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# Community-based health insurance: improving household economic indicators?

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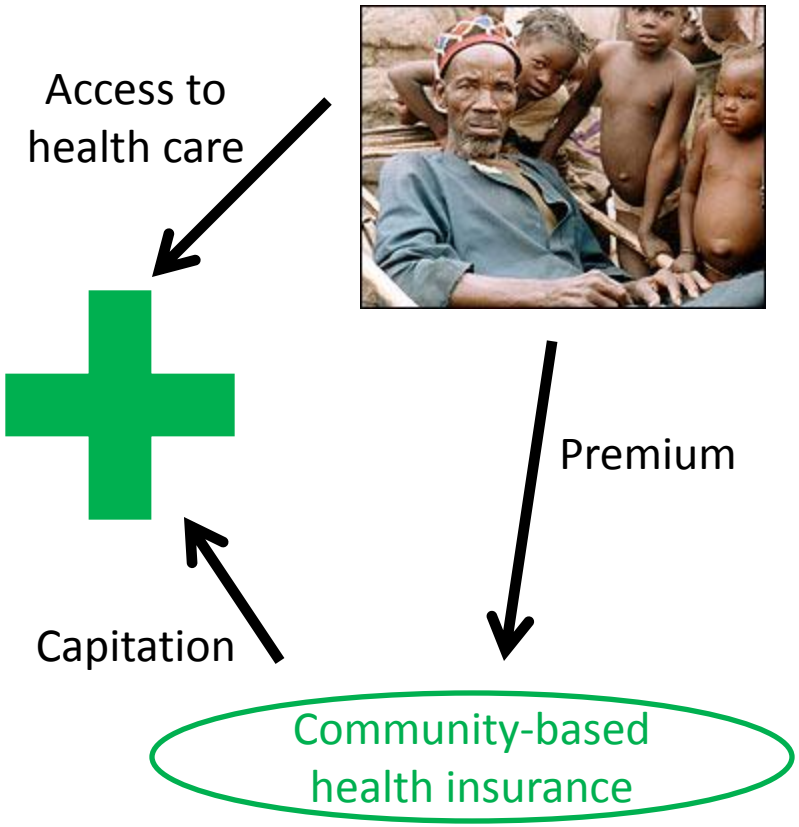
# Community-based health insurance (CBI)




Enrolment modalities:

- Unit of enrolment is the household
- Premium: 1500 CFA (2.29€) adult 500 CFA (0.76€)child
- Enrolment is yearly

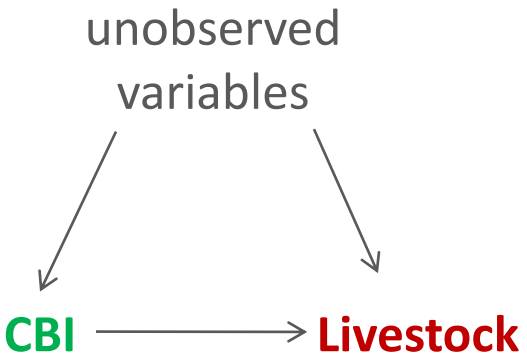
# Research Question

Is there a **causal** relationship between community-based health Insurance (CBI) and household economic indicators in the Nouna Health District?

- Is there an improvement in the household livestock, assets and/or income for the insured overtime

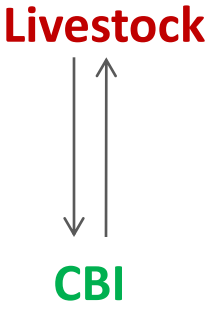
# Observational data

Unlike randomized trials, in observational studies the intervention (CBI) is not randomized…




***Selection bias***

Enrolment for CBI is voluntary: we cannot assume that the insured (cases) and uninsured (controls) are similar




***Reverse (2-way) causation***

# Model

$$Livestock_{it} = Z_i.\ \beta_1 + X_{it}.\beta_2 + CBI_{it}.\ \beta_3 + u_i + \varepsilon_{it} + \delta_t$$

$Livestock_{it}$ :Household ownership of livestock

$Z_i$ : observable time-invariant factors e.g. religion, education

$X_{it}$ : observable time varying factors e.g. age, household size

$CBI_{it}$ : insured household

$u_i$ : unobservable time-invariant factors e.g. ability, preference

$\varepsilon_{it}$ : household-specific time shock e.g. death in the household

$\delta_t$ : sample-specific time shock e.g. drought that effects everyone

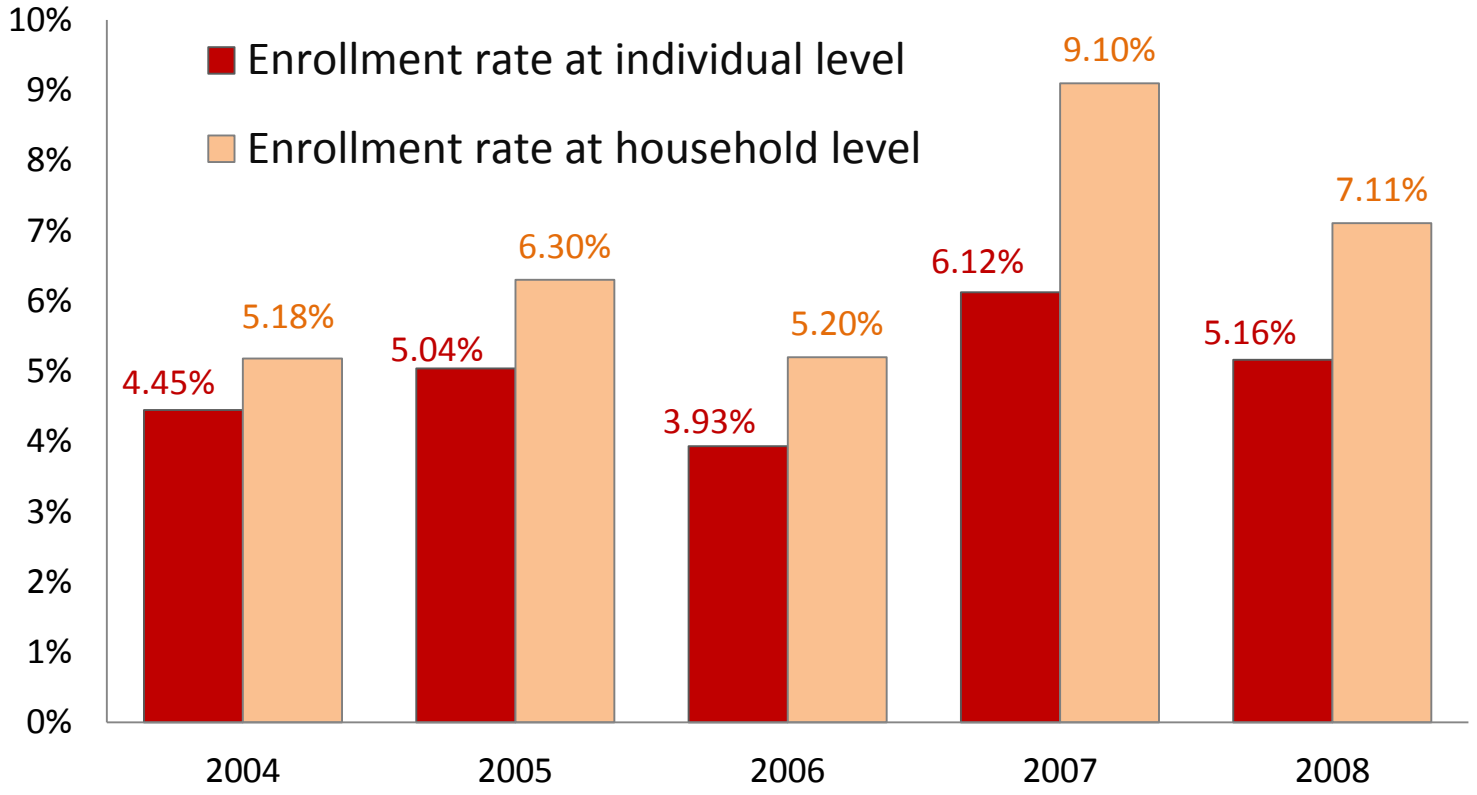
# Data sources

1. Nouna Health District Household Survey (NHDHS)
   - DSS region: 41 villages & Nouna town
   - 15% of the population (Total population:67,262)
   - Panel survey (same households interviewed every year)
   - Conducted every year since 2000

*(0) Socio-demographic: ethnicity, religion, housing conditions, education…*
*(1) Socio-economic: assets, livestock, monetary income, expenditures…*
*(2) Self-reported morbidity: illness episodes, health-seeking behaviour…*
*(3) Preventive care*
*(4) Risk-sharing & perceptions on quality of health care*
*(5) CBI: enrolment decisions, reasons for enrolling…*

# Data sources

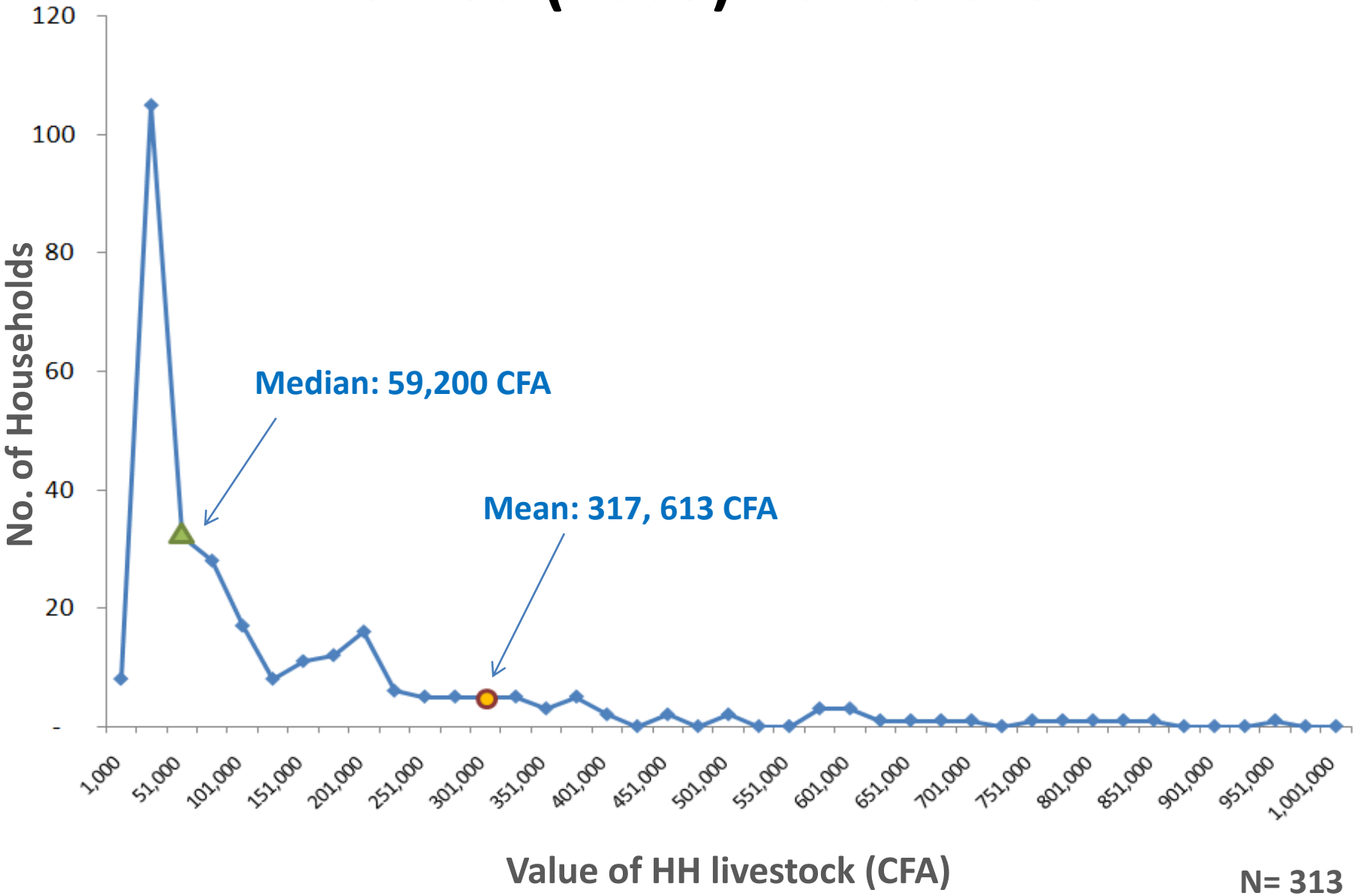
2. Community-based health insurance register
   - List of households and individuals enrolled every year
   - Can be linked to NHD household survey




**Enrollment 2004-08**

# Preliminary Results

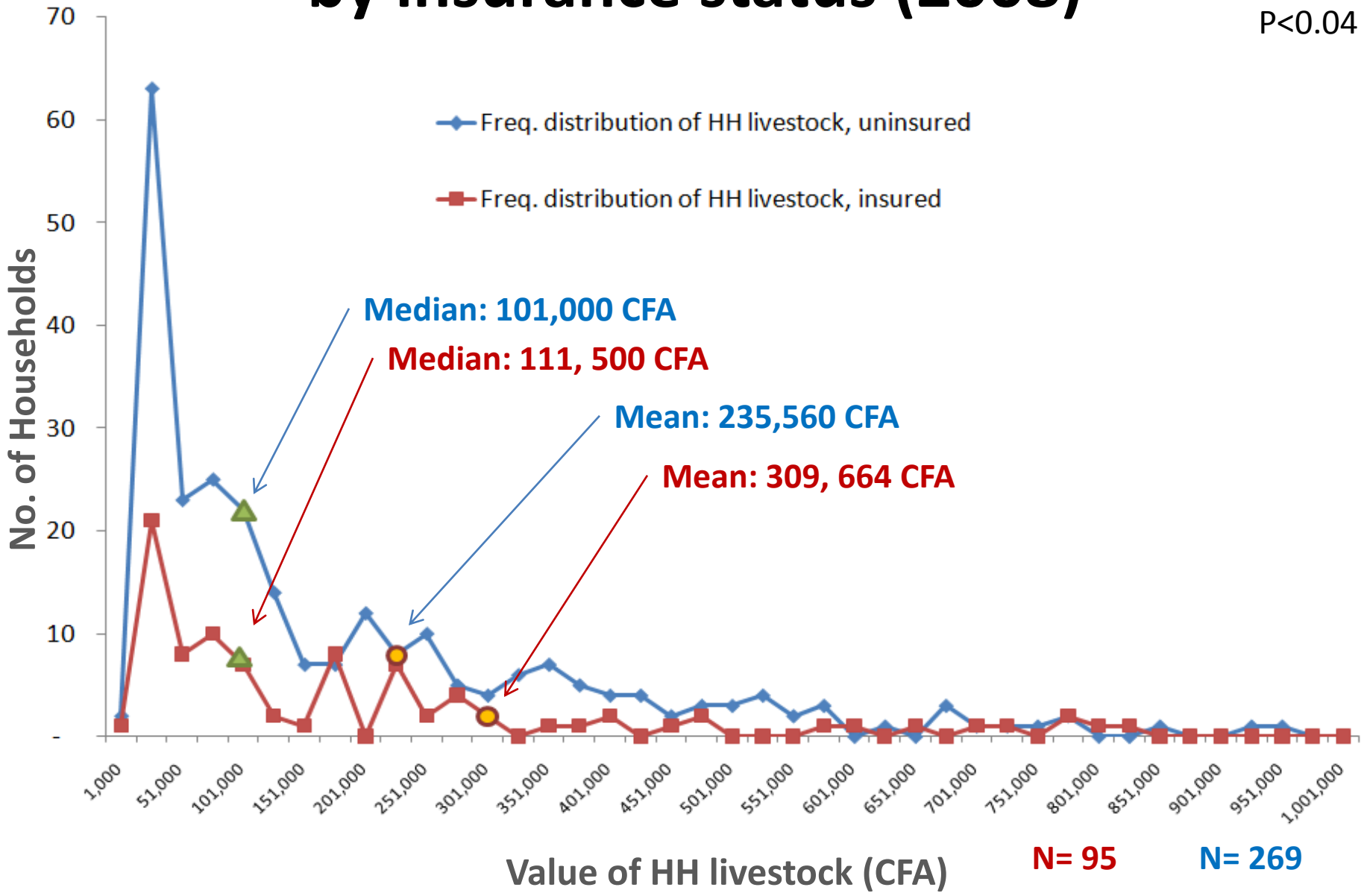
# Freq. distribution of HH livestock, uninsured (2003) i.e. before CBI



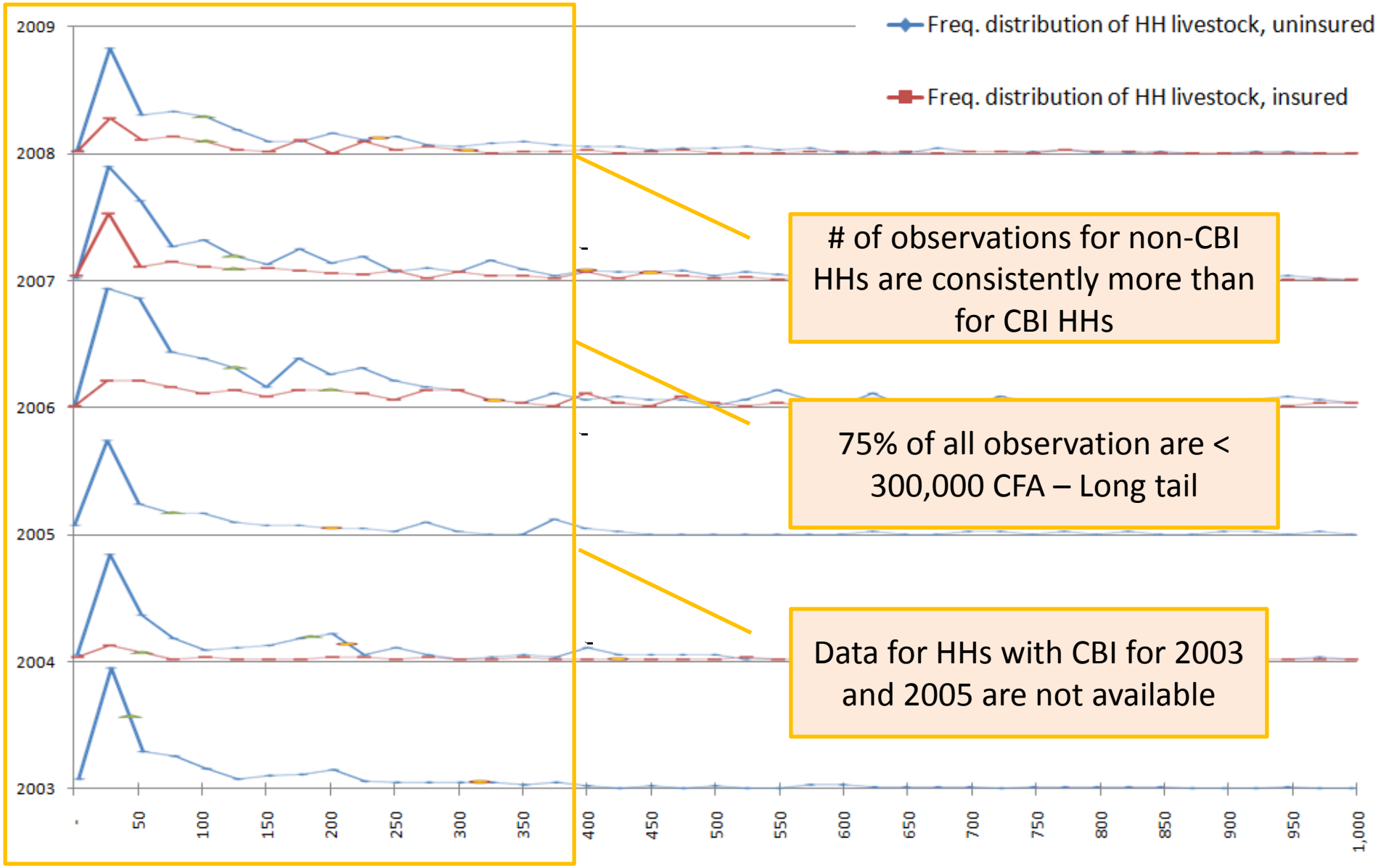

N= 313

# Freq. distribution of HH livestock, by insurance status (2008)

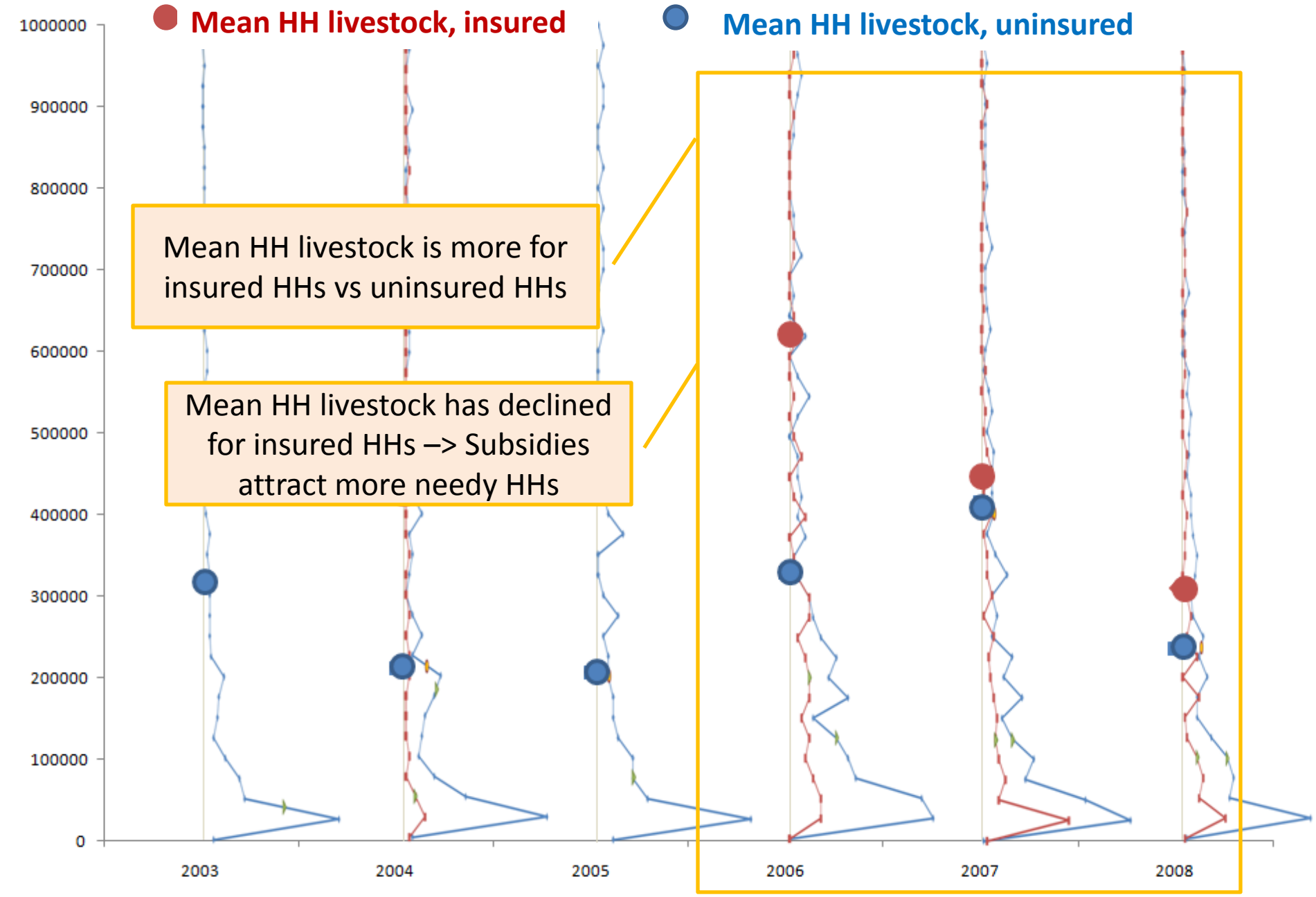
P<0.04



# Freq. distribution of HH livestock, by insurance status (2003-08)



# Analysis of mean HH livestock , by insurance status (2003 -08)



# To conclude,

- There appears to be significant difference in the value of HH livestock between the insured and the uninsured.
- Insured HHs have relatively more HH livestock than uninsured HHs.
    1. This could be due to the fact that richer households are enrolling (Subsidies in 2007)
    2. Part of this could also be explained due to an improvement in HH livestock for the insured due to CBI

***Thank you***

***Any questions, comments …***