



# Analyzing Household Decisions in Malawi

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## Introduction

Like many countries in Sub-Saharan Africa, Malawi's labor force is mostly agricultural, with 90 percent of the population working in agriculture.

Understanding the labor supply decisions of rural Malawian households is thus, informative about the welfare of the majority of the country.

Adults in rural Malawi divide their time between work on the family farm, on home enterprises, paid labor, and other employment.

Observing how households allocate their time across these activities is vital because improving productivity requires understanding whether these choices are optimal, or are in response to market failures. Studying the time use of these households is a first step towards understanding how to increase productivity and resolve market failures.

## Research Questions

- How do households in rural Malawi allocate their time across various household activities?
- Do household time use decisions indicate the presence of market failures?

## Data

### Malawi IHS3

- The Third Integrated Household Survey was conducted by the Government of Malawi from March 2010 to March 2011.
- The nationally representative sample includes 12, 271 households from 768 enumeration areas.
- Household data include household characteristics, time use on the family farm and in household enterprises, and use of inputs including hired labor.

### Module E: Time Use & Labor Supply

- Contains information on hours in the last 7 days spent on agricultural activities, non-farm enterprises and paid work for each household member.
- Also collects information on paid and unpaid work in the last 12 months

## Results

Figure 1

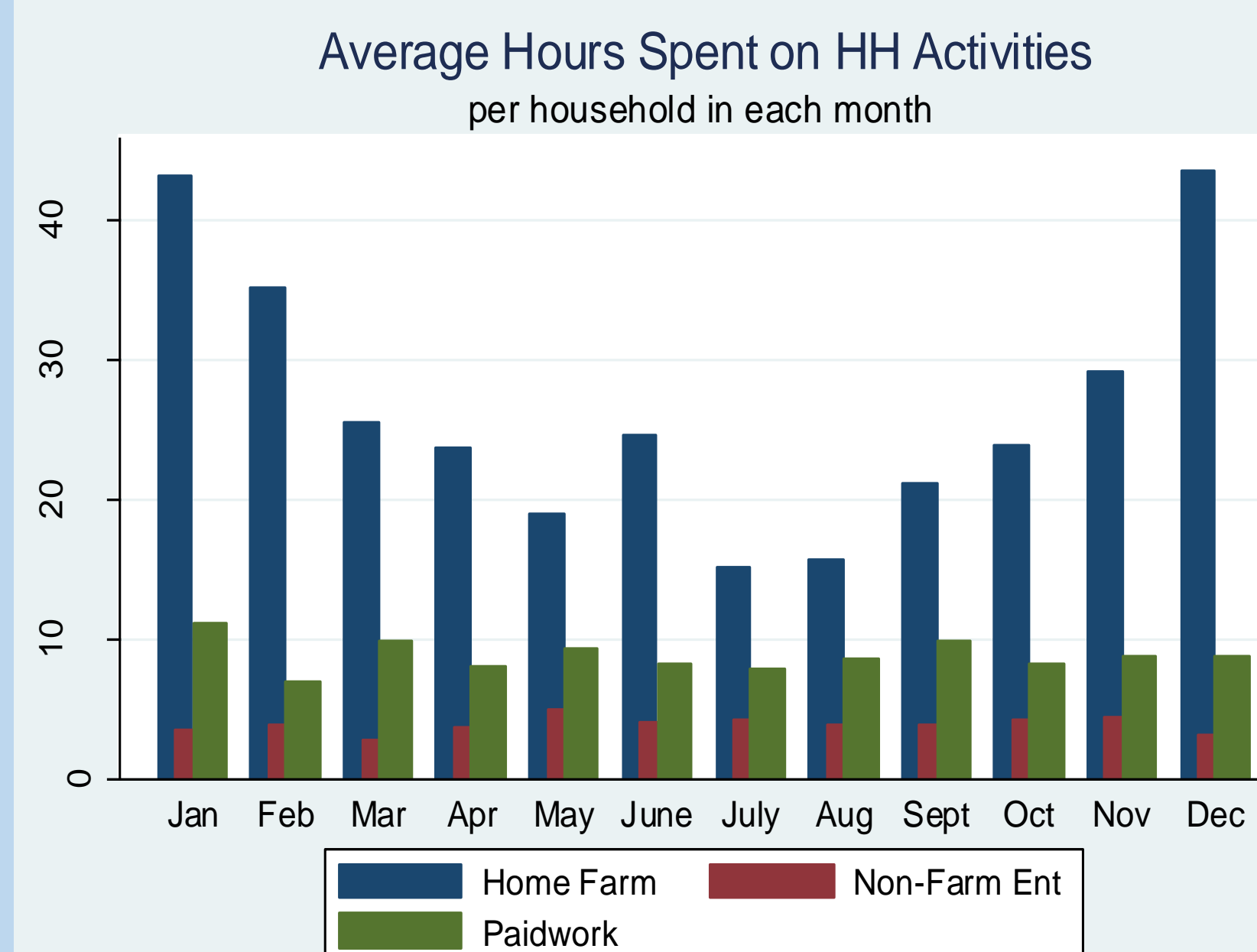


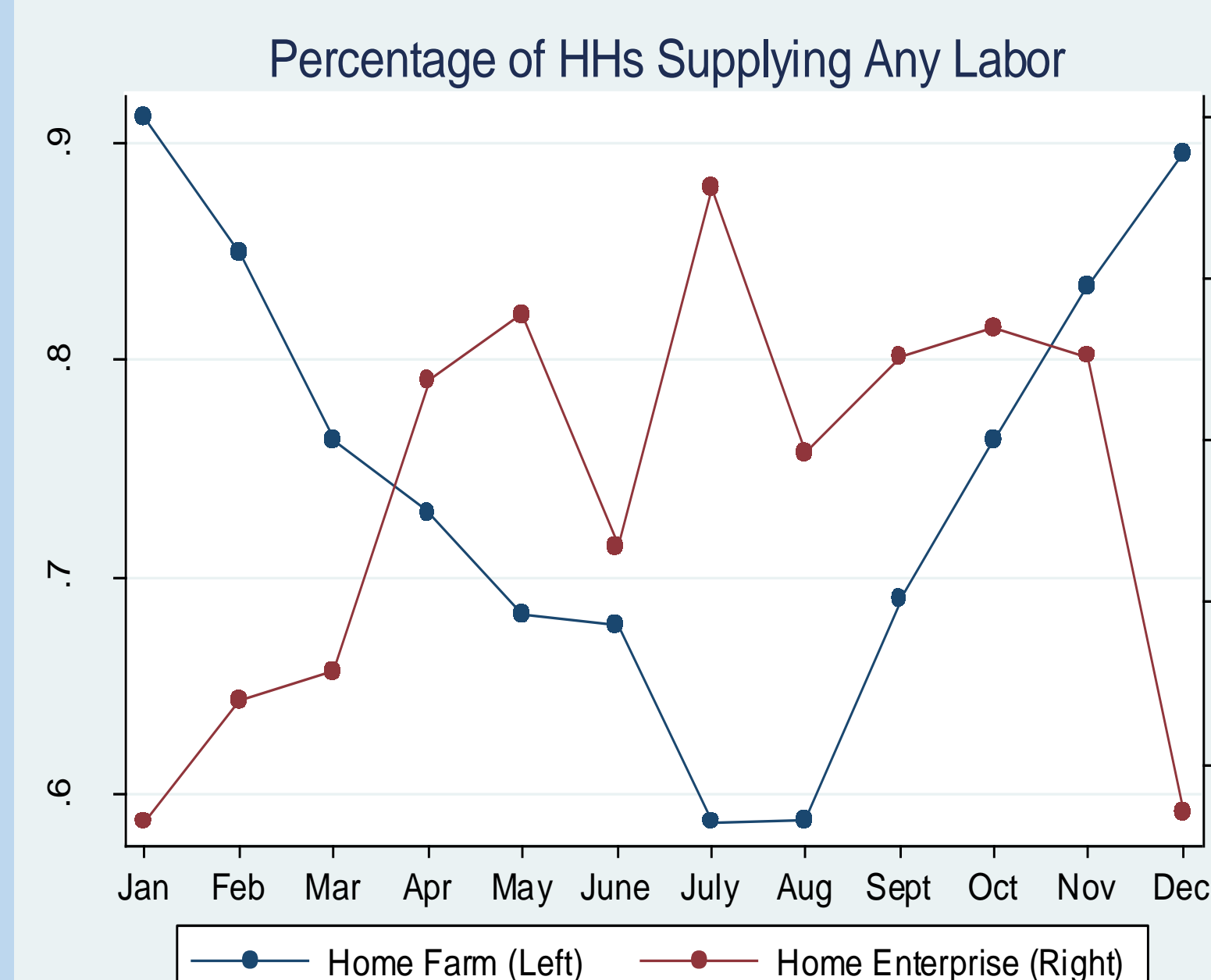
Table 1: Household Time Use on Farm

	Rainy Season	Planting	Weeding	Harvesting
Mean	239.1	191.4	119.1	
SD	278.4	224.9	203.8	
N	10038	10038	10038	
	Dry Season	Planting	Weeding	Harvesting
Mean	14.6	10.8	5.9	
SD	65.0	53.5	35.5	
N	10038	10038	10038	

Table 2: Regional Household Time Use

Region	Total	Home Farm	Non-farm Enterprise	Paid work	
North	Mean	36.0	23.0	3.2	7.8
	SD	37.3	30.2	12.1	19.9
	Obs	1758	1758	1758	1758
Center	Mean	46.7	32.2	4.0	8.5
	SD	42.7	36.6	14.3	17.9
	Obs	3485	3485	3485	3485
South	Mean	40.2	24.8	3.9	9.6
	SD	38.3	31.6	12.8	19.3
	Obs	4785	4795	4795	4795
Total	Mean	41.7	27.1	3.8	8.9
	SD	40.0	33.4	13.2	18.9
	Obs	10038	10038	10038	10038

Figure 2



## Results

Table 3. HH Size, Gender of HoH, and Time Use

	Home Farm	Non-farm Enterprise	Paid Work
Household Size	3.670*** (0.149)	0.366*** (0.0607)	0.315*** (0.0870)
Female Head	-4.014*** (0.759)	-1.848*** (0.309)	-3.378*** (0.443)
Constant	11.14*** (0.818)	2.611*** (0.333)	8.283*** (0.477)
N	10038	10038	10038
adj. R-sq	0.067	0.009	0.008
OLS Regressions			
Standard errors in parentheses			
Source: IHS3			
* p<0.05, ** p<0.01, *** p<0.001			

Table 4. HH Size, Education of HoH, and Time Use

	Home Farm	Non-farm Enterprise	Paid work
Household size	3.755*** (0.173)	0.457*** (0.0750)	
Education of Head	-0.797*** (0.105)	0.0891* (0.0454)	0.939*** (0.0622)
Constant	15.00*** (1.144)	1.640*** (0.495)	3.316*** (0.476)
N	7568	7568	7568
adj. R-sq	0.065	0.005	0.029
OLS Regressions			
Standard errors in parentheses			
Source: IHS3			
* p<0.05, ** p<0.01, *** p<0.001			

## Discussion

As expected, an overwhelming majority of households in Malawi primarily work in agriculture. The results illustrate major seasonal fluctuations. Differences in time use patterns on the farm can be attributed to growing patterns for rainfed crops. Paid work follows a similar cyclical pattern as home farm activities. The labor supply pattern for home enterprises is the opposite.

Regressions in table 3 & 4 demonstrate the correlation between household time use patterns and household characteristics. Larger households tend to spend more time on the farm, and more educated households spend less time. For each additional year of education for the HoH there is about a 0.8 hour decrease in farm labor, but increases in other types of work. Female headed households work for fewer hours in all activities. Household decisions may reflect optimal tradeoffs, or may be second-best options due to market failures.

Studying the time use of these households is a first step towards understanding how to increase productivity and resolve market failures. Understanding household time allocation also affects the design of policies meant to stimulate economic growth. More research is needed to identify the constraints and market failures that may influence household time allocation.

## References

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