

Comparative Evidence on the Effects of Crop Diversification on Poverty in Southeast Asia



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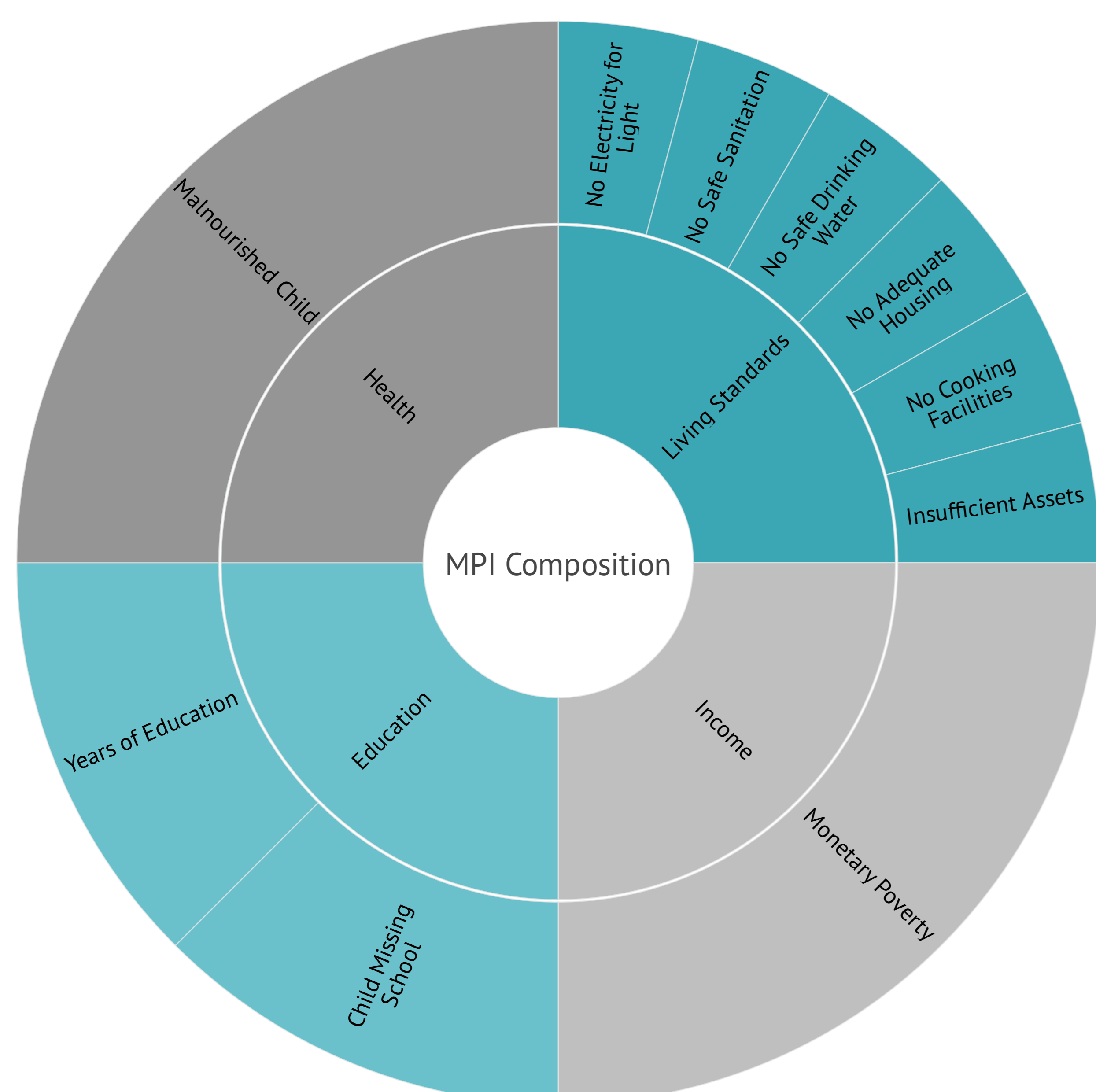
Introduction

- Multidimensional poverty indices provide a more detailed picture of poverty than other poverty measures such as the poverty line (Alkire & Santos 2014).
- They also cover several categories of the Sustainable Development Goals (Feliciano 2019).
- Crop Diversification reduces monetary poverty and can function as a shock mitigation strategy (Tesfaye 2020, Donfouet et al. 2017).
- This paper studies the effect of crop diversification on multidimensional poverty and thereby the effect on the SDGs.

Data

Thailand & Vietnam Socio Economic Panel (TVSEP)

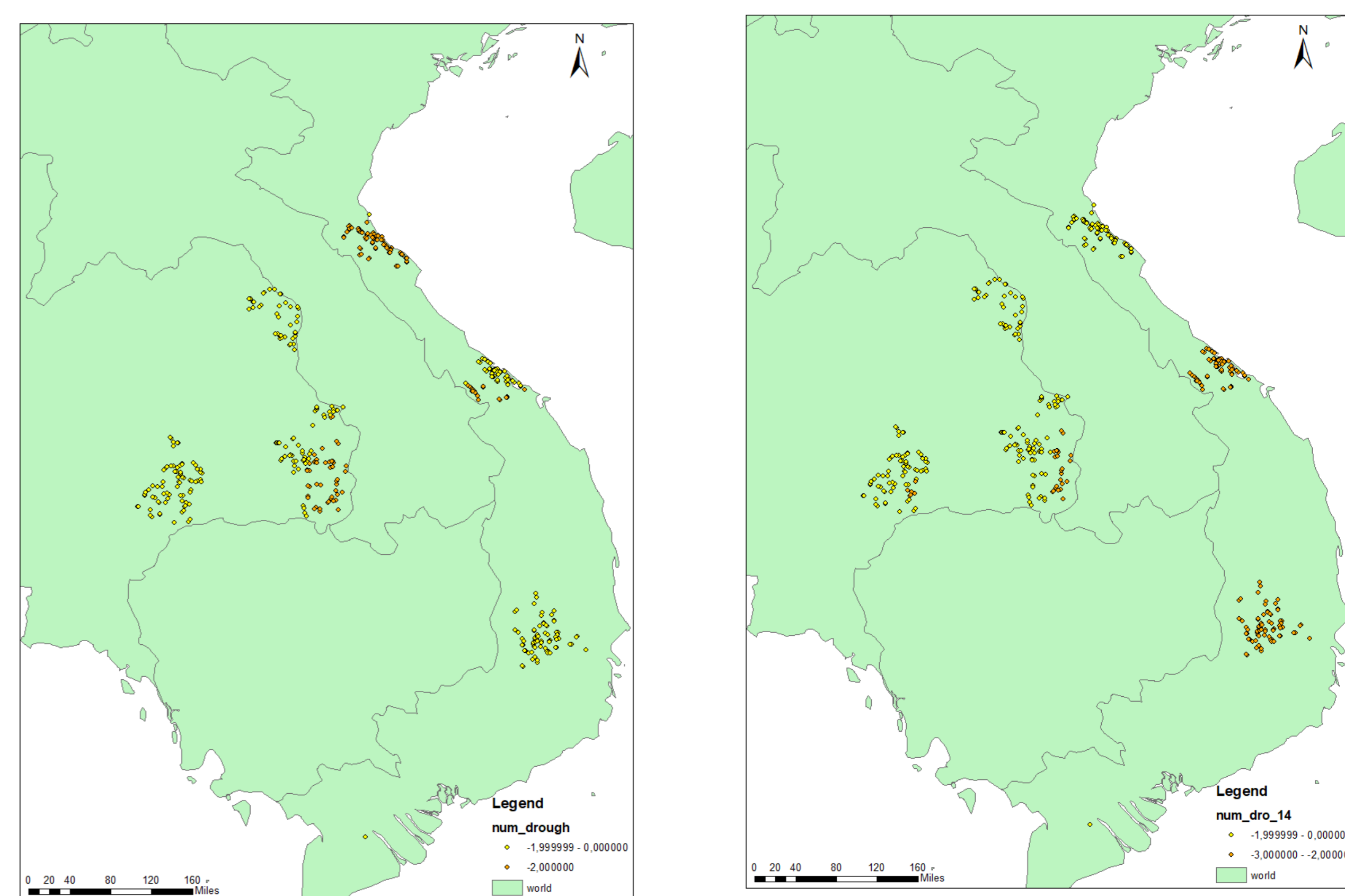
- Panel Data from 2007-2017
- 3 rural Thai provinces and 3 rural Vietnamese provinces, 4,400 households
- Data is used to construct:
 - a) Simpson Index of Diversification
 - b) Multidimensional Poverty Index (MPI)



Precipitation Data

- Matsuura & Willmott, University of Delaware from 1900-2017
- Monthly deviation from historic mean
- Drought if precipitation is 1 SD below historic mean
- Annual number of months with droughts per village (Fig. 2)

Fig. 2: Droughts 2007 vs. Droughts 2017



Method

Fixed Effects Logit Panel Regression

- Dependent variable: Multidimensional Poverty Index
- Variables of interest: Simpson Index of Diversification, number of droughts and interaction of both to measure shock mitigation mechanism

Results

Precipitation - Droughts	MPI	MPI 0.25	Self-Reported Shocks	MPI	MPI 0.25
Panel A: Whole Sample					
Crop Diversification	-0.0196**	-0.2885***	Crop Diversification	-0.0060	-0.1392
Number of Droughts	0.0015	0.0359*	Self-Reported Environmental Shocks	0.0136***	0.1497***
Diversification * Droughts	0.0064*	0.0290	Diversification * Environm. Shocks	-0.0151*	-0.2715**
Panel B: Thailand					
Crop Diversification	-0.0163	0.1763	Crop Diversification	0.0100	0.2768
Number of Droughts	-0.0010	-0.0010	Self-Reported Environmental Shocks	0.0081**	0.0962*
Diversification * Droughts	0.0146	-0.0715	Diversification * Environm. Shocks	-0.0338**	-0.4556*
Panel C: Vietnam					
Crop Diversification	-0.0286***	-0.4794***	Crop Diversification	-0.0197**	-0.4222***
Number of Droughts	0.0002	0.0161	Self-Reported Environmental Shocks	0.0134***	0.1432**
Diversification * Droughts	0.0053	0.0121	Diversification * Environm. Shocks	-0.0066	-0.1251

- Crop Diversification reduces multidimensional poverty
- Crop Diversification works as a shock mitigation strategy only in Thailand and when considering self-reported environmental shocks

Conclusion

Crop Diversification helps to reduce multidimensional poverty. Therefore, it contributes to achieving the SDGs. Crop Diversification can help to mitigate self-reported shocks. This indicates that the effectiveness of crop diversification as a shock mitigation strategy depends on farmers perception and on the severity of the shock.