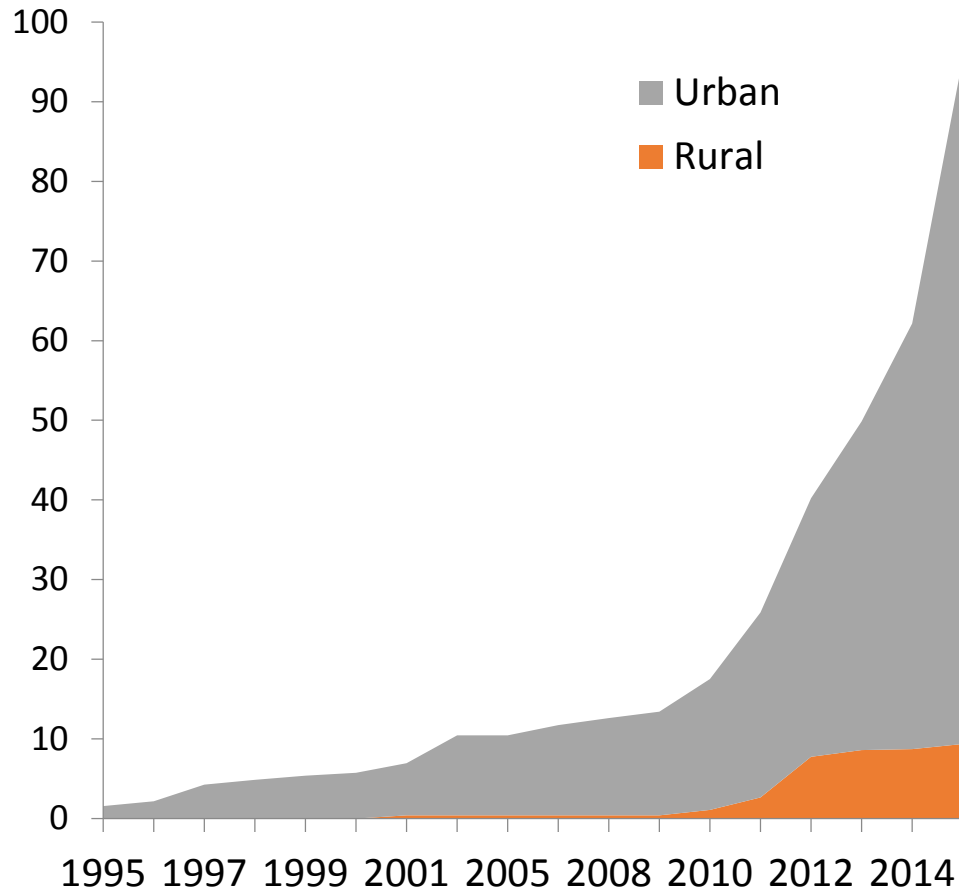
## Methodology

- Purposively selected 2 clusters of 'aquaculture' and 'agriculture' village tracts for comparison, based on spatial concentration of ponds and prevailing crop farming systems
- Randomly selected 'enumerations areas' and households to represent entire populations of both clusters (including non-farm households)
- Total sample = 1102 HHs in 40 village tracts, representing 37,390 HH

# Survey locations



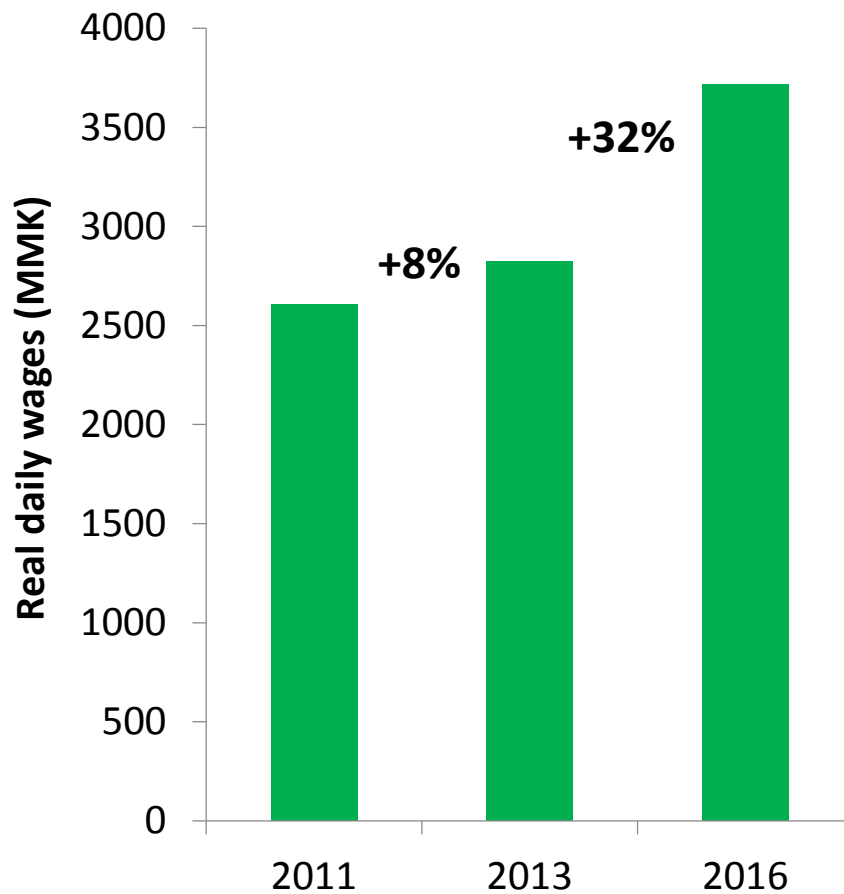
# Rapidly accelerating rural-urban migration post-2010



**The cumulative share of current migrants by year (%)**

- 16% of HH have migrants
- Average migrant age 20
- 55:45 male/female split
- 70% employed in manufacturing
- 8% international
- Some rural-rural migration from remoter areas for fulltime agricultural work (40% of permanent workers in aquaculture cluster)
- 80% of HH with migrants receive remittances

# Real wage increases

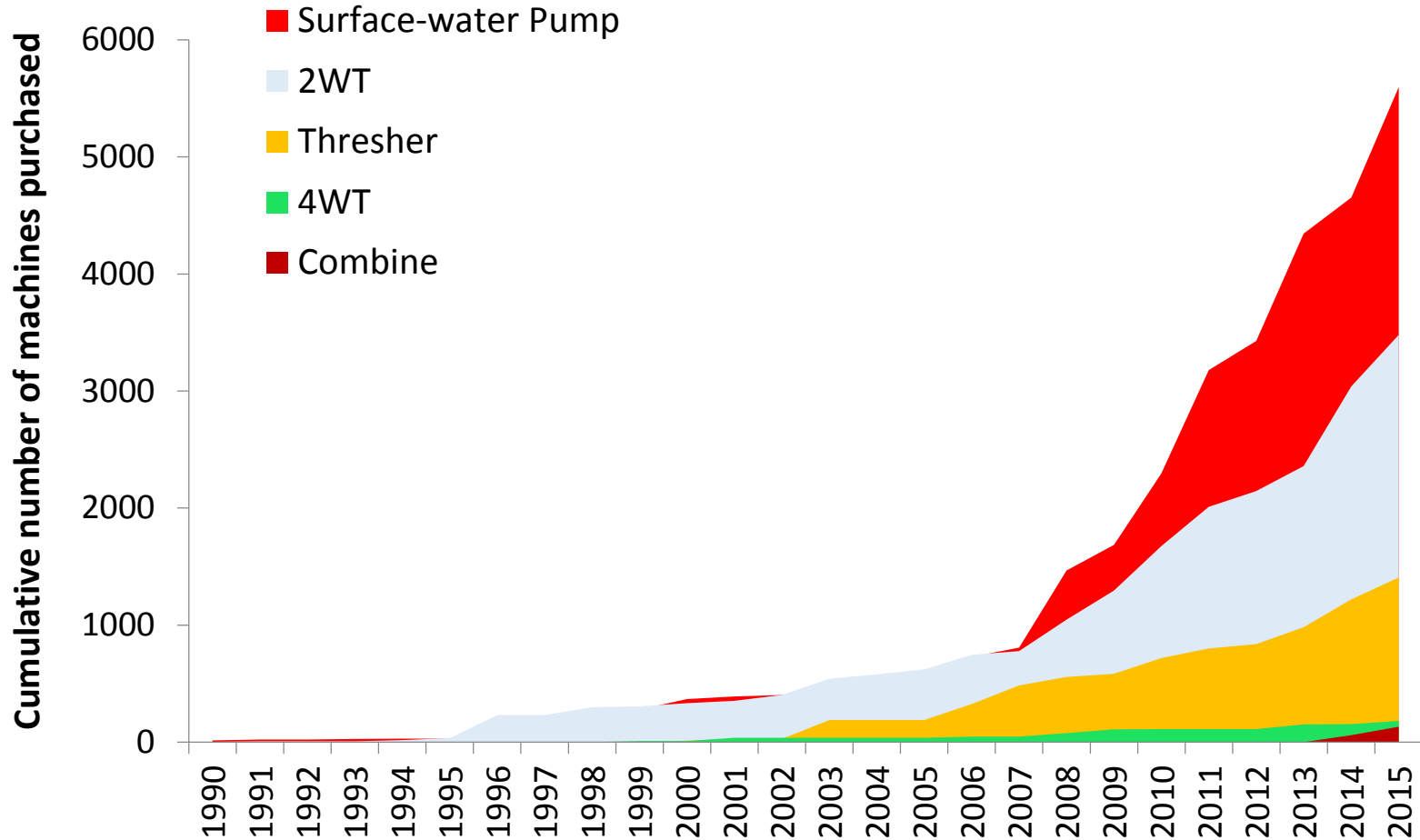


Main impact of migration is on rural labour supply and wage rates

**Average real daily wage for male agricultural labour (2011-2013)**

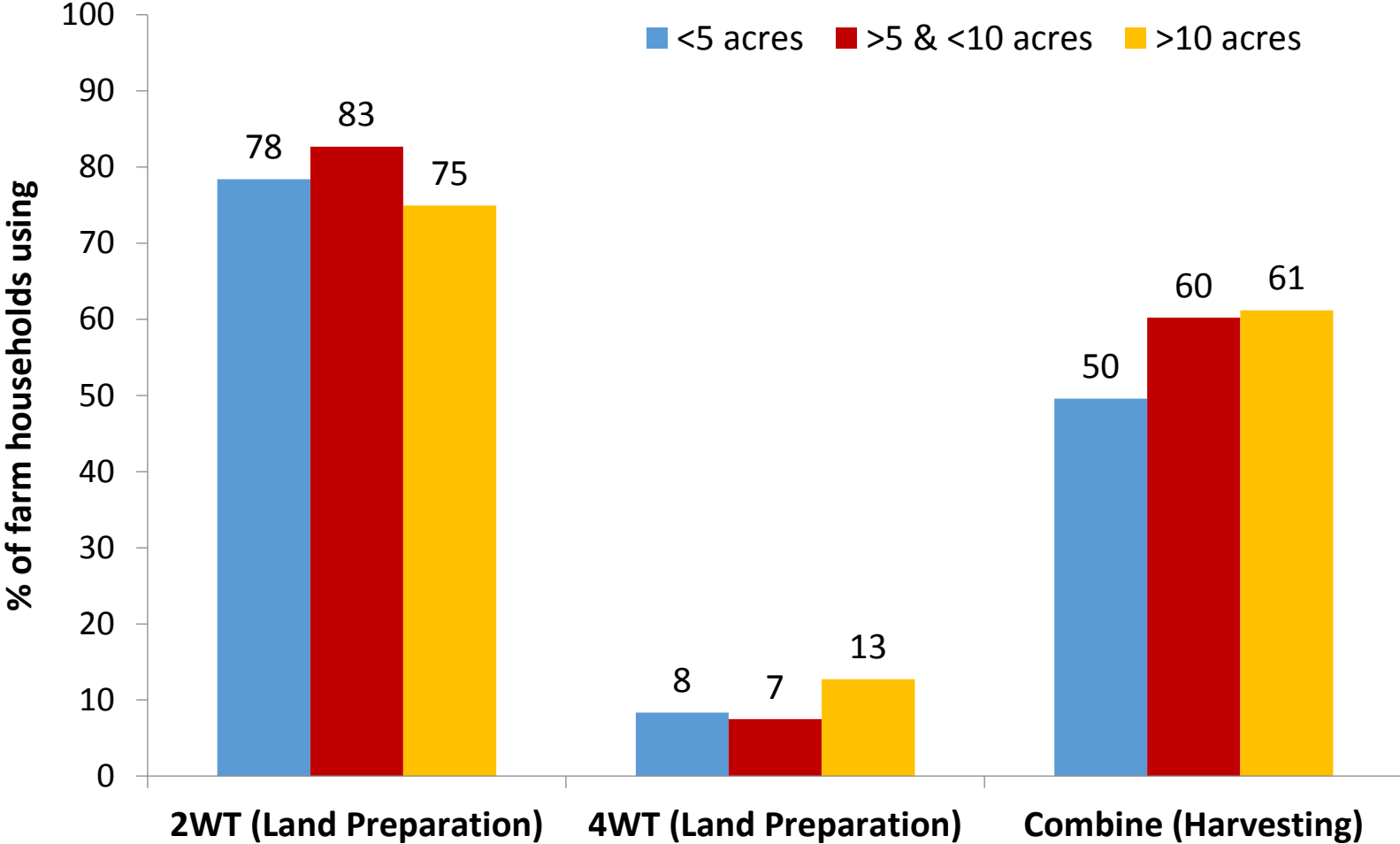


# Labor shortages & rising wages driving mechanization



**Cumulative purchases of agricultural machinery, 1990-2015**

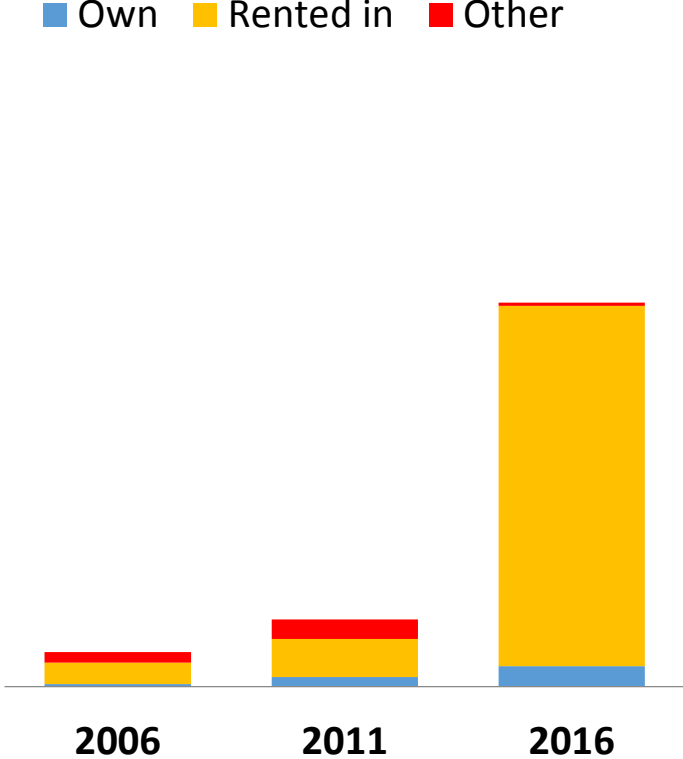
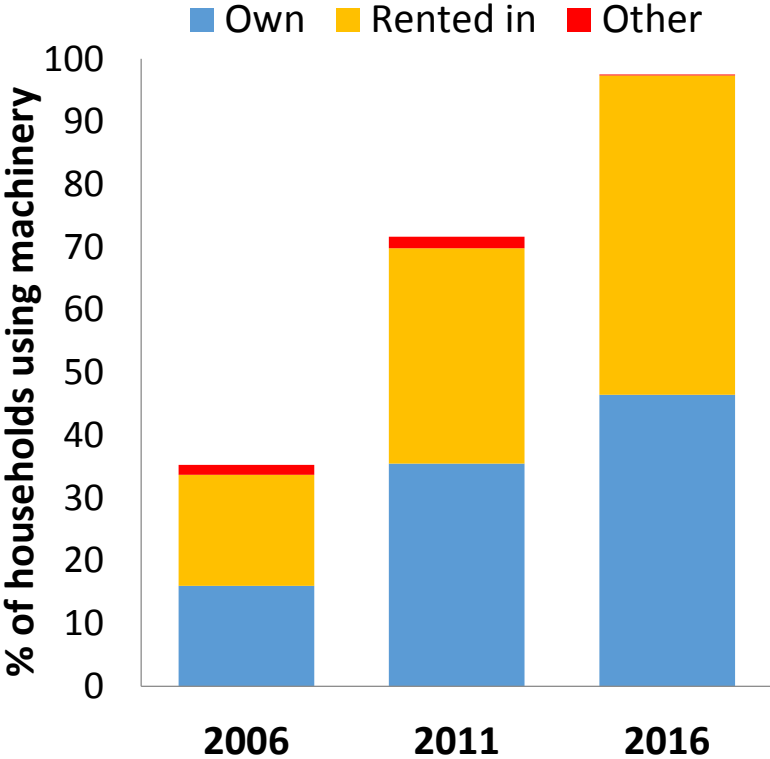
# Scale-neutral technology



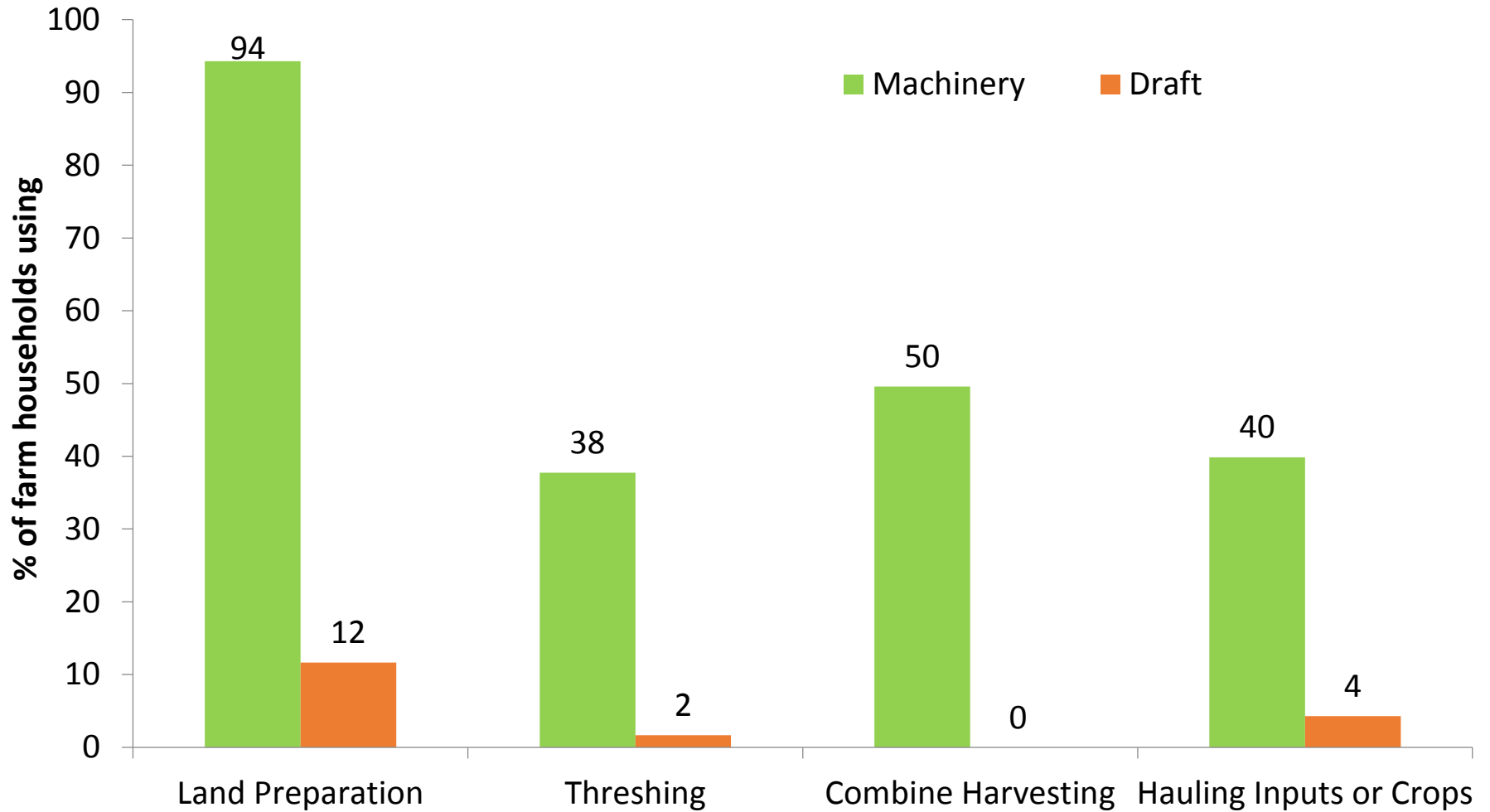
# Adoption supported by rental services

Machine Use for Land Preparation

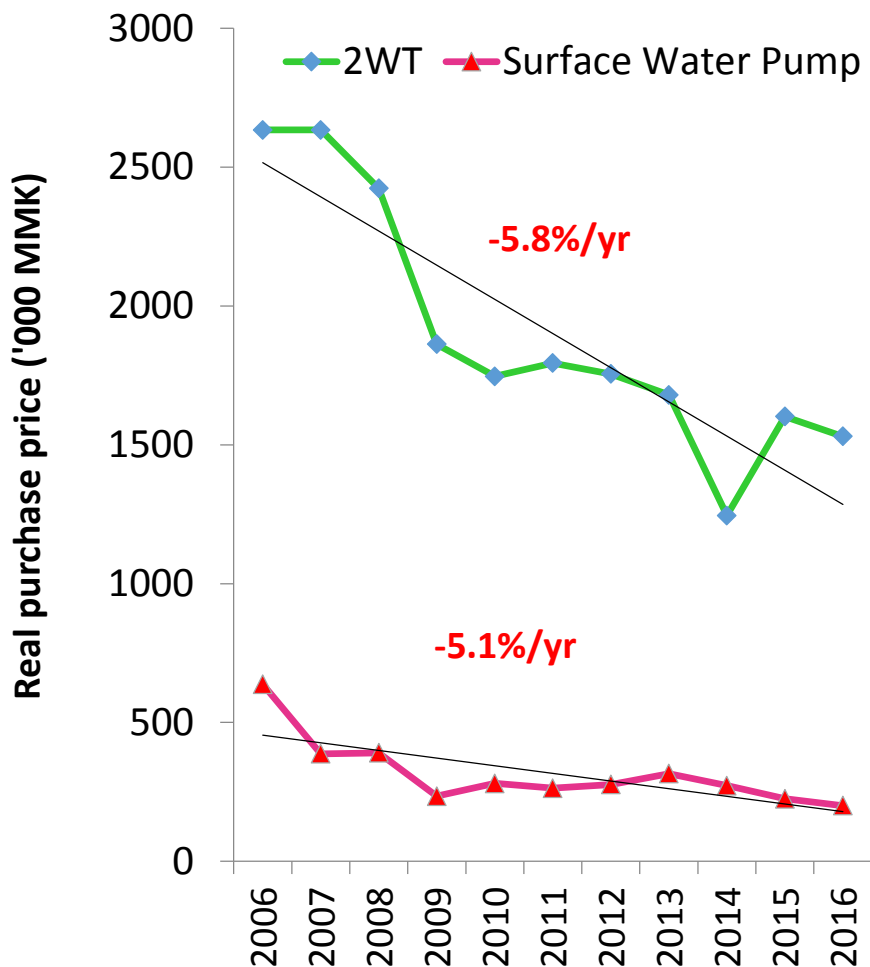
Machine Use for Harvesting



# Declining draft animal use



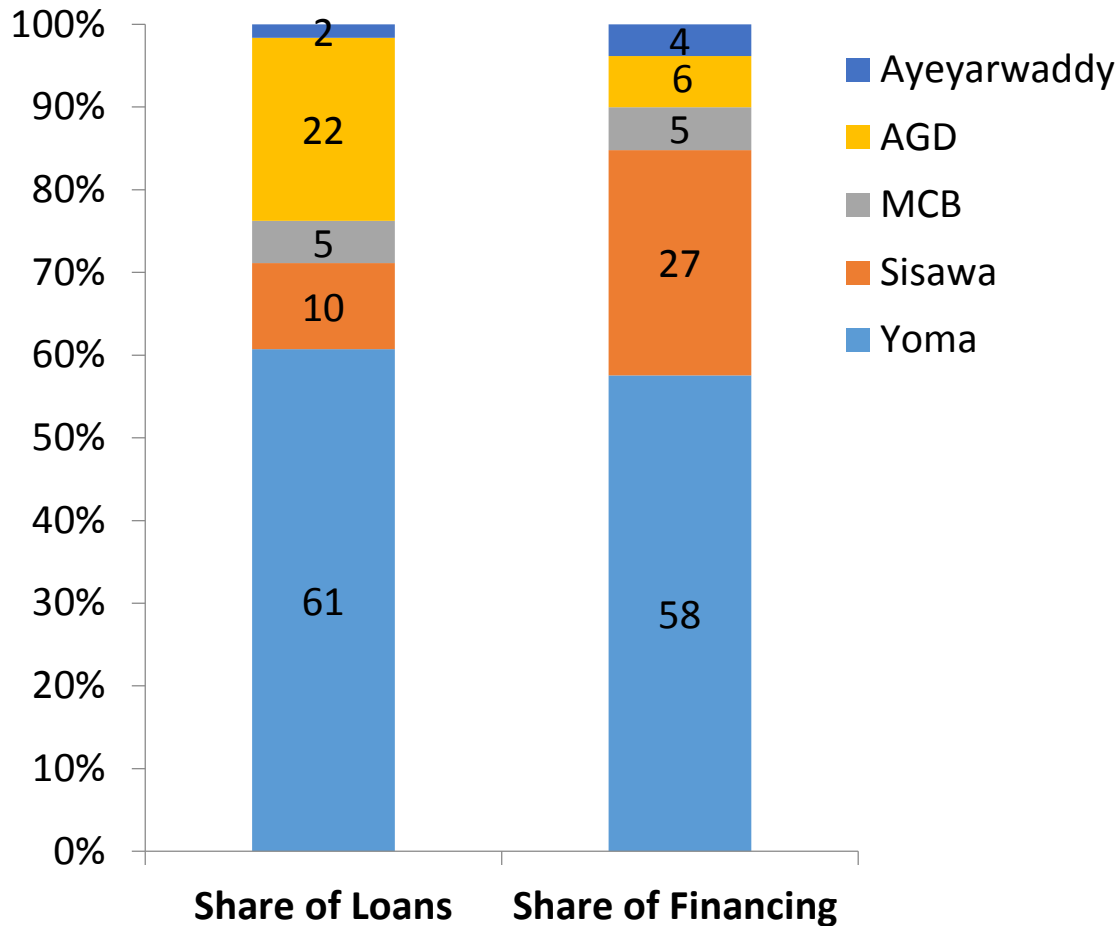
# Mechanization supported by more affordable machines, access to formal financial services



Majority of machine sales financed by hire purchase agreements with banks

Item	Bank-financed sales (%)
2 wheel tractor	63
4 wheel tractor	82
Combine	87
Trawlajee	75

# Impact of better terms of finance

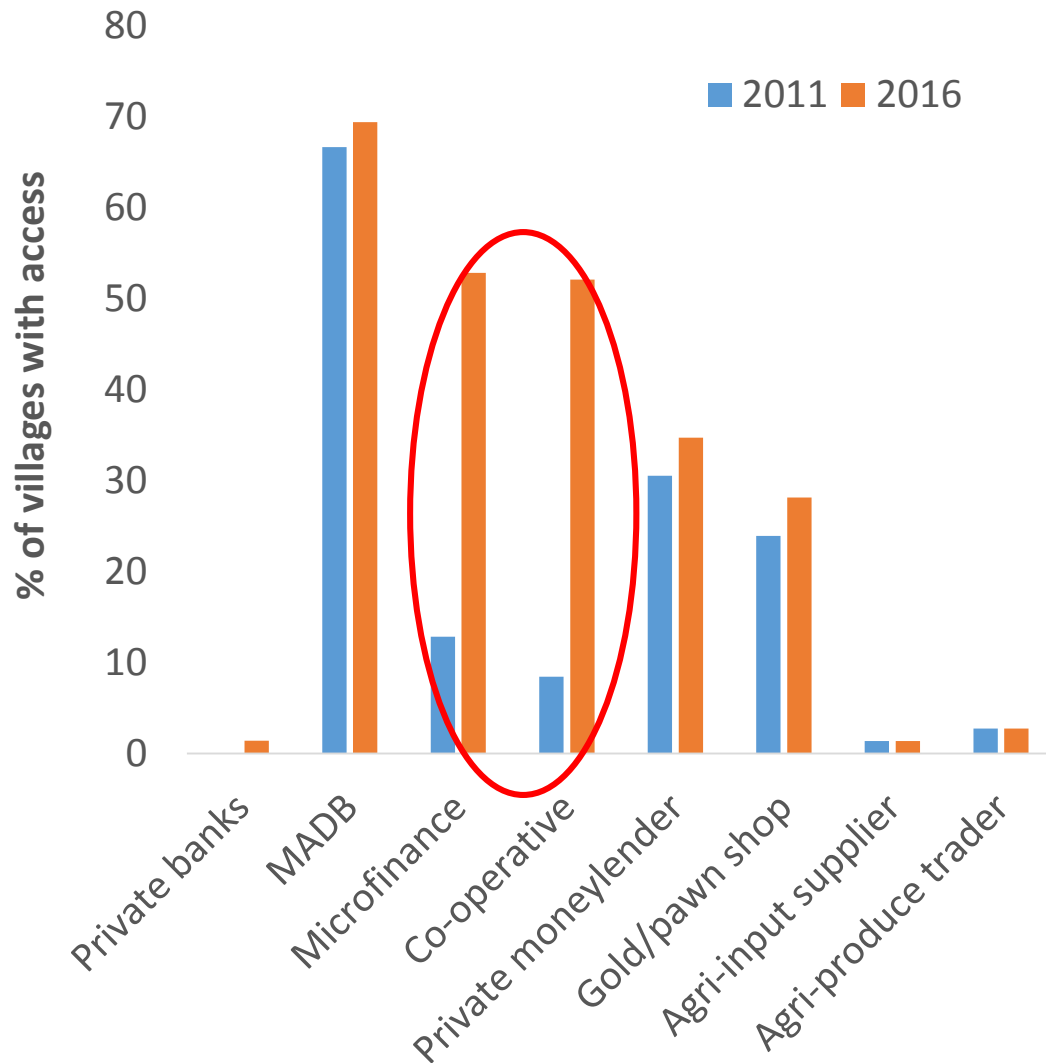


LIFT-supported Yoma Bank scheme:

- Smaller down payment + longer repayment period = more customers

**Share of bank-financed agricultural machinery sales, by number and value of loans**

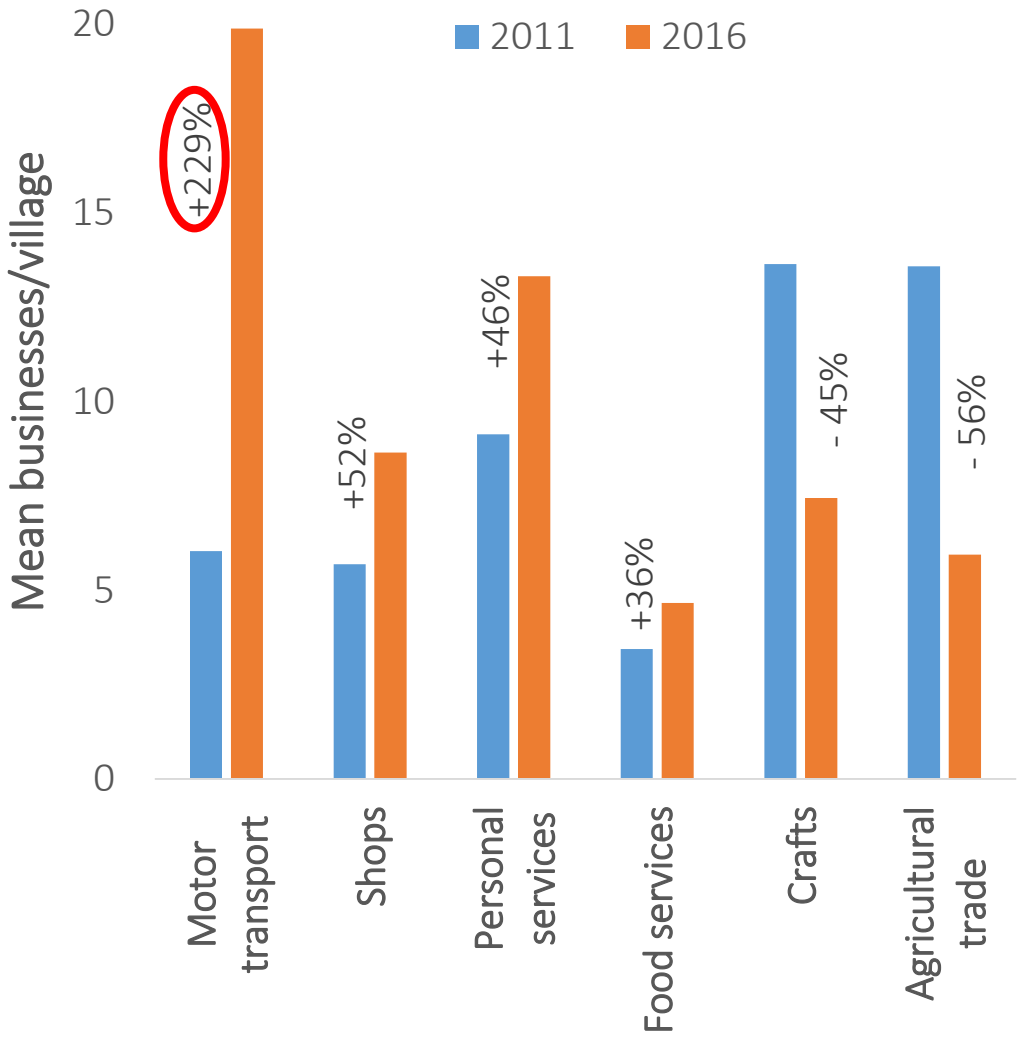
# Sources of credit diversifying



- Access to credit improving due to MFIs and cooperatives
- Average rates of interest paid on informal and semi-formal loans fell from 72% in 2011 to 60% in 2016.
- Very few output-tied agricultural loans

Share of villages with credit access by source (2011-2016)

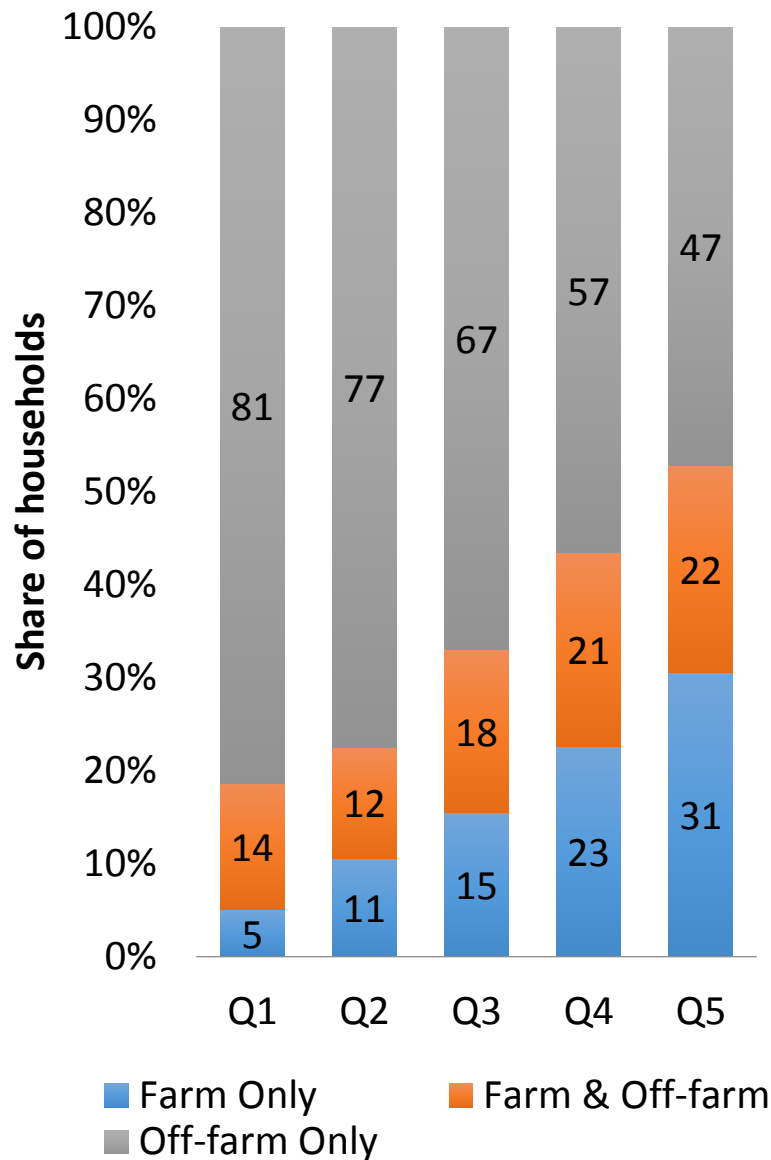
# Rapid growth of non-farm enterprise



- From 2011-2016, motor vehicles replaced boats as main mode of transport: average journey times to fell 20-30%.
- Increasing mobility: 44% of workers in fulltime employment travel beyond local area but remain resident
- Village stores have attained almost total ubiquity (96% of villages)

Change in average number of businesses per village, 2011-2016

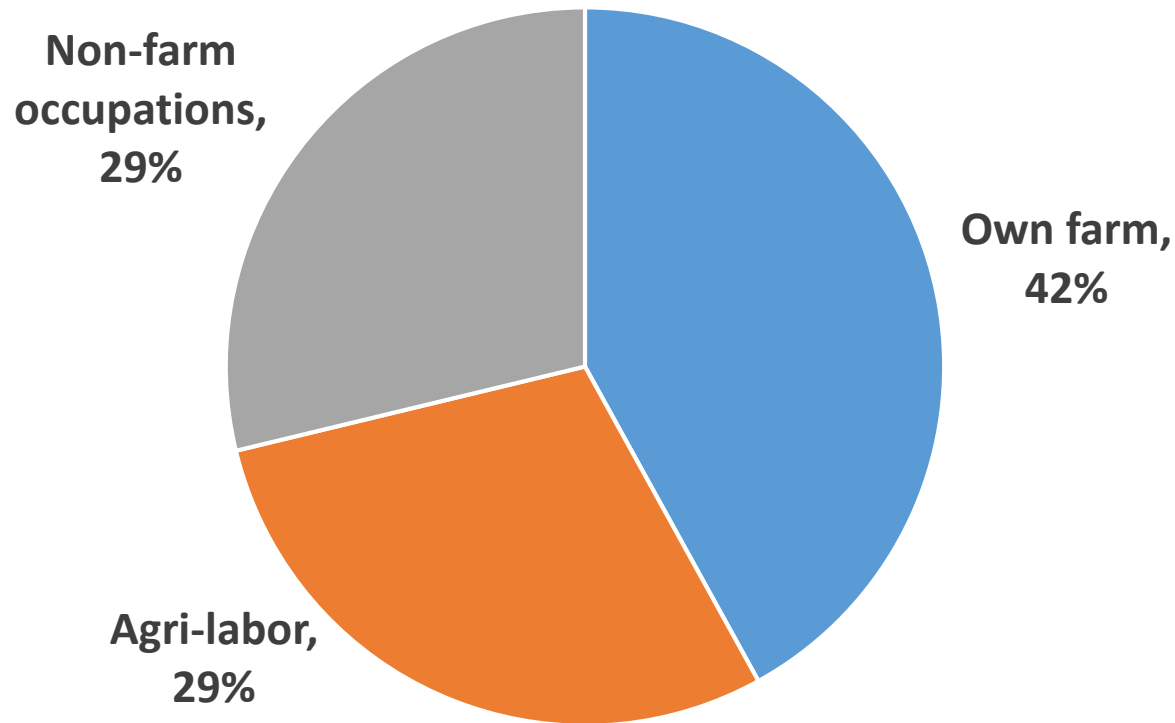




Off-farm employment plays a major role in livelihoods for households in all income and landholdings groups

**Household participation in farm and off-farm employment**

# Agriculture still the major source of primary employment



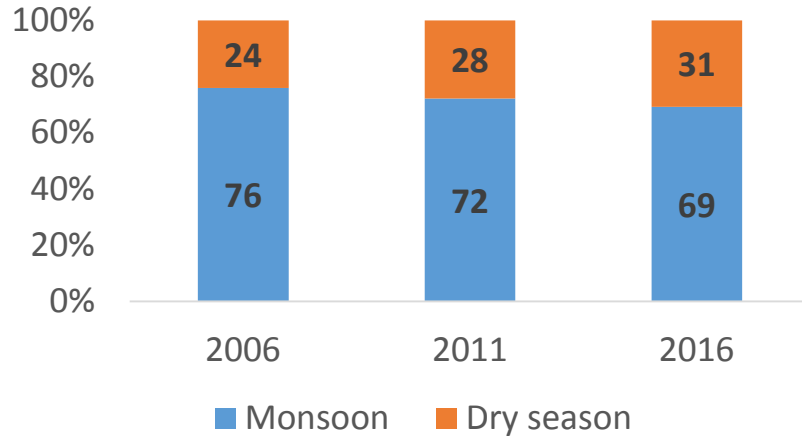
Share of primary employment, by type

Agriculture directly provides >70% of primary employment (plus more in related value chains)

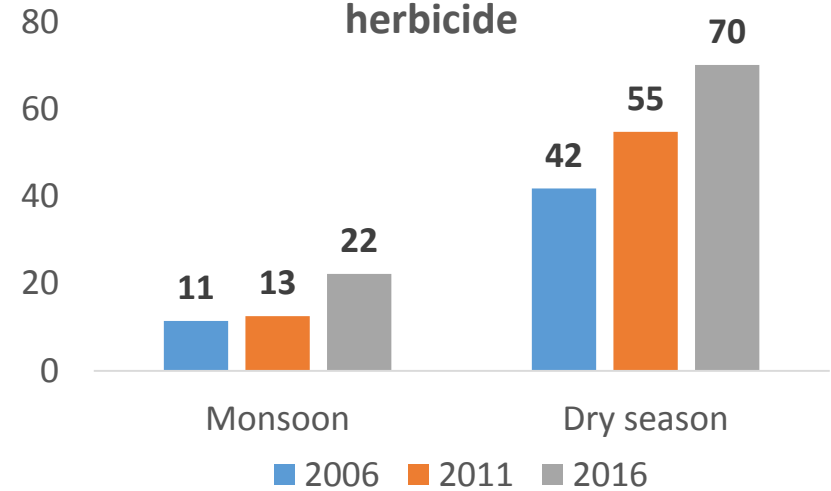
Non-farm employment, and off-farm agricultural work, contribute similar shares of primary employment

# Incipient agricultural intensification

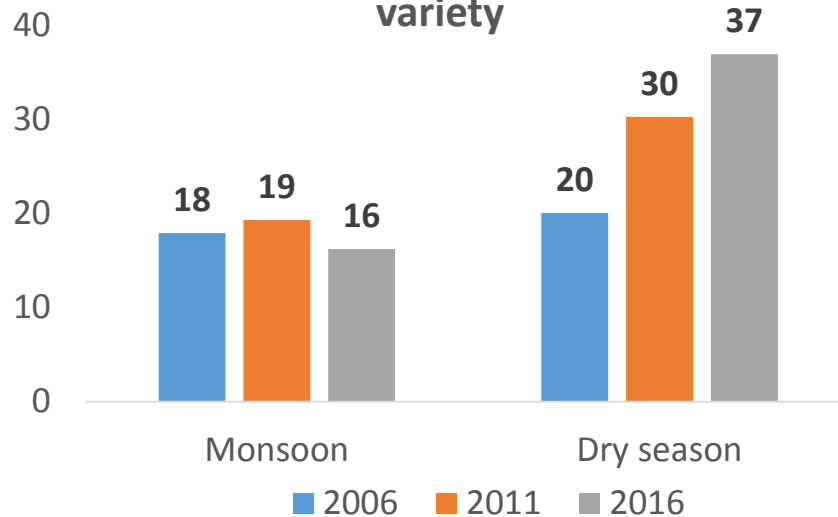
**Main paddy crop  
(% of HH reporting)**



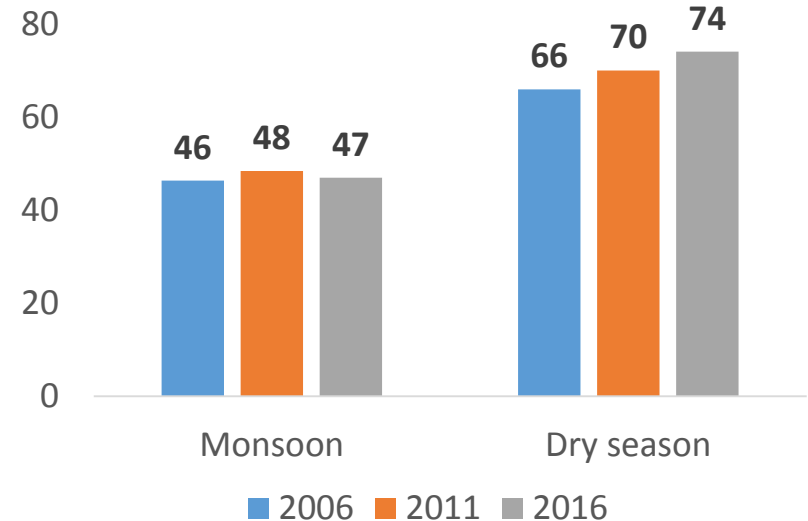
**% of paddy farms applying  
herbicide**



**% of HH planting improved rice  
variety**



**Paddy yield (baskets/acre)**



# Conclusions

- Rapid rural transformation taking place in townships close to Yangon, driven by migration
- Migration facilitated by
  - freedom of movement post 2010;
  - urban growth & industrialization post 2012
- Leading to: Labor shortages, rising wages → Mechanization of agriculture, growth of RNFE
- Growth of RNFE, supported by: greater mobility (transport services), deeper market integration (labour, inputs, outputs), improving access to and terms of credit
- Mechanization supported by: Expansion of bank finance, falling machine costs, thriving rental markets, scale neutrality
- Apparent synergies between agricultural productivity and RNFE expansion



**THANK YOU**

