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Community-based health insurance scheme in Burkina Faso

Can premium subsidies increase adverse selection?

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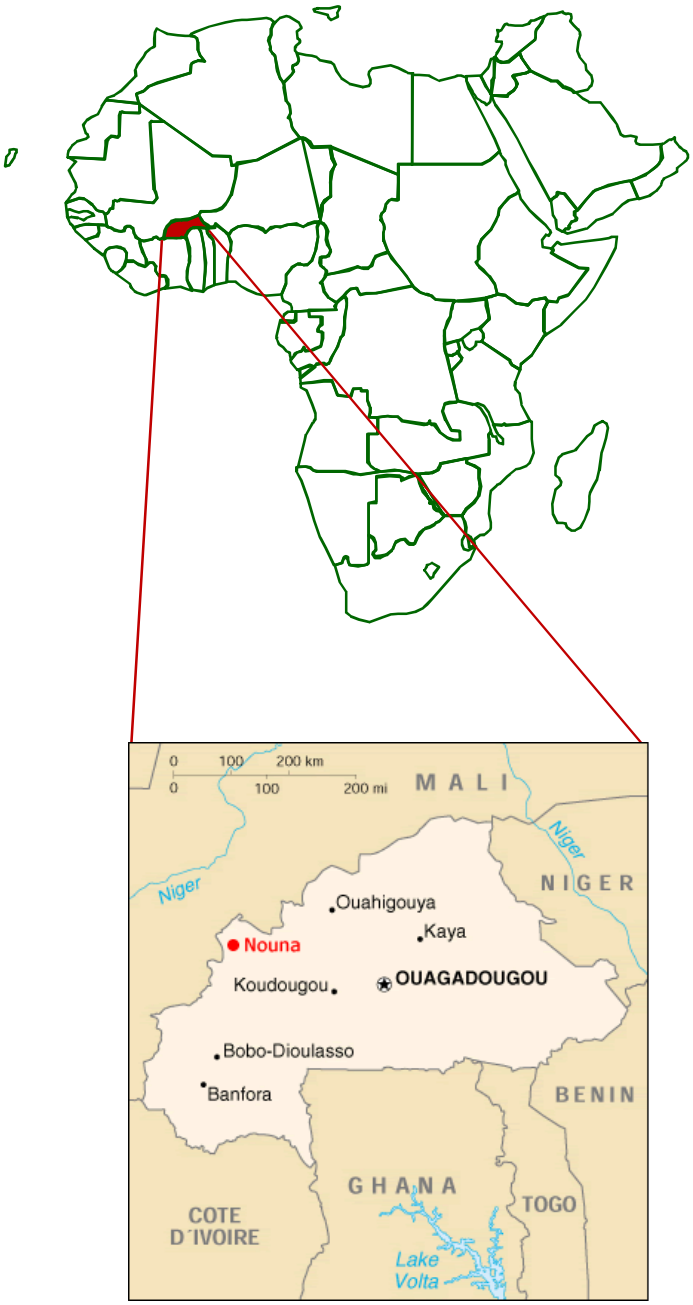
Burkina Faso

- Population: 15.8 million
- GDP per capita (PPP): $1200 (207/228)
- Occupation: 90% engaged in agriculture
- Literacy: 30% (men), 15%(females)
- Spending on health per person: $7
- Life expectancy : 53 years (199/228)
- Infant mortality rate: 85 /1000 live births
- No. of people per doctor: 33,333



Reference: https://www.cia.gov

Community-based Health Insurance (CBI)

Access to health care

Premium

Capitation

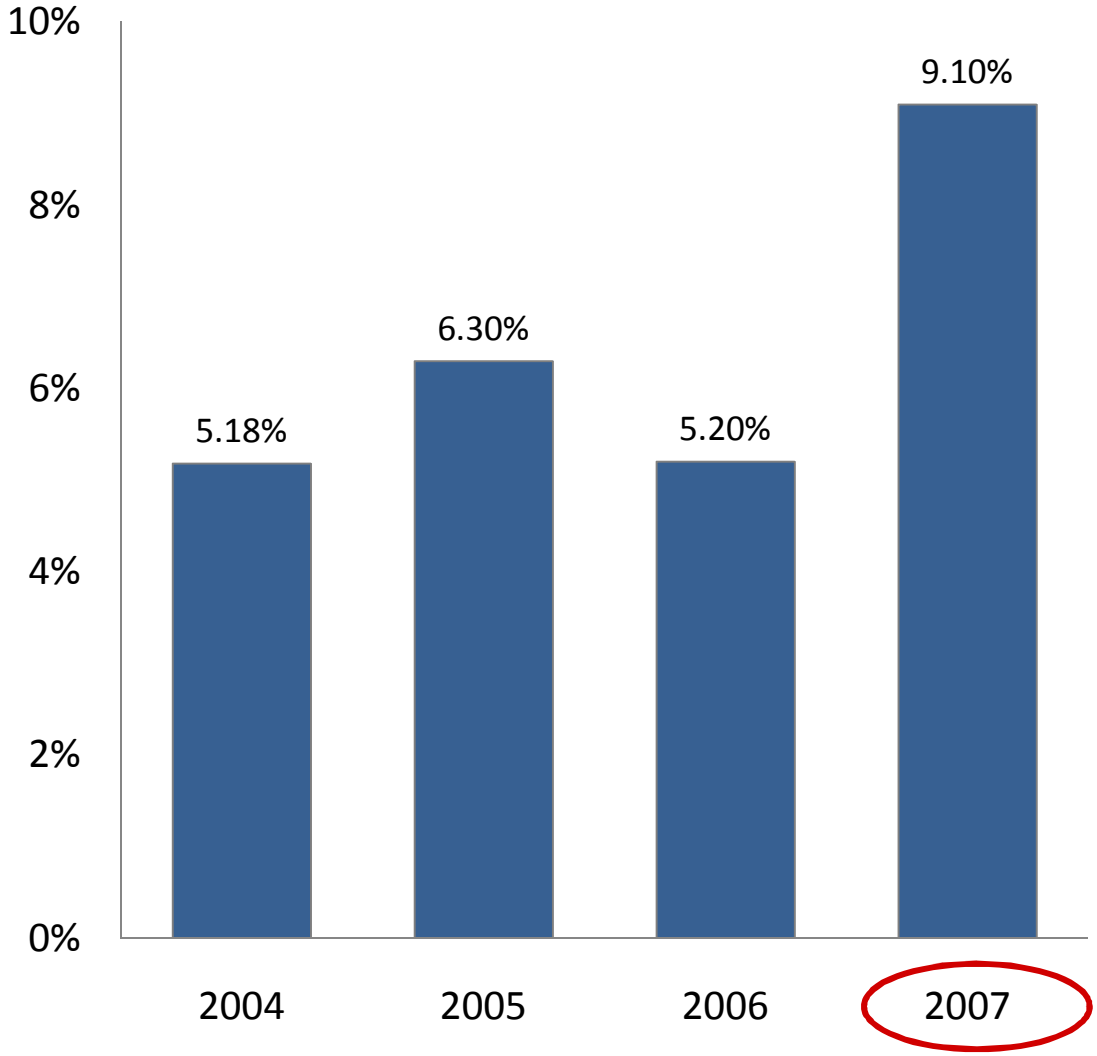
Community-based health insurance

- Introduced in 2004
- 41 villages and Nouna town

  (i.e. 7762 households)
- Unit of enrolment: household
- Premium: 1500 CFA (2.29€) per adult
  500 CFA (0.76€) per child p.a.

BUT, enrollment among the poor was low. Therefore, in 2007, premium subsidy was offered to the poor

Enrolment Rate 2004-2007



Sharp increase in enrolment after premium subsidy was offered

Question 1.

Do the sick enrol more?

(adverse selection)

Variables	Coefficient	SE
Age (years)		
≤ 15	0.004	0.009
60+	0.015	0.036
Education		
Literate	-0.001	0.006
Subsidized		
Subsidy	0.1	0.011***
Household size		
Size	-0.002	0.001***
SES		
MidSES	0.015	0.006***
HighSES	0.028	0.007***
Year		
2005	0.003	0.003
2006	-0.002	0.003
2007	0.009	0.004**
Sick X Year		
Sick x 2004	0.001	0.010
Sick x 2005	0.000	0.009
Sick x 2006	0.008	0.009
Sick x 2007	0.021	0.011**
No. of observations		18480
No. of individuals		6713
F statistic (p-value)		11.47 (0.000)
R^2		0.0078

1. Fixed Effects Regression

Dependent variable: CBHI (0,1)

Sick: individuals who reported being sick for at least 3 months

Interaction: Sick*Year

***1%, **5% and *10% sig levels

Proportion of sick individuals enrolled significantly increased in 2007

Questions 2.

Why should adverse selection increase in 2007?

- Did subsidy increase adverse selection?

Variables	Coefficient	SE
Age (years)		
≤ 15	0.005	0.009
60+	0.018	0.036
Education		
Literate	-0.002	0.006
Subsidized		
Subsidy	0.1	0.012***
Household size		
Size	-0.002	0.001***
SES		
MidSES	0.015	0.006***
HighSES	0.028	0.007***
Year		
2005	0.002	0.003
2006	-0.001	0.003
2007	0.013	0.004***
Sick X Subsidy		
Sick x Subsidy=0	0.008	0.007
Sick x Subsidy=1	0.048	0.027*
No. of observations		18480
No. of individuals		6713
F statistic (p-value)		11.47 (0.000)
R^2		0.0078

2. Fixed Effects Regression

Dependent variable: CBHI (0,1)

Sick: individuals who reported being sick for at least 3 months

Interaction: Sick*Subsidy

***1%, **5% and *10% sig levels

Proportion of sick individuals more among those who were given subsidy

Community wealth ranking: defining poverty

Poverty criteria: as decided by the community	Poverty categories		
	Very poor	Middle	Rich
Old person without child	+++		
Needs to beg to live	+++		
No chickens	+++		
No assistance network	+++		
Unable to finance medical costs	+++	++	
In good health		++	+++
High quality housing		++	+++
Sufficient food		++	+++
Nice clothes		++	+++
Ownership of farming equipment		++	+++
Able to support someone		++	+++
Ownership of transport means		++	+++

Conclusions

- Enrolment significantly increased among the poor when subsidized premiums were offered to them
- More poor households were likely to be sick than the rich ones
- By offering the poor subsidized premiums – proportion of sick individuals increased in CBHI

Implications for CBHI

Cost of providing health insurance increases

- Strictly enforce enrolment of complete households
- Remove subsidy– but this will discourage the poor from enrolling who have greater need for health insurance – harms equity! ✗

  Adverse Selection OR Positive selection (well-targetted)
- Increase premiums for rich: rich subsidize the poor but will discourage enrolment among them (context: rich=less poor) ✗
- Essential to receive government/international support to cover these extra costs

<u>Need to budget for adverse selection</u>

Thank you

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