

# Agriculture and Rural Transformation in Myanmar

Implications for Development Strategy  
with a Spotlight on Shan State

By

Ben Belton, Isabel Lambrecht, Duncan Boughton



# Outline

- What do we mean by agricultural and rural transformation (A/RT)?
- Why does it matter for USAID programming in Myanmar?
- How do we generate evidence on A/RT?
- What is the evidence on drivers, trends and constraints to A/RT?
  - Overview of findings from the Delta and Dry Zone
  - Spotlight on Shan State: similarities and contrasts to Delta and Dry Zone
- Implications for development strategy
- Q&A / Discussion

# Agricultural and Rural transformation (A/RT) defined

- A/RT refers to the process of expansion and diversification of the rural economy in response to market opportunities and productivity growth
- Look at agricultural and rural economy transformation jointly because of strong linkages (multiplier effects) between farm and non-farm activities
- Drivers of A/RT typically include urbanization, trade, infrastructure, migration, technology, financial services
- Geography and agro-ecology shape farmer and agri-business response to these drivers as well as outcomes.

# Relevance to USAID programming

- Outcomes of A/RT processes are of direct relevance to a wide range of USAID objectives: inclusive development, poverty reduction, food and nutrition security, gender equity, and resilience
- A/RT processes can be shaped by USAID engagement and programming to improve positive outcomes and avoid/mitigate negative ones
  - Example of rate of outmigration from rural areas that can have positive and negative outcomes

# FSPP Survey Locations



- **2015: Mon State Survey**
- **2016: Delta Region Survey (with aquaculture VC)**
- **2017: Dry Zone Survey (with pulses and oilseed VCs)**
- **2018: Dry Zone Variety Adoption and Seed Demand**
- **2018: Southern Shan State (with maize and pigeonpea VCs)**

# Survey Topics

## Household Livelihoods

- Land access
- Farm enterprises and profitability
- Farm technology & mechanization
- Credit access
- Farm and non-farm employment
- Migration
- Gender
- Household income shares

## Off-farm value chain stages

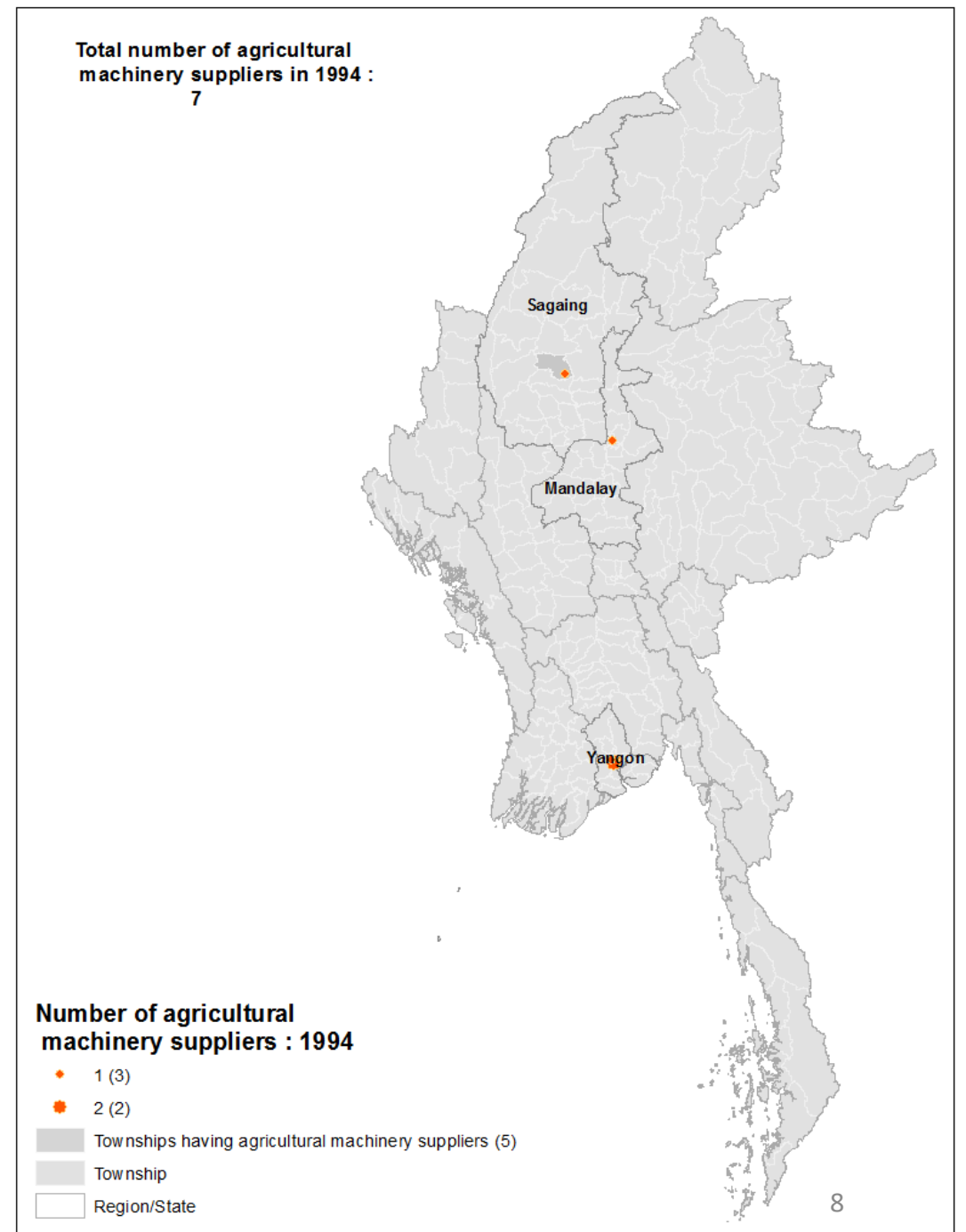
- Aquaculture
- Pulses
- Oilseeds
- Maize
- Rubber

# Summary of A/RT in the Delta and Dry Zone

- 1) Agriculture is the largest source of rural employment and, with growing urban demand for high quality and diversified food, a key ***potential*** driver of sustained growth in the rural economy.
- 2) Migration is accelerating, driving up rural wage rates.
- 3) Remittances received by migrant households are mainly used for day to day expenses, including health and education.
- 4) Formal sources of credit have expanded, reducing interest rates.
- 5) Labor scarcity and increasing wage rates, combined with bank finance for machinery rental services, is driving extremely rapid mechanization.

# Spatial growth in machinery supply businesses during the past 25 years

**Number of agricultural machinery supply businesses by township, 1994-2018** (Delta & Dry Zone Enterprise surveys)



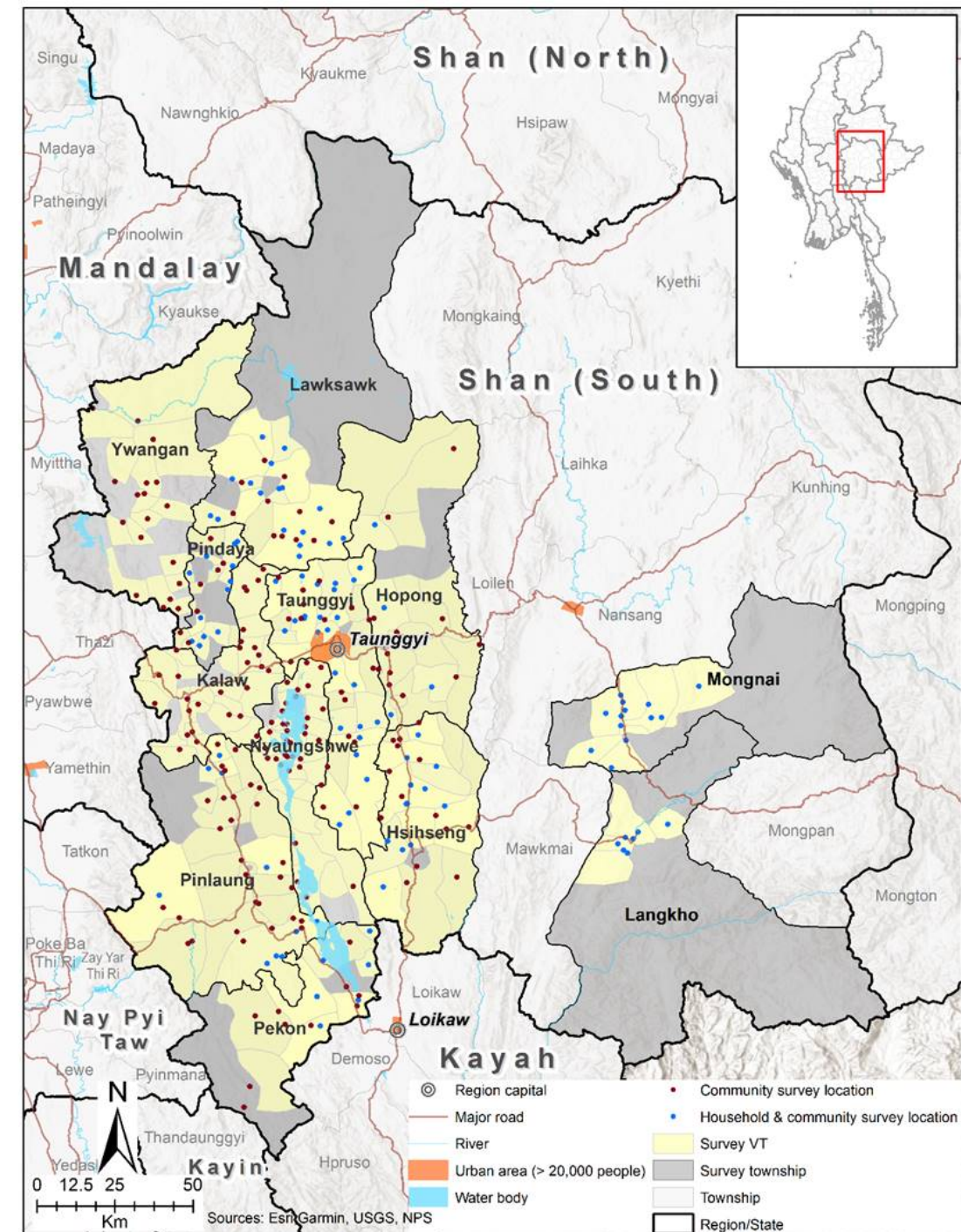


# Summary of A/RT in the Delta and Dry Zone (2)

- 6) Access to a wide range of goods and services, especially transport and communications, has improved rapidly in rural areas.
- 7) Agriculture is under-performing relative to potential due to:
  - poor water control (irrigation and drainage)
  - Limited access to improved varieties / quality seed
  - inefficient use of fertilizer and pesticides
  - limited diversification into high value farm enterprises (aquaculture, livestock, fruit and vegetables)
  - Instability in output prices, especially for products heavily traded with India and China

# Shan Agriculture and Rural Economy Survey (SHARES)

- **Focus:** Agriculture and the rural economy in South Shan, with particular emphasis on **maize & pigeon pea** value chains
- Household survey: 1562 HH in 99 villages in 9 townships
- Representing all village tracts where maize or pigeon pea grown
- Community survey: in 323 villages in 12 townships



# COMMUNITY SURVEY



# Ethnic diversity & Access

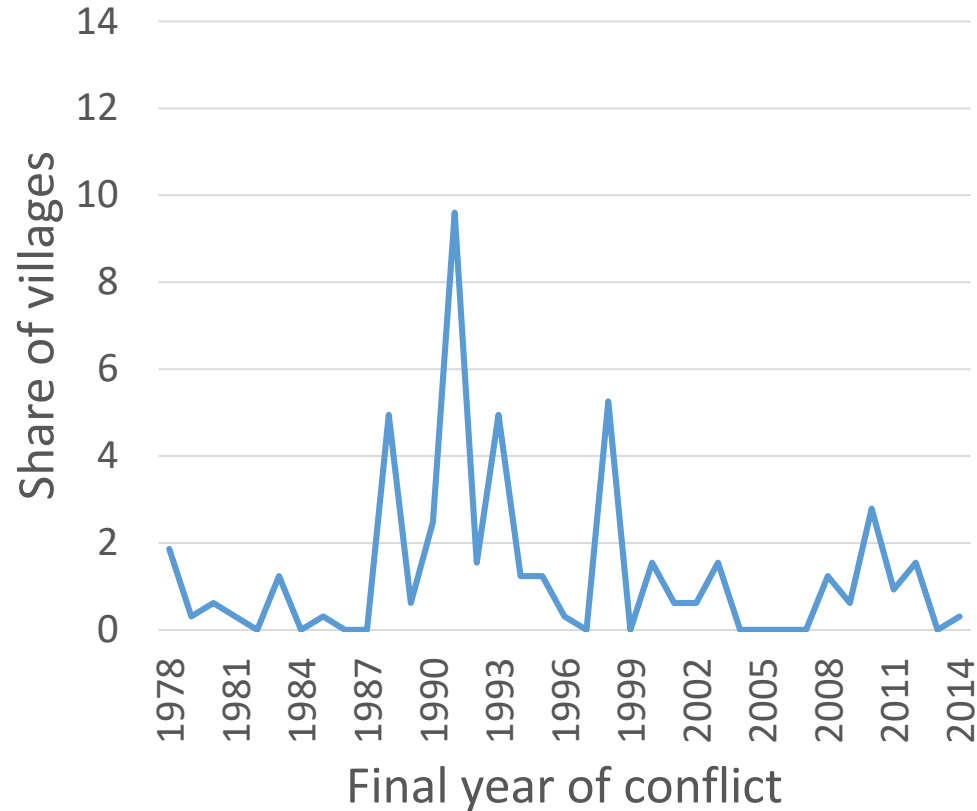
Ethnically diverse

- Villages contain 1 – 12 different ethnic groups (average 2, total 19)
  - Pa'O, Shan and Burmese
- + Danu, Taungyoe, Kayan, Innthar, Lahu, Palaung, Kayin, Li Sue ...
- One third of communities have households with mixed ethnicities

Administration	# villages	% of villages
General Administration Department (GAD)	211	65.3
Pa'O Self-Administered Zone	74	22.9
Danu Self-administered Zone	33	10.2
Shan State Army	2	0.6
Other	3	0.9

**Obtaining permission to work in areas outside of direct government control is difficult...**

# History of conflict



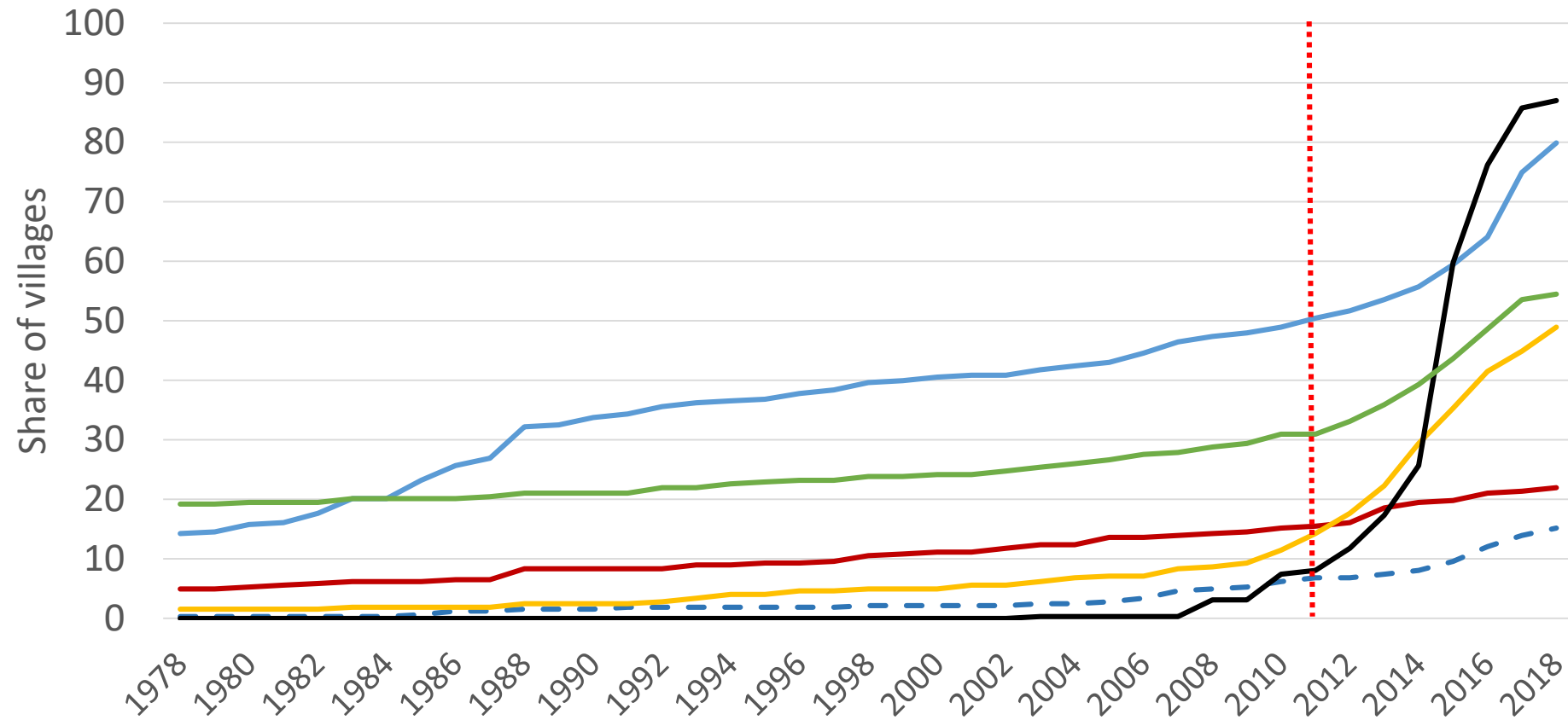
**Half of all villages (53%) ever experienced armed conflict**

- 25% experienced conflict in the last 25 years

**Consequence for households in these villages:**

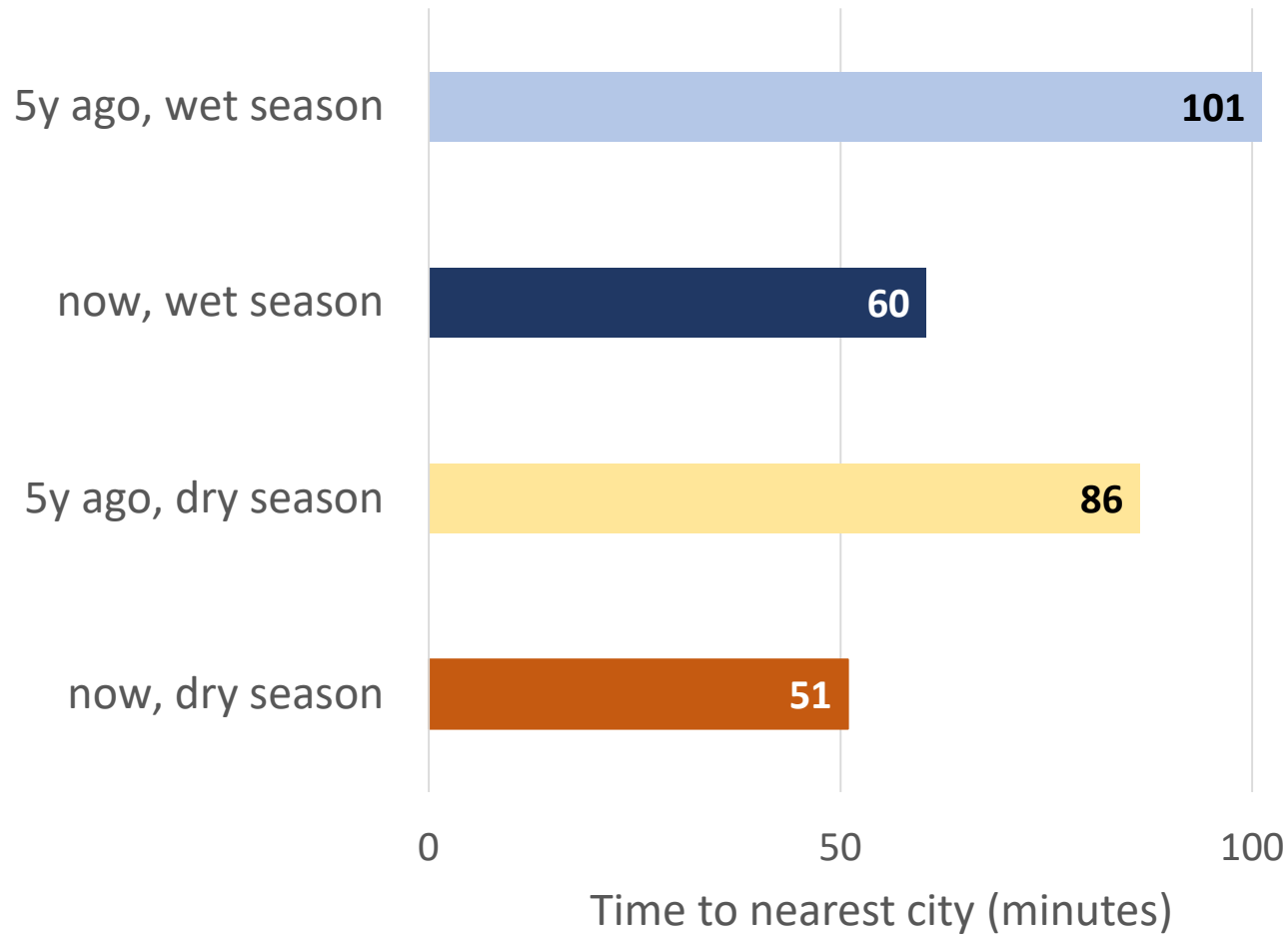
- Forced to work as laborers or porters: 87%
- Livestock killed / stolen: 28%
- Forced to relocate : 19%

# Infrastructure



— School — Post=primary school — Health infrastructure — Electricity — Mobile internet — Paved road

# Mobility

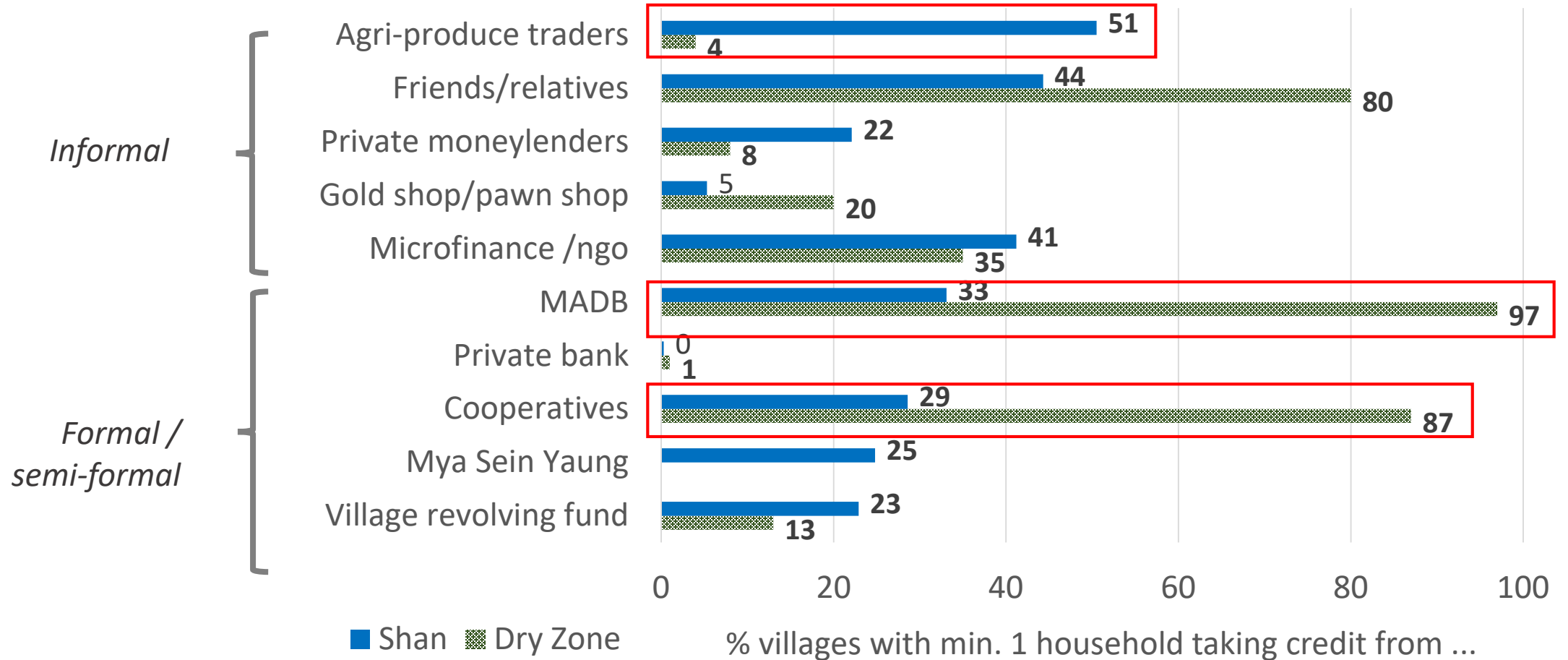


Increasing mobility and reduced travel times, but infrastructure lags behind Dry Zone

- **54%** access to paved road  
-> **Dry Zone: 75%**

- **24%** access to public electricity  
-> **Dry Zone: 35%**

# Access to finance





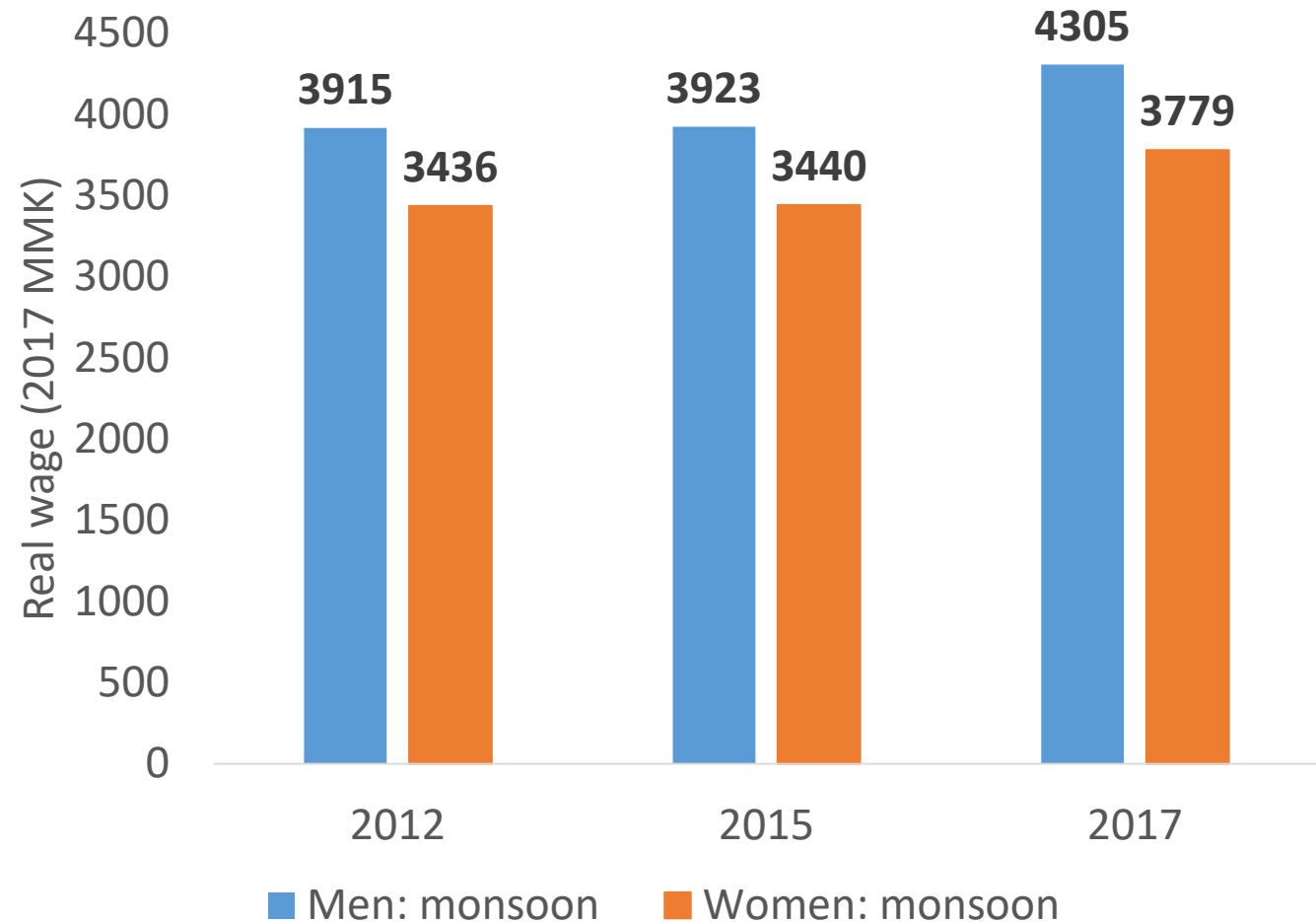
# Agricultural wages

**No** significant changes in real agricultural wages over time

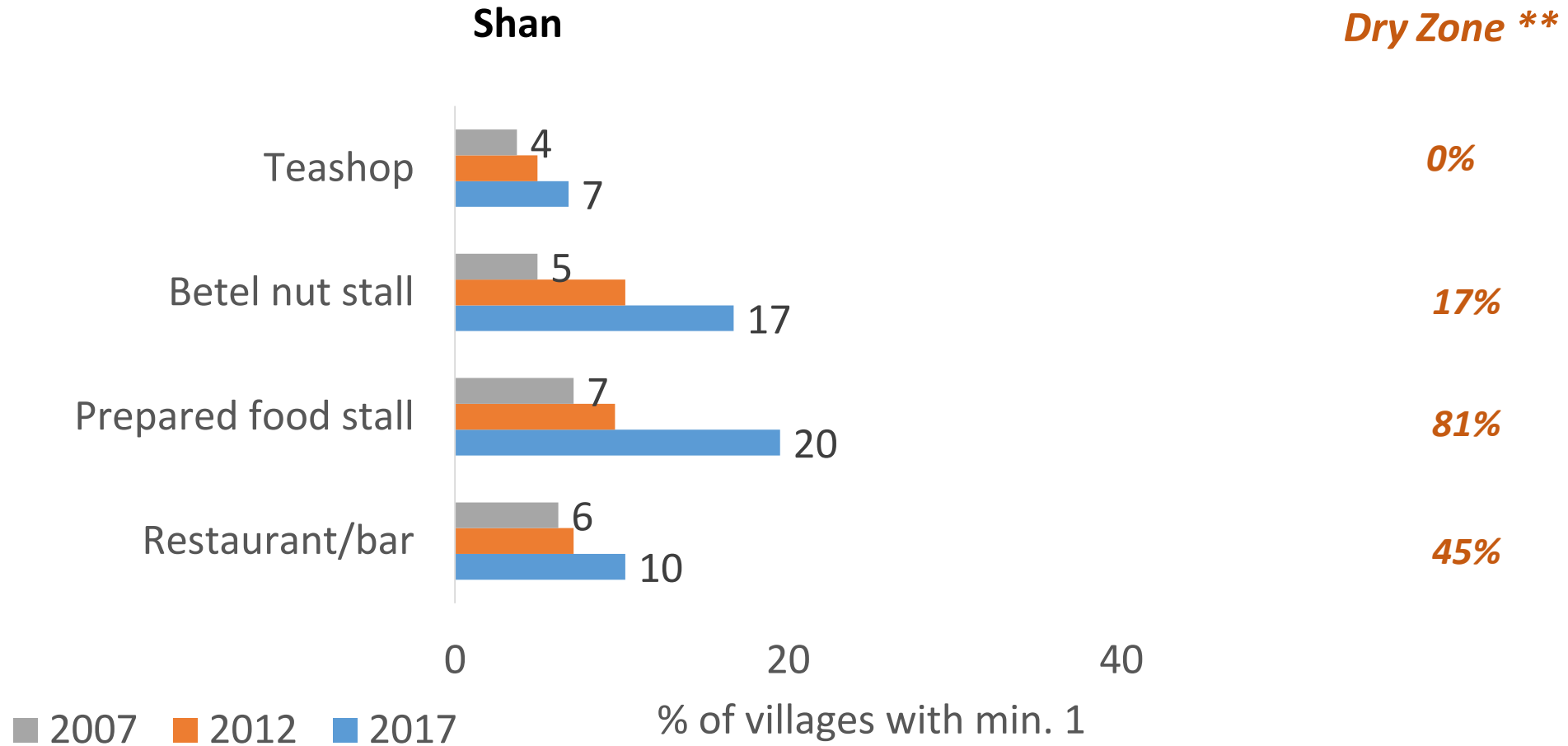
*-> Dry Zone: ± 40% increase from 2012-2016*

Gender gap is smaller than other regions of the country: women earn on average **12%** less than men in the monsoon season

*-> Dry Zone: 20% gender wage gap*

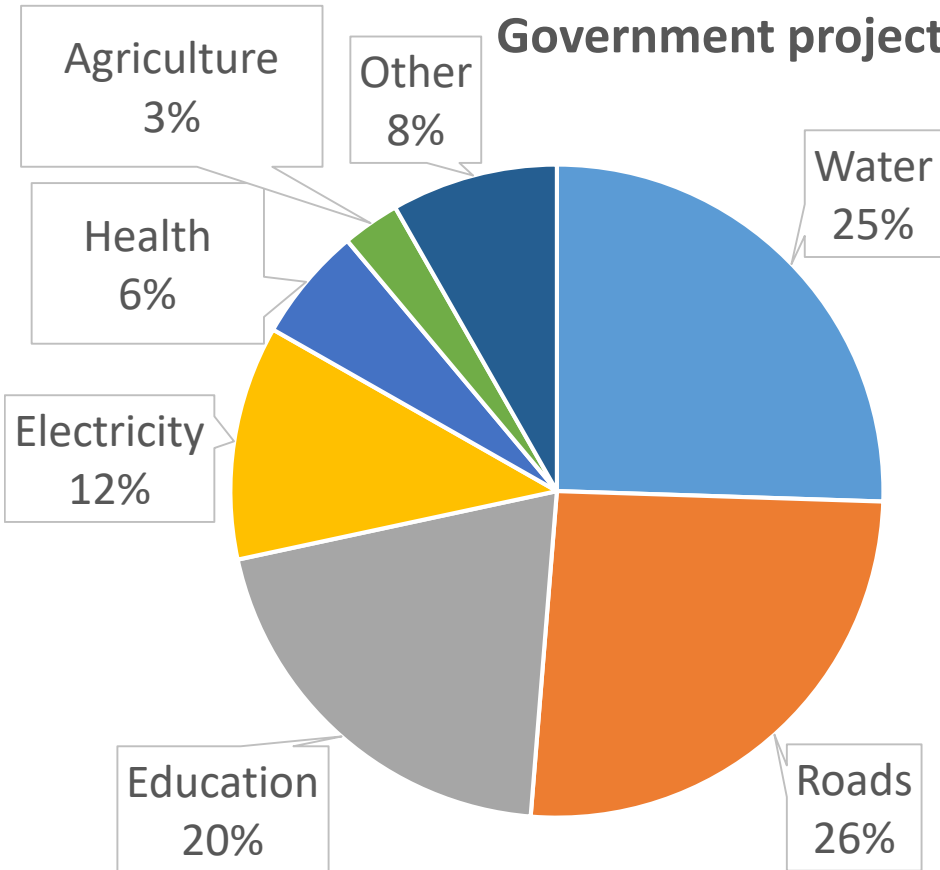


# Growth of non-farm enterprises

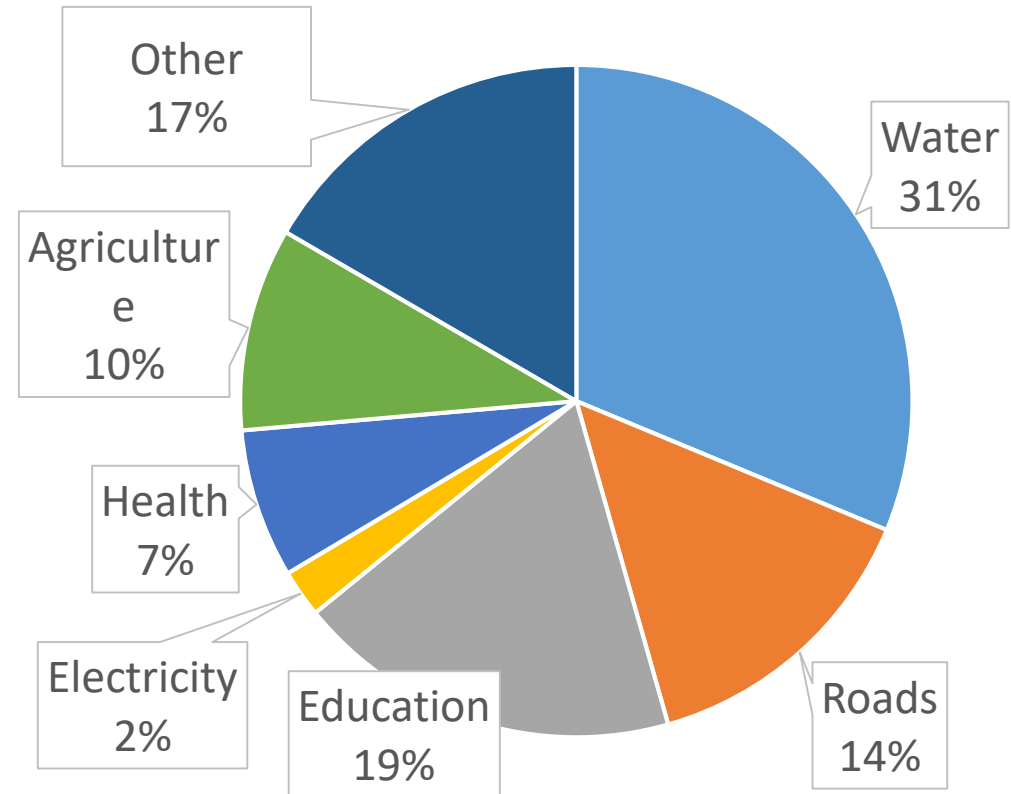


# Development assistance projects

**Government projects (66% of villages)**



**Non-government projects (57% of villages)**



# Farmer associations

Very few farmer groups, the existing ones are small and recent.

---

	<b>% of villages with...</b>	<b>Year established</b>	<b># members</b>
	<b>association</b>		
Any farmer organizations in this village	7.1	2015	29
NGO farmer group	3.4	2015	31
Central Cooperative Society	0.6	2015	37
Myanmar Farmers' Association	0.3	2013	5
Other	3.1	2015	30

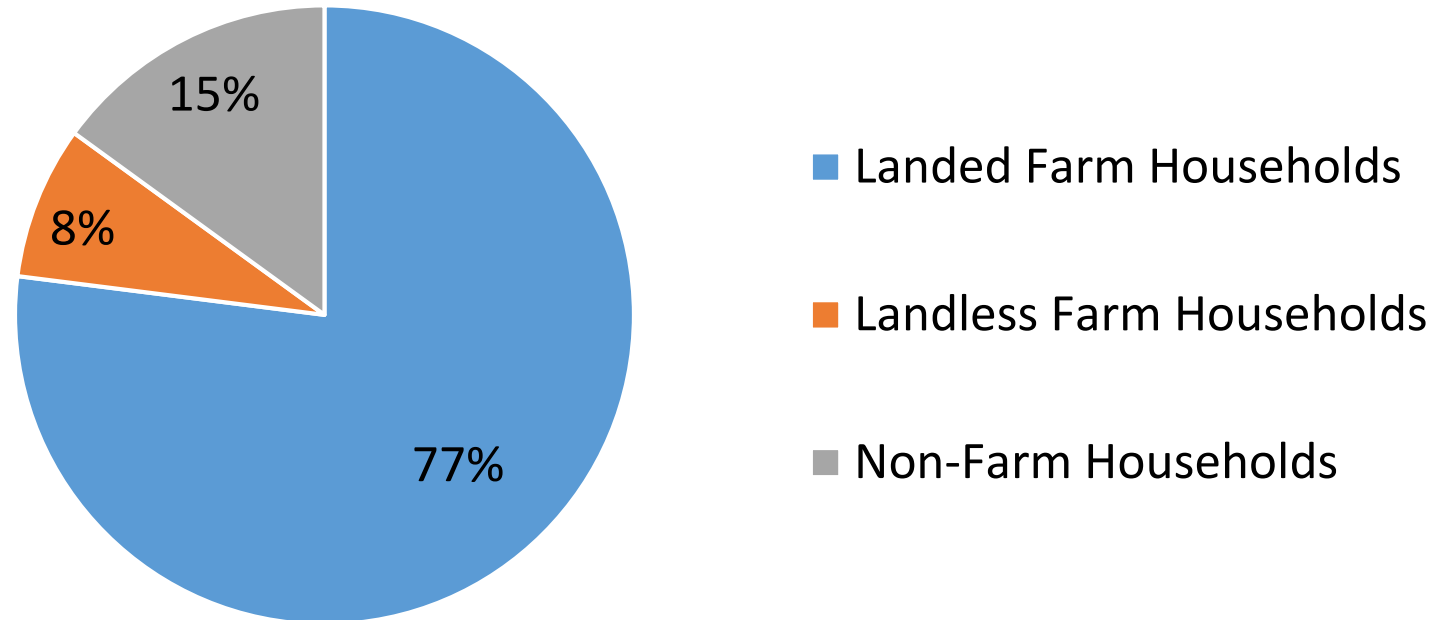
---

# HOUSEHOLD SURVEY



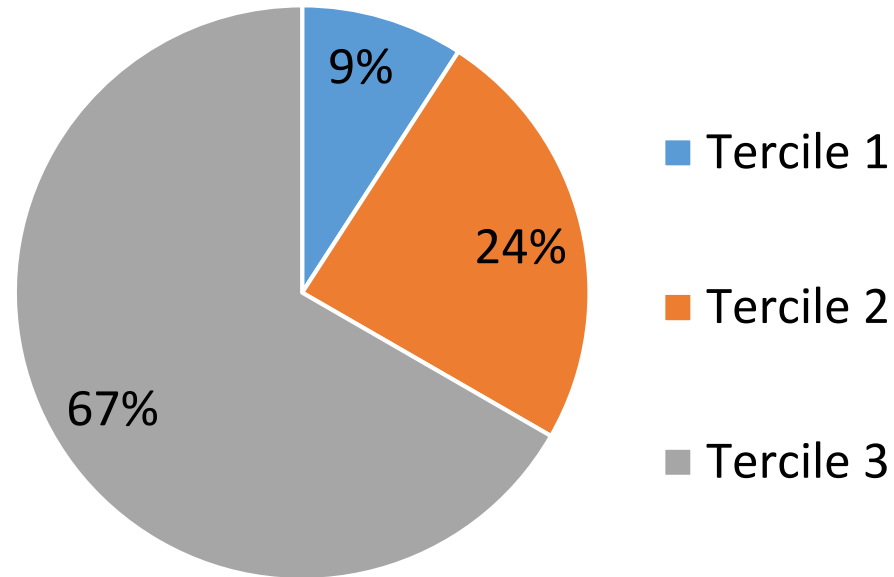
jenniehilton

# High levels of access to agricultural land



85% of HH have access to land (60% in DZ; 40% in Delta)

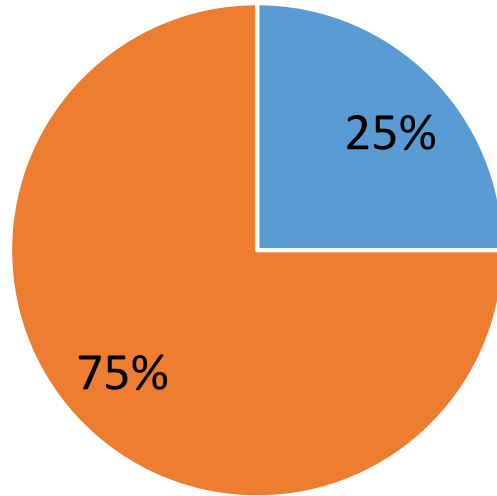
# Small landholdings



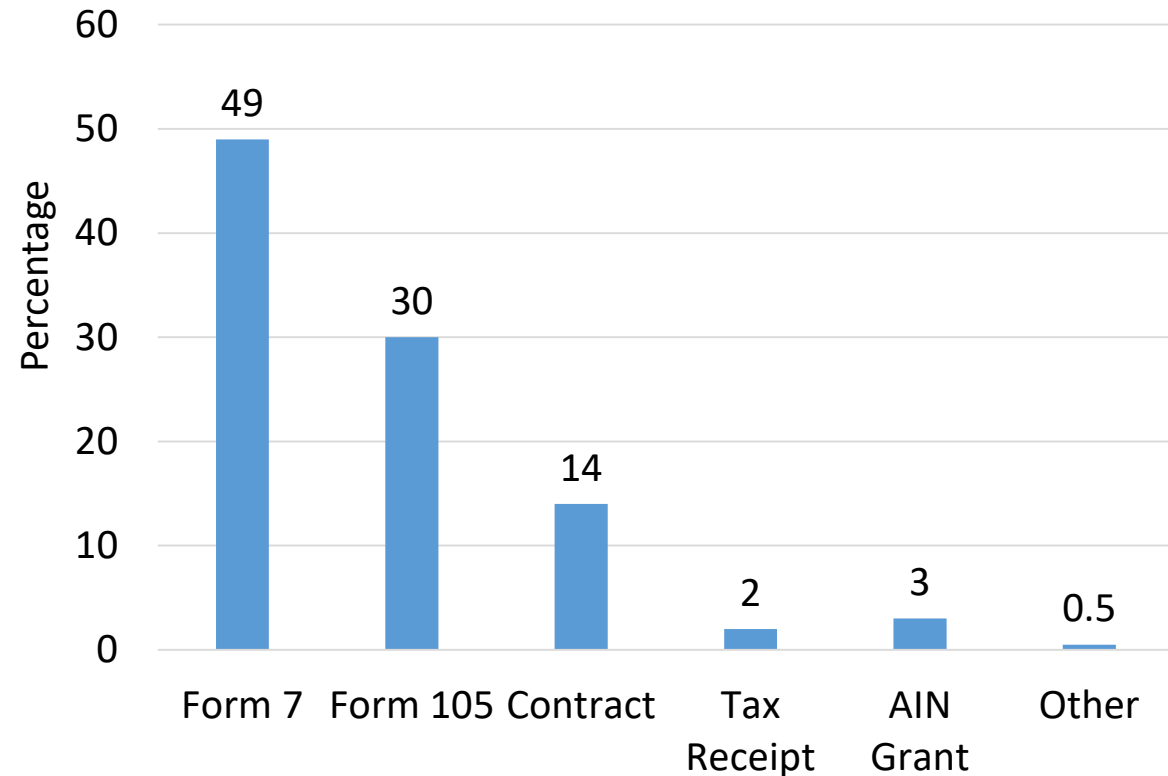
- Average Land Owned by Landed Farm Households
  - All – 3.5 acres (DZ 5, Delta 10)
  - T1 – 1.5 acres
  - T2 – 4.3 acres
  - T3 – 10 acres

(Smaller on average but more evenly distributed than DZ & Delta)

# Limited land titling



- Agri: Parcels with Land Document
- Agri: Parcels without Land Document



(87% of DZ parcels have Form 7/Form 105)

- Most land tenure insecure (untitled land defined as ‘wasteland’);
- Cannot be used access formal credit (e.g. MADB)
- Land titles overwhelmingly in name of male HH head

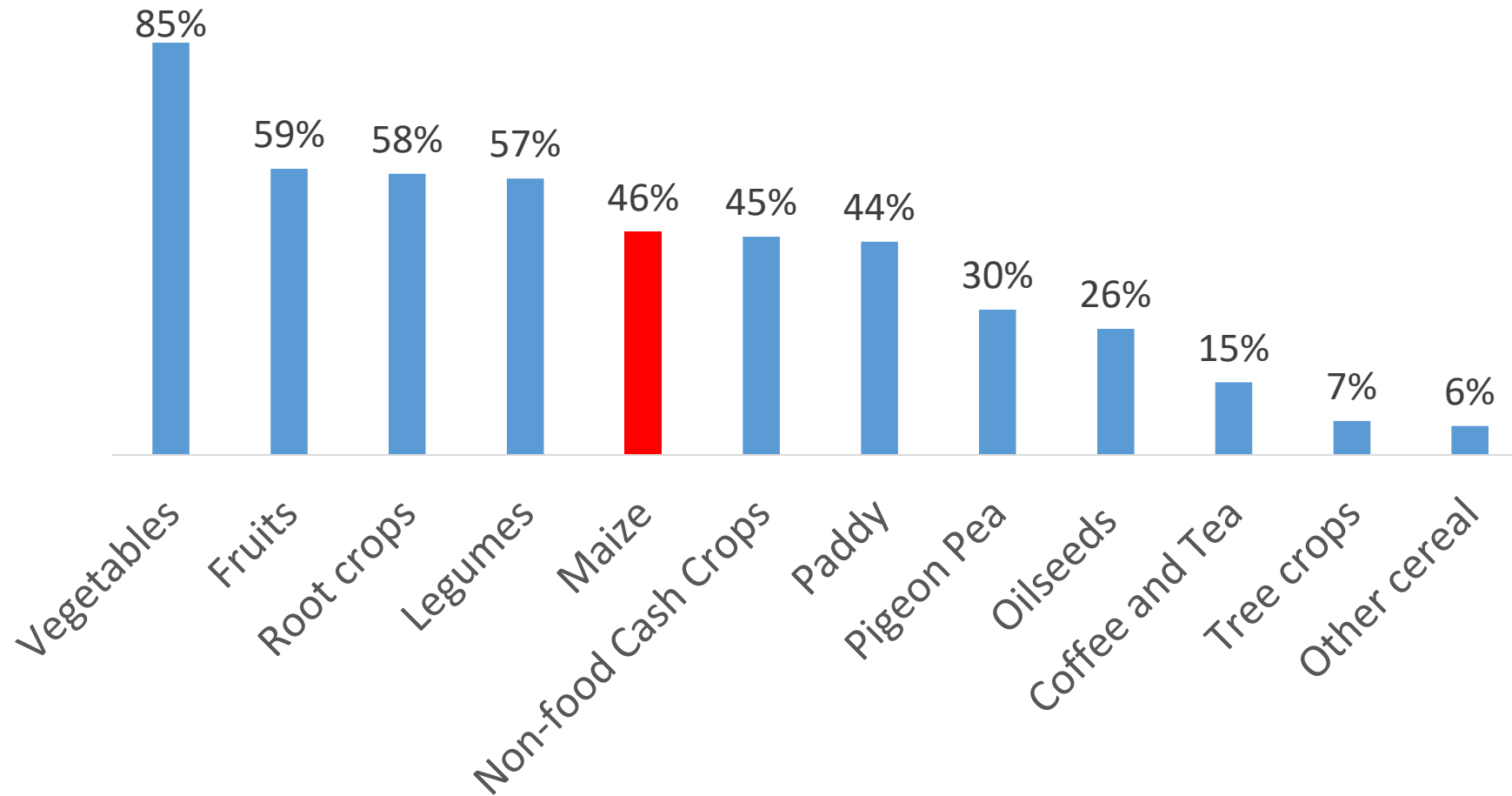


# Livelihoods in Shan dominated by farming, Agricultural labor & non-farm income < Dry Zone

Income source	Landless	Tercile 1	Tercile 2	Tercile 3	All	Dry Zone
Own farm income	19	41	65	76	58	28
Agricultural labor income	10	12	8	3	7	19
Non-farm income	71	47	27	21	36	52

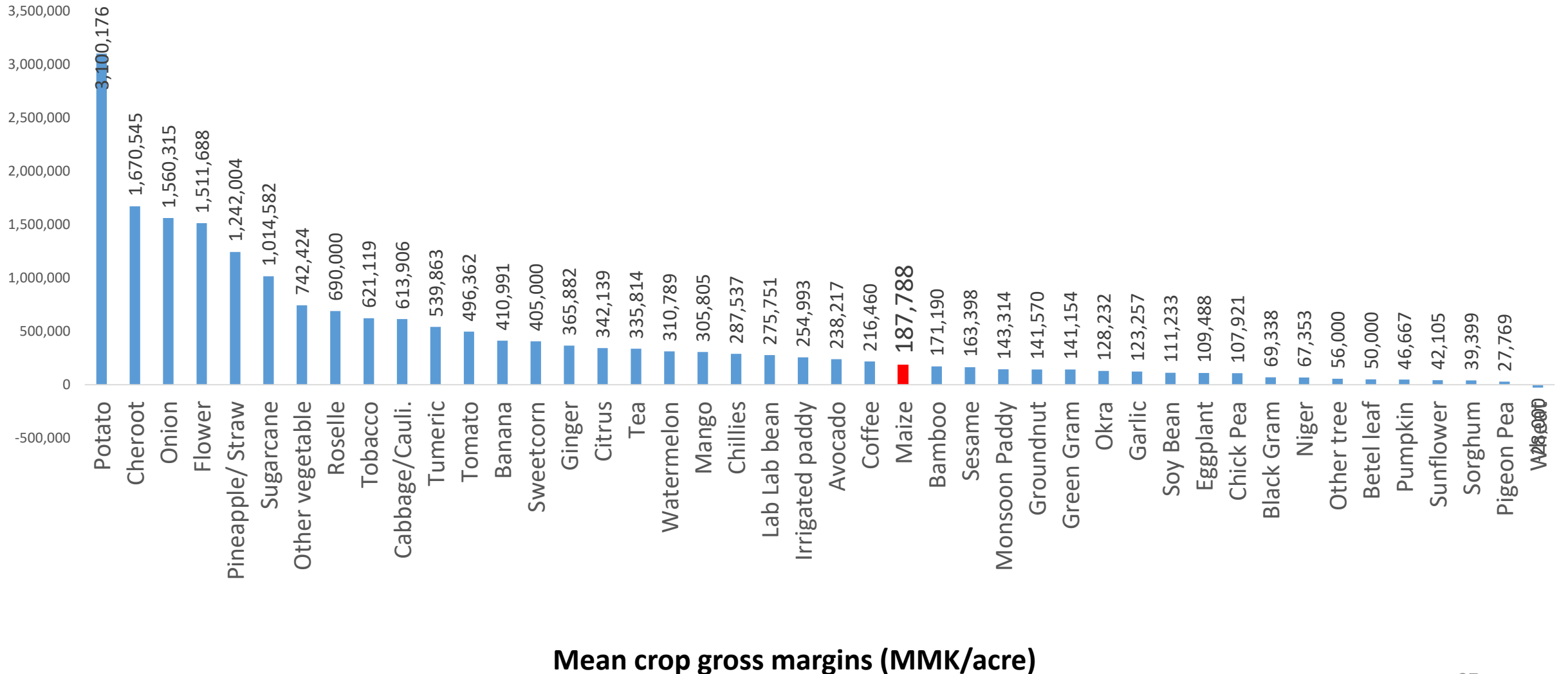
Share of income, by source and landownership status (% of total)

# High diversity of crops grown (mean 9.7 per HH)

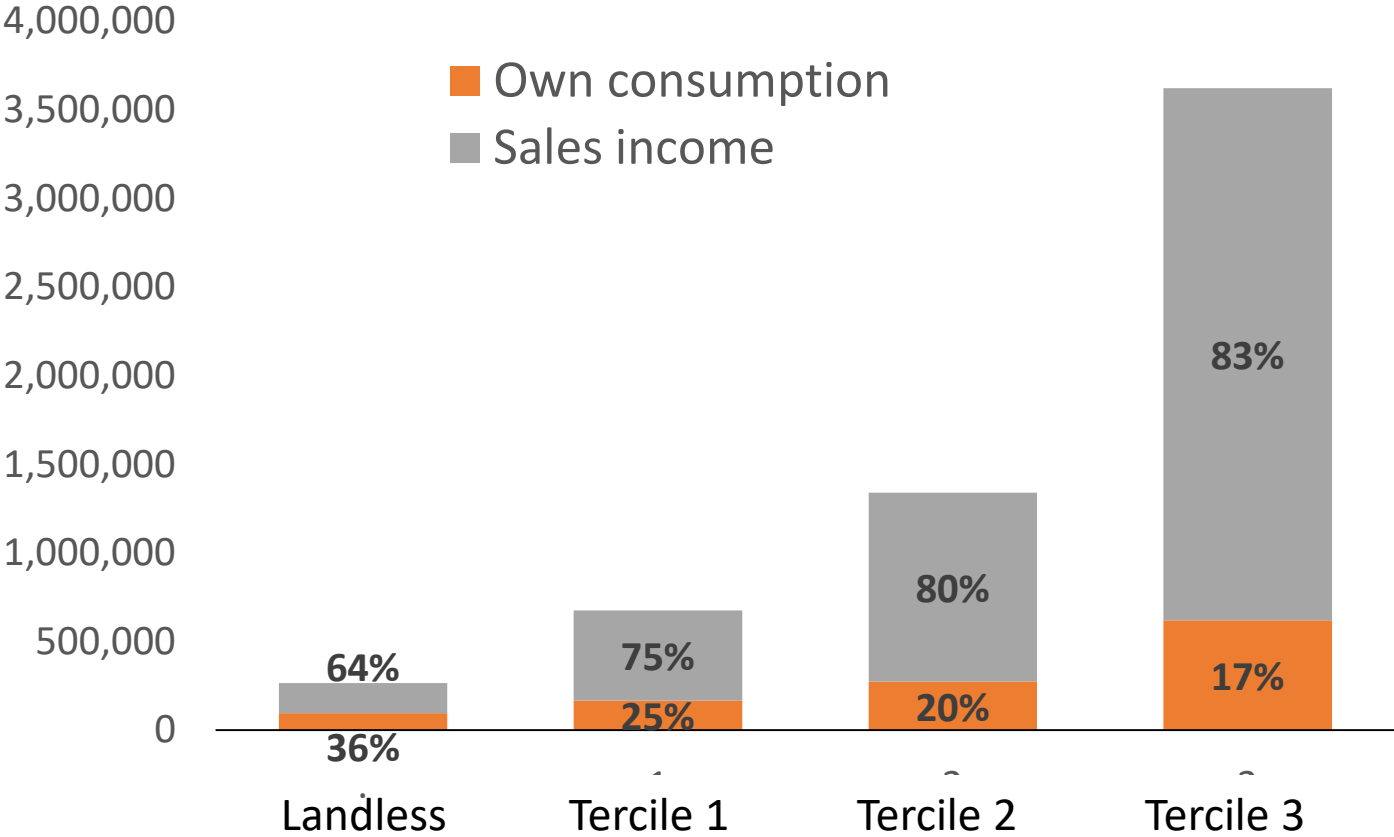


Share of households growing crop type

# Many high value crops, but mostly grown on small area



# High level of subsistence consumption, but value of crops sold far outweighs value of crops consumed

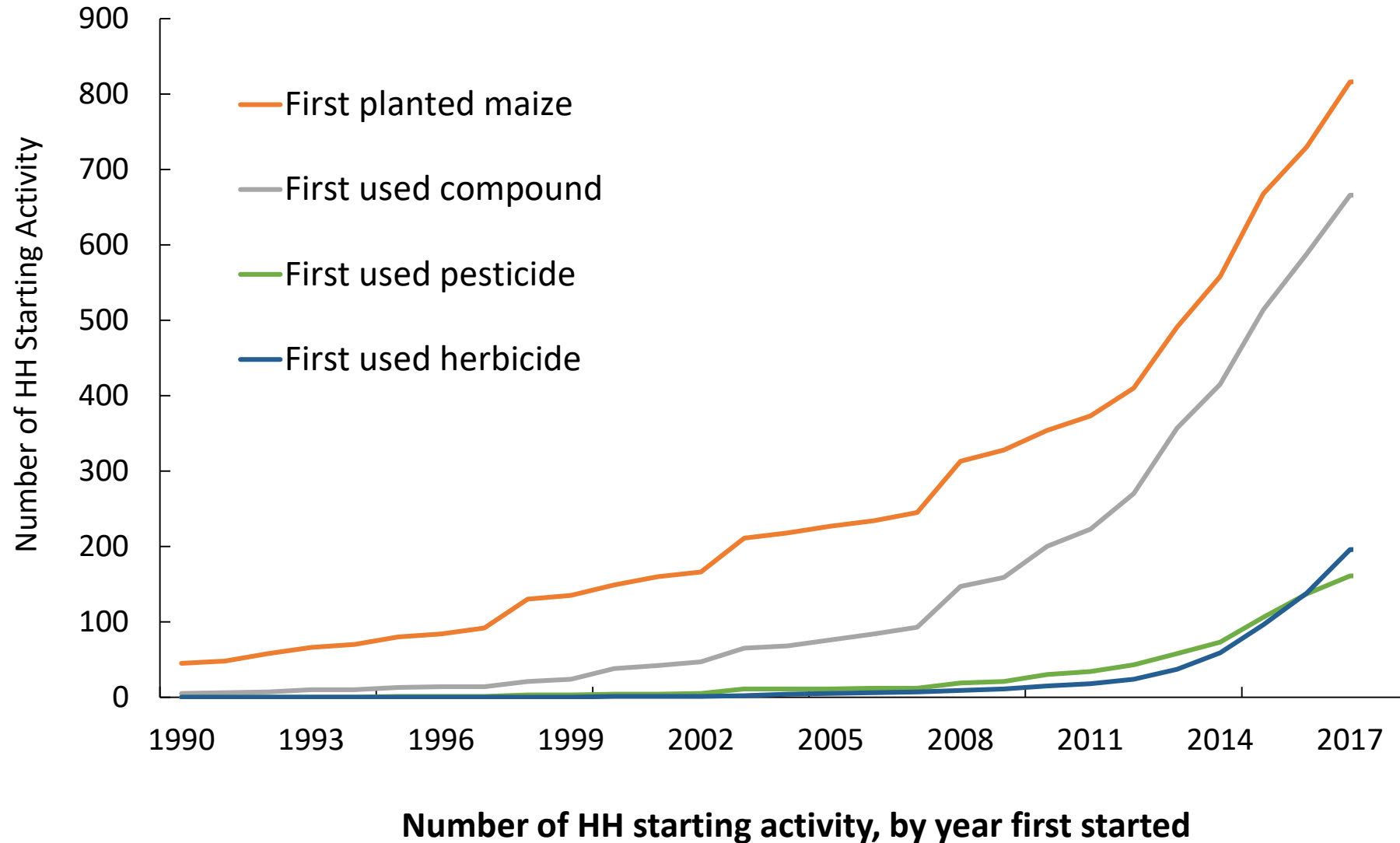


Mean value of self-consumed and marketed crops, by land ownership tercile (MMK)

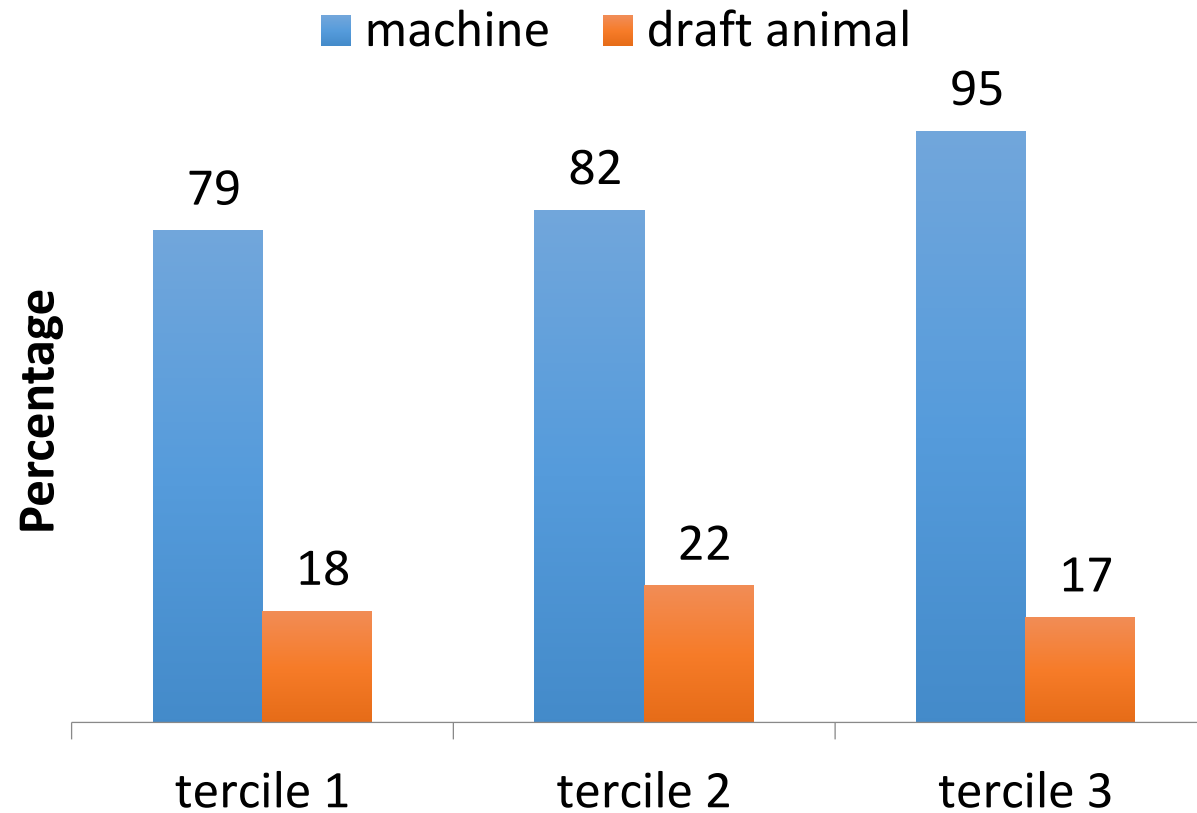
# Maize is dominant crop in terms of planted area

	Tercile 1	Tercile 2	Tercile 3	All
HH growing maize (%)	35	54	77	<b>46</b>
Maize % of total cultivated area - maize growers (%)	67	60	61	<b>62</b>
Maize % of total cultivated area - all HH (%)	30	40	53	<b>41</b>

# Big increase in maize cultivation in past decade, accompanied by rising input use

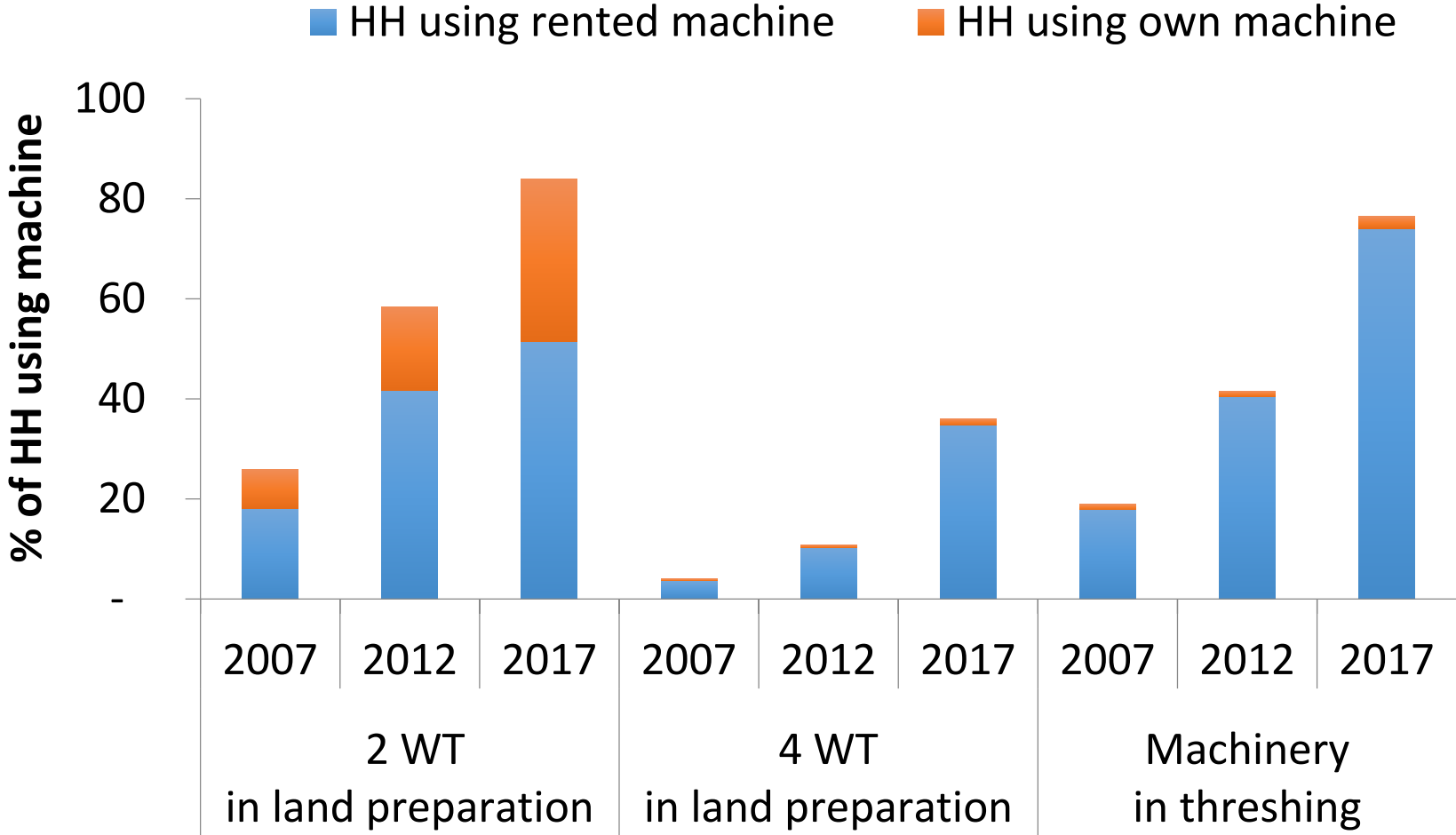


# Machines have rapidly replaced draft animals, irrespective of farm size



**Share of farm HH using machinery or draft animals  
in maize and pigeon pea production, by landholding tercile**

# Rental markets facilitate machine access



**Share of farming HH using own / rented machines in land preparation and threshing**



# Moderate levels of migration; mix of international and domestic

- 14% of HH have a migrant at present; 7% of individuals of working age are migrating (c.f. DZ 30% HH; Mon 49% HH)
- Migrants are young: 84% aged 15-29 at time of migration
- Roughly even gender split – Men 53%; Women 47%
- More current international migrants than domestic (65:35), but domestic increasing rapidly
- International: 88% Thailand
- Domestic: 79% urban; 63% within Shan

# Most migrants send remittances, remit significant amounts

<b>Migrant type</b>	<b>Migrants remitting in past 12 months (%)</b>	<b>Average value of remittances (MMK/month)</b>
<b>All</b>	58	66,791
<b>Domestic</b>	39	46,037
<b>International</b>	73	76,033
<b>Male</b>	58	61,544
<b>Female</b>	57	73,981

# Most remittances used to cover cost of everyday expenses

	1 <sup>st</sup> reason (%)	2 <sup>nd</sup> reason (%)
Day to day expenses	52	0
Farm operating costs	9	21
Medical expenses	7	17
Repayment of debt	7	1
Education costs	6	35
Housing	6	8
Child care	5	10
Savings	3	3
Purchase agricultural assets	5	4
Donations	2	1

# Opportunities in Shan State

- South Shan is promising in terms of potential for inclusive agriculture driven growth of the rural economy, including agro-tourism.
- Investments to leverage additional value from existing crop supply chains (e.g. better varieties, greenhouse and small-scale irrigation, improvements in cold chain, packing and handling for fruits and vegetables, geographical indications, branding, organic certification).
- Livestock production system development.
- Improved financial services (tailored to ways in which households use formal and informal credit, remittances, and farm and non-farm incomes).
- Formalization of trade with China and diversification of markets

# Broad Implications for A/RT programming

- Regional conditions are very important for A/RT programming
- Improve market responsiveness through agricultural diversification and value addition, requiring finance and quality assurance, is key to sustained rural economic growth
- Improve trade regimes and market diversification for price stability
- Increase productivity through effective private and public research and extension systems
- Improve understanding of causes of poor nutrition indicators in highland areas and urban areas for targeted interventions
- Look for ways to reduce the risks and maximize the benefits of migration – language and skills training, loans, awareness of rights
- Track impacts of recent changes in land law on smallholders with insecure tenure

Thanks and time for Q&A....

Detailed reports can be found at:

**[www.canr.msu.edu/fsp/countries/myanmar](http://www.canr.msu.edu/fsp/countries/myanmar)**