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Uptake of Micro Life Insurance in Rural Ghana

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Prevalent types of microinsurance

High Ease of Design/ Higher Success Rates

* Credit life
* Term life/ personal accident
* Savings life
* Property insurance
* Endowment life
* Health insurance
* Agricultural insurance

Low Ease of Design/ Lower Success Rates
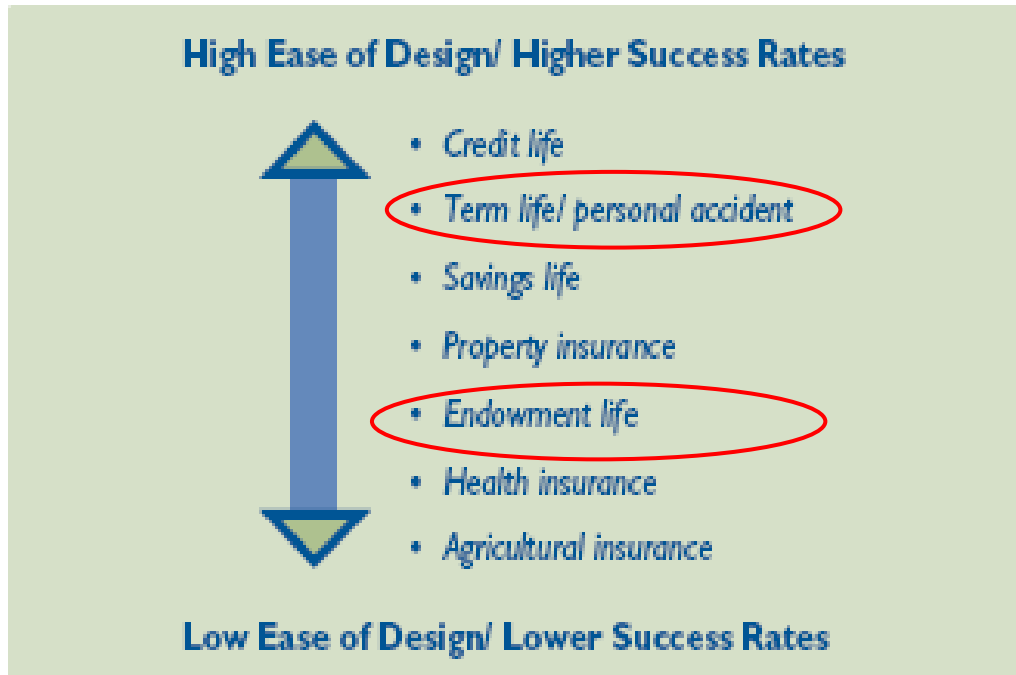
Source: Malaika and Kuriakose (2008)

Puzzle:

* Low take-up rates

* Microinsurance identified in 77 of 100 poorest countries

* But coverage <5%

➢ Research question: What determines participation micro (life) insurance markets?

➢ Relevance of life insurance in Ghana: compensate for loss of income, provide funds for burial, old age security

outline

approach

- predictions of participation in life insurance markets
- distribution and marketing of the Anidaso policy
- source of data
- descriptive statistics

results

- results I: determinants of uptake
- results II: comparison with other types of insurance

conclusion

Predictions of participation in life insurance markets

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approach

Benchmark model: uptake of life insurance is a function of

- risk aversion,
- expected lifetime (probability of risk)
- intensity for bequests (vs. saving-for-retirement motive)
- accumulated and expected wealth ($\rightarrow$ ambiguous)
- costs (loading factor)

(e.g. Yaari 1965, Hakansson 1969, Pissaridis 1980, Lewis 1989)

Extensions:

- models of asymmetric information (e.g. Rothschildt and Stiglitz 1976),
- subjective evaluation of risk (prospect theory: Kahnemann and Tversky 1979, 1981)
- behavioural finance: trust, networks (e.g. Hong et al. 2004; Guiso et al. 2007)

$\rightarrow$Evidence so far: Participation patterns in microinsurance markets not necessarily consistent with benchmark

(Giné, Townsend and Vickery 2008; Cole et al. 2009; Cai et al. 2009; Ito and Kono 2010)

Distribution and marketing of the Anidaso policy

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The Anidaso Policy

- Term life insurance (+ accident + hospitalization + optional investment)
- Who can be insured: principal, spouse, up to 4 children
- Premiums: start at 2 Gh Cedi
- Cooperation with 26 rural banks / 15,000 clients

- Personal Insurance Advisors and sales agents operate from rural banks
- premiums are deducted from accounts at the rural banks
- marketing strategy: approach groups and opinion leaders, attend group meetings, hold information events at banks, door-to-door

Source of Data

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Survey among 1030 households in 2009

– Service area of 3 rural and community banks in 3 regions (Central, Eastern, Volta) which distribute „Anidaso policy" of the Gemini Life Insurance Company (GLICO)

– Deliberate choice of communities with insured clients and comparable communities without insured clients (17 semi-urban locations)

– Stratified sample: 1/3 insured households; 1/3 non-insured households from the same locations; 1/3 households from locations without insured clients

approach

Descriptive statistics

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Types of insurance used by households

Type of insurance	Number of households in the sample (total = 1031)	Estimated number of households in the survey area (total = 24310.5)	Estimated proportion in the survey area (%)
Anidaso policy	321	507.37	2.09
National health insurance (NHIS)	562	12602.00	51.84
Any insurance	738	14536.80	59.80
Private insurance	409	3349.98	13.78

approach

Determinants of uptake

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approach

(A) reduced-form probit model on correlates of household's uptake of micro life insurance

- We cannot adequately control for the supply side, costs (policy loading factor) can also not be included

(B) Explanatory variables:

- **Risk aversion / probability of risk:** unrealistic parameters of risk aversion from decision experiment → dropped; subjective risk perception index; actual experience of health/ death/ economic shocks in past 5 years, share of severly ill HH members;
- **Wealth and income activities:** asset index, landsize, head engaged in non-farm activities, remittances, transfers
- **Bequest motive / saving-for-retirement motive:** head is married, share of kids, age of head / share of old dependents, av. age of HH members
- **Trust / networks:** years HH used services of RCB before Anidaso was introduced, group membership of head, consumption of newspaper and radio
- **Other controls**: female headship, schooling of head, experience of a loan denial, ratio of RCB clients before Anidaso introduced, ratio of *susu* clients

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Determinants of uptake (Results I)

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Independent variables	Microinsurance (1)			Microinsurance (2)			Marg. effect scaled by population take-up rate
	Coeff.	t-stat.	Marg. effect	Coeff.	t-stat.	Marg. effect	
Share of severely ill HH members (last 12 mths)	0,387***	2,650	0,012	0,483***	3,024	0,032	1,531
Lagged asset index	0,096**	2,050	0,003	0,025	0,439	0,002	0,096
Head engaged in non-farm activities	0,433***	3,858	0,014	0,474***	3,694	0,031	1,483
Head is married	-0,030	-0,282	-0,001	-0,048	-0,391	-0,003	-0,144
Share of own kids in HH	0,507***	2,892	0,016	0,514***	2,636	0,034	1,627
Age of head	0,060***	2,714	0,002	0,086***	3,356	0,006	0,287
Age of head squared	-0,001***	-2,944	0,000	-0,001***	-3,730	0,000	0,000
Ratio of RCB clients in community before Anidaso introduced	1,318***	6,978	0,042				2,010
Ratio of susu clients in community	-2,799***	-4,072	-0,088				-4,211
Subjective risk perception index	-0,105***	-2,836	-0,003	-0,106***	-2,625	-0,007	-0,335
Years HH used RCB services before Anidaso introduced				0,064***	4,781	0,004	0,191
No. of groups head is member of	0,078*	1,837	0,002	0,103**	2,223	0,007	0,335
Head reads newspaper	-0,221**	-2,016	-0,007	-0,265**	-2,199	-0,017	-0,813
Female headed HH	-0,194*	-1,714	-0,006	-0,311**	-2,365	-0,021	-1,005
HH experienced that loan was denied	0,339***	2,795	0,011	0,315**	2,106	0,021	1,005
Constant	-4,189***	-7,639		-4,271***	-6,800		
Observations	1028			686			
McFaddens R2	0,128			0,133			

results

→ Variables not shown: no. of health/death shocks in past 5 years, remittances, transfers, landsize, years of schooling, head listens often to news in radio, share of old dependents, average age of all hh members, community controls

Determinants of uptake (ResultsII)

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Comparison with other types of insurance:

Independent variables	Microinsurance			NHIS			Private insurance		
	Coeff.	t-stat.	Marg. effect	Coeff.	t-stat.	Marg. effect	Coeff.	t-stat.	Marg. effect
Share of severely ill HH members (last 12 mths)	0,483***	3,024	0,032						
Share of ill HH members (last 12 mths)				0,505***	2,997	0,198	-0,024	-0,105	-0,004
No. of health shocks (last 5 years)	0,031	0,620	0,002	0,106*	1,691	0,041	-0,011	-0,156	-0,002
Subjective risk assessment index	-0,106***	-2,625	-0,007	0,121**	2,221	0,048	0,158**	2,252	0,025
Lagged asset index	0,025	0,439	0,002	0,305***	3,658	0,120	0,329***	3,392	0,053
Head engaged in non-farm activities	0,474***	3,694	0,031	0,045	0,305	0,018	0,660***	2,953	0,106
Remittances per month (Ghana Cedi)	0,002	1,632	0,000	0,001	0,708	0,000	-0,007***	-2,980	-0,001
Transfers per month (Ghana Cedi)	0,001	0,671	0,000	0,008***	2,655	0,003	0,002	0,587	0,000
No. of groups head is member of	0,103**	2,223	0,007	-0,010	-0,145	-0,004	0,197***	2,686	0,032
Community controls	Yes			Yes			Yes		
Constant	-4,271***	-6,800		0,548	0,845		0,613	0,926	
Observations	672			1008			983		

→ Variables not shown: no. of death/economic shocks in past 5 years, landsize, head married, share of own kids in hh, share of old dependents, age of head, average age of hh members, years hh used services from formal bank, head reads newspaper, head listens to news in radio often, female headship, schooling of head, experience of loan denial

results

Conclusion

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- Analysis provides first insight into cross-sectional correlates of households' decision to take up a micro life insurance

  → in future research, randomized experiments are preferable !

- Several predictions of the benchmark model confirmed
  - Bequest motive outweighs saving-for-retirement motive, but motive to use partial withdrawal or gain access to loan may also play a role
  - But what about risk aversion…

- Deviations from the benchmark
  - Households which feel more exposed to risk are less likely to participate
  - Trust, familiarity and networks are crucial
  - Female headship decreases participation (are formal financial services a men's domain?)

- Correlates of participation in different types of insurance may differ quite substantially

- Scope for further research on the role of alternative risk management strategies (e.g. remittances, transfers)

conclusion

Thank you!

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Self-declared reason to buy or not to buy insurance

Reason	Number of households	Estimated proportion in the survey area (%)
Reason to buy the Anidaso policy		
To secure against future shocks	180	57,58
To protect family in case of illness/death	77	23,80
For investment reasons	28	8,76
To obtain collateral for loans	17	5,13
Old age security	5	1,47
To finance medical care	4	1,24
Other	3	1,05
To finance funeral costs	2	0,58
Education	1	0,39
Total	317	100,00
Reason not to buy any insurance		
Too expensive	145	49,62
Not important to me	40	13,29
No information on insurance facilities	29	12,95
Don't trust insurer	26	6,64
No knowledge on insurance	16	6,05
Not enough time/can't be bothered	12	4,63
Did not think about it	10	2,80
Insurance provider too far away	8	2,31
Other	2	0,75
Procedures too difficult	2	0,41
Not eligible	1	0,29
Insurance not considered effective	2	0,26
Total	293	100,00