



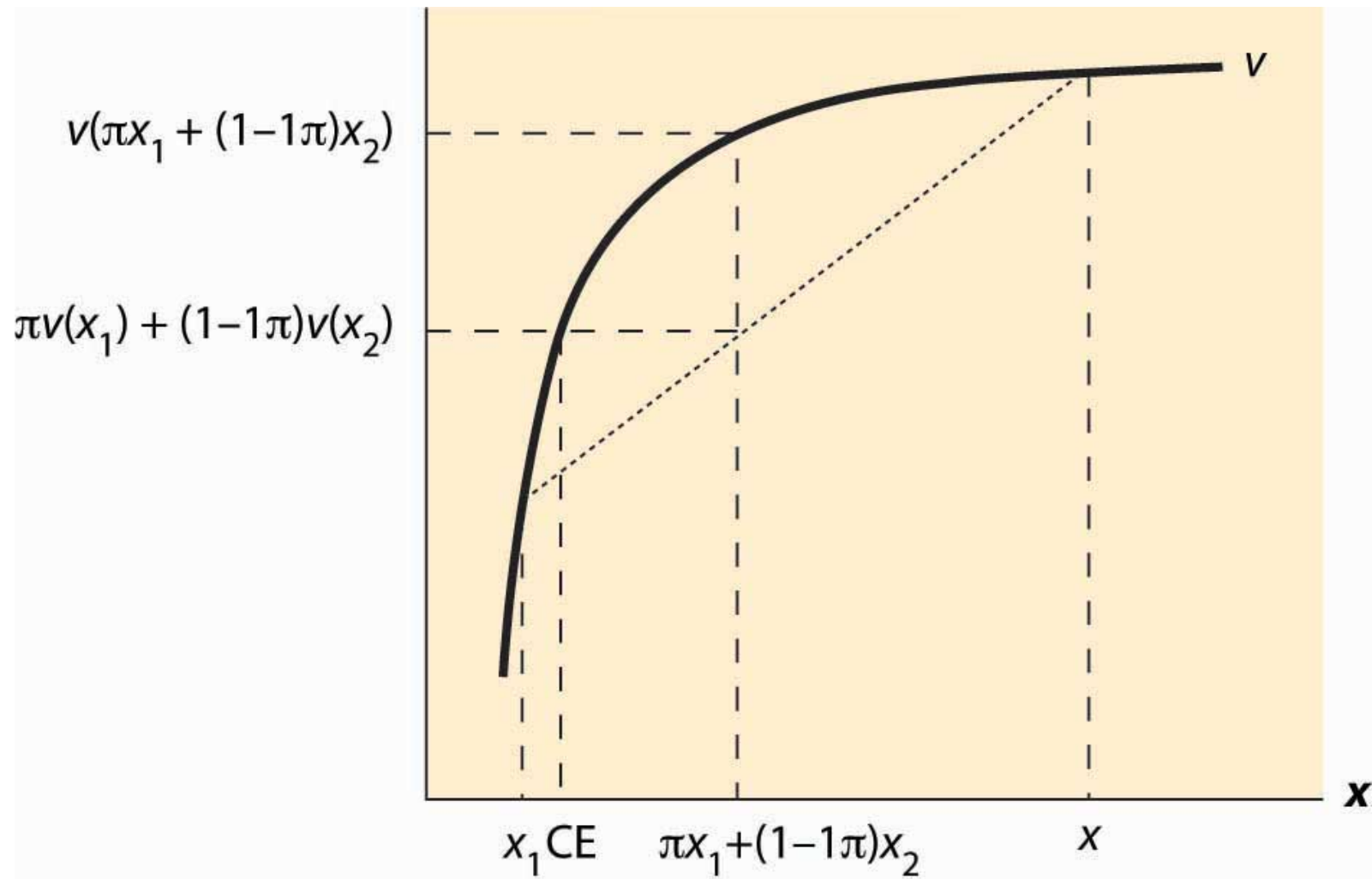
# INSURANCE

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# The Value of Insurance



# But what does this mean?

Table 8

Determinants of consumption

	(1)	(2)
Permanent income	0.432 [0.183]**	
Transitory income	0.551 [0.059]***	
Unexplained income	0.481 [0.056]***	
Rich		
Permanent income		0.318 [0.195]
Transitory income		0.499 [0.096]***
Unexplained income		0.515 [0.093]***
Poor		
Permanent income		0.863 [0.275]***
Transitory income		0.593 [0.079]***
Unexplained income		0.500 [0.074]***

Burkina Faso, 1980s: Food consumption/AE=\$0.50 per day. Calorie consumption around 2000 kcal/AE per day.

# So provide crop insurance!



Why not?

# So provide crop insurance!



## 1. Moral Hazard

# So provide crop insurance!



1. Moral Hazard
2. Adverse Selection

# So provide crop insurance!



1. Moral Hazard
2. Adverse Selection
3. Administrative Costs

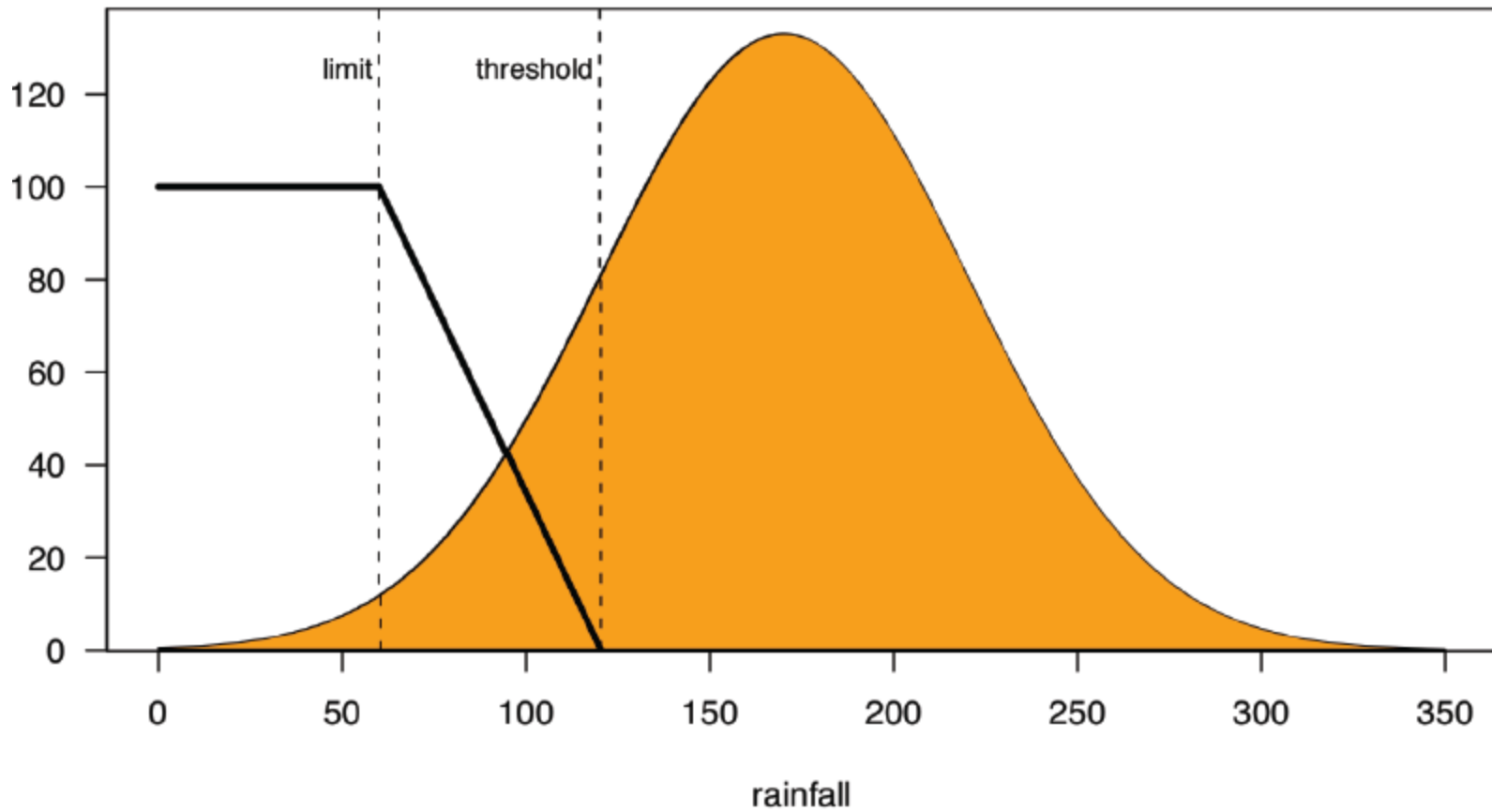
# Index insurance



1. Overcomes information problems, and mitigates administrative costs
2. Addresses covariate risk that is difficult to insure informally
3. But, basis risk



# Index insurance



# Data needs for index insurance...

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1. Long-term data on index (rainfall)
2. Long-term data on output, profits, consumption, income
3. Clear understanding of technology environment

$$y_{it} = X_{it}\beta + F(R_{it}) + \varepsilon_{it}$$

# Demand for insurance in Malawi

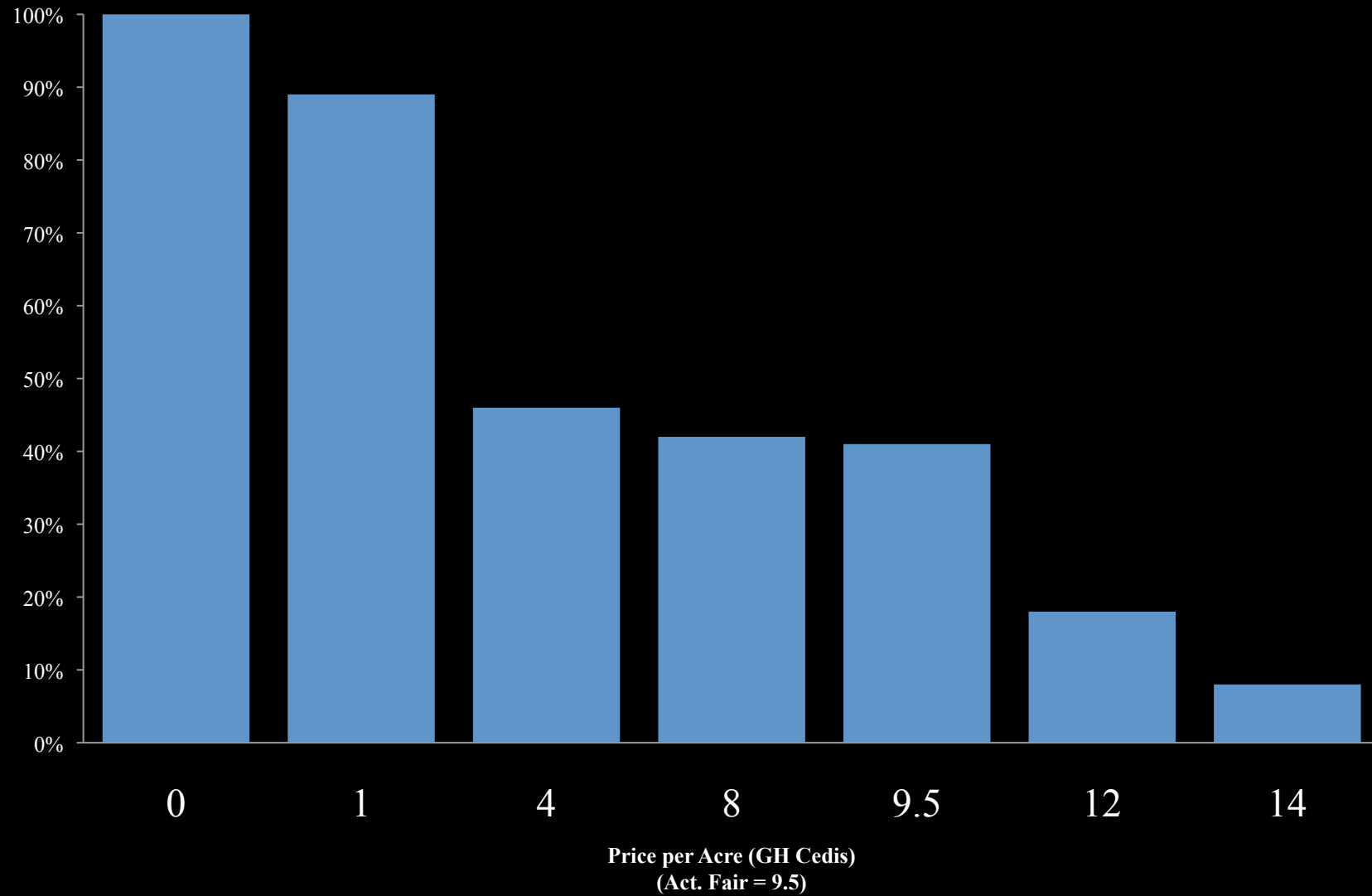
**Table 3: Impact of insurance on take-up of loan for hybrid seeds**  
(Ordinary least-squares estimates)

Dependent variable: Respondent took up loan for November 2006 planting season

	(1)	(2)	(3)	(4)	(5)
Treatment indicator	-0.154 [0.109]	-0.141 [0.082]*	-0.132 [0.082]	-0.128 [0.074]*	-0.134 [0.076]*
Female (indicator)			-0.027 [0.031]	-0.036 [0.034]	-0.039 [0.035]
Household is female headed (indicator)			0.038 [0.053]	0.054 [0.053]	0.049 [0.051]
Years of schooling			0.010 [0.005]*		
Age			0.002 [0.001]		
Land owned			0.001 [0.002]		
House quality			0.016 [0.018]	0.015 [0.018]	0.016 [0.017]
Net income (MKs 100,000)			0.009 [0.014]		
Region fixed effects		Y	Y	Y	Y
Indicators for 5-year age categories				Y	Y
Land quintile indicators				Y	Y
Income quintile indicators				Y	Y
Education quintile indicators				Y	

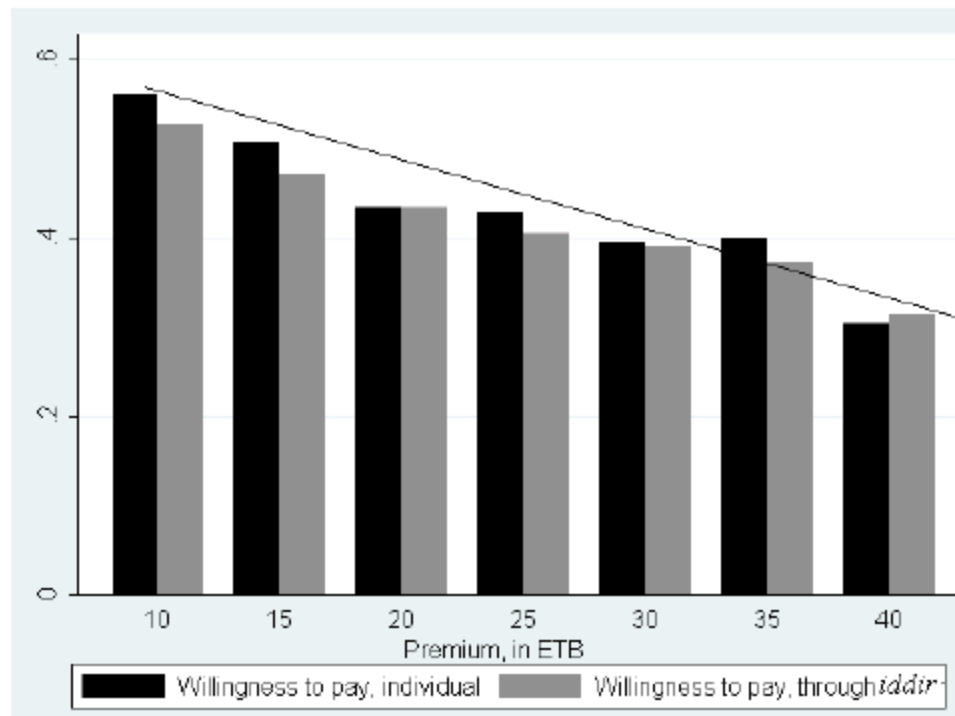
Gine and Yang  
(2009)

# Take up of Takayua Insurance 2010



# Demand for insurance...

Figure 3.1—Demand for weather insurance



Ethiopia, “Willingness to Pay”, a.f. value 25 (Hill, Hoddinott, Kumar 2011)

# Demand for insurance...

**Table 4: Price Elasticity of IBLI Demand**

Herd Group	% Population	% Herd Population	Elasticity of Demand	Proportion with effective demand at		
				Fair	1.3×Fair	1.4×Fair
Less than 15 TLU*	0.48	0.13	-2.08	0.61	0.23	0.12
Between 15-30 TLU	0.23	0.35	-3.32	0.65	0.10	0.04
Greater than 30 TLU	0.28	0.53	-2.70	0.69	0.10	0.07
Aggregate	1.00	1.00	-2.54	0.64	0.16	0.09

Northern Kenya, Livestock Insurance Willingness to Pay (Chantarat, Mude, Barrett 2009)

# Demand for insurance...



Cole et al (2009) : 5-10% purchase insurance, and only a single policy for a fraction of their land at that

# Impact



- So far, weak evidence only... northern Ghana looks strong



# Demand Side Concerns



1. Price
2. Alternative risk-sharing arrangements
3. Basis risk
4. Liquidity constraints
5. Understanding/learning
6. Trust
7. Framing and behavioral issues

# References

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- Chantarat, Mude and Barrett, “Willingness to Pay for Index Based Livestock Insurance”, 2009, ILRI
- Cole, Gine, Tobacman, Topalova, Townsend and Vickery “Barriers to Household Risk Management: Evidence from India” 2009 NBER working paper.
- Gine and Yang. “Insurance, Credit and Technology Adoption” Journal of Development Economics. 2009.
- Hill, Hoddinott and Kumar “Adoption of Weather Index Insurance” IFPRI Discussion Paper, 2011
- Kazianga and Udry. “Consumption Smoothing? Livestock, Insurance and Drought in Burkina Faso” Journal of Development Economics, 2006.