

# Integrated Poverty Assessment for Livestock Policy

Joachim Otte and David Roland-Holst, FAO and UC Berkeley

*FAO Seminar, Faculty of Economics, Chulalongkorn University, Bangkok  
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# 1. Introduction

Detailed economic analysis can support policy and complement technical assistance in three ways:

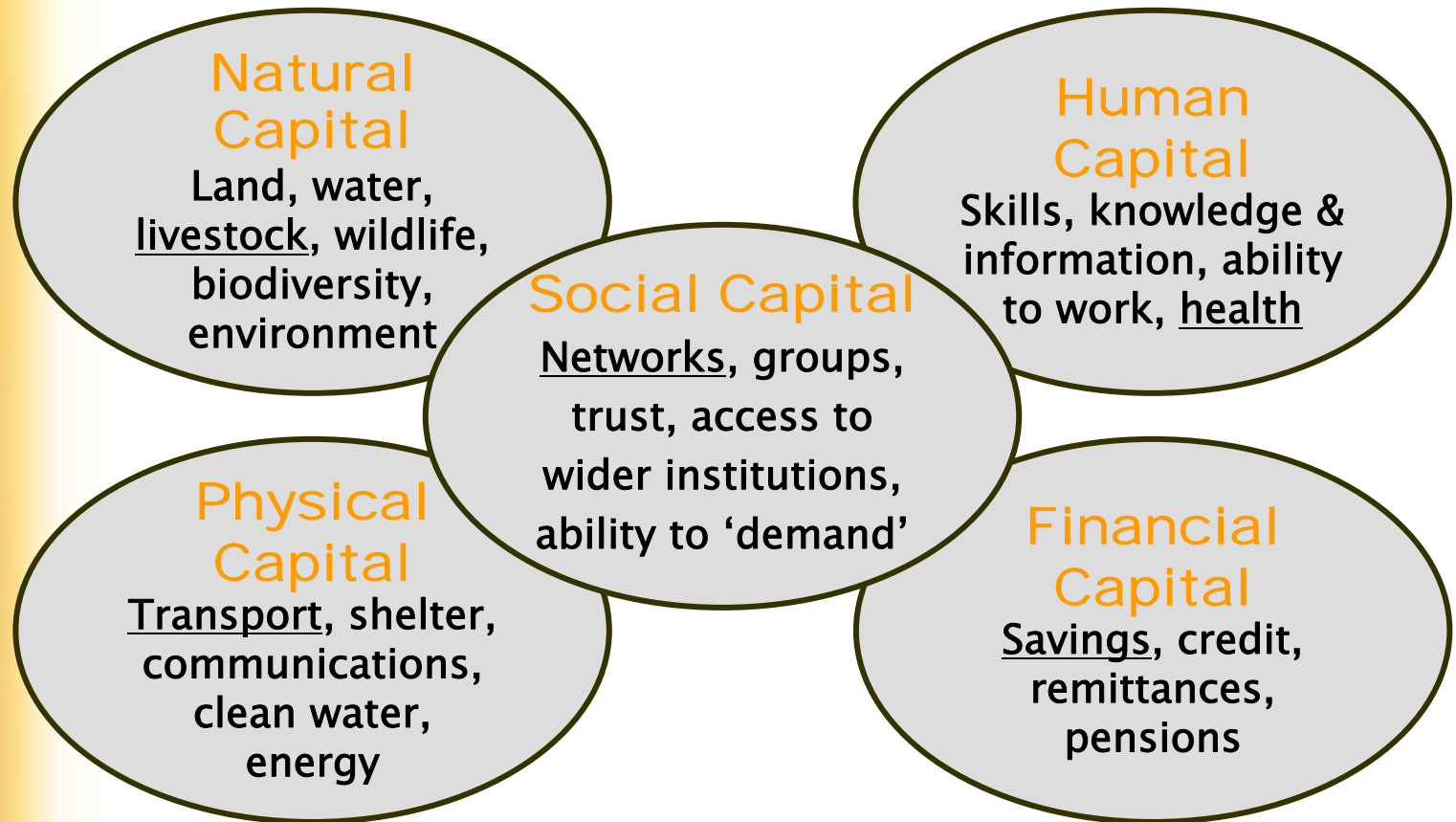
1. Improve visibility about economic fundamentals, including
  1. Trends
  2. Heterogeneity/complexity
  3. Linkages
2. Enable more effective targeting. This will permit them to identify stakes and stakeholders, recruit beneficiaries to support more effective policy, and anticipate adjustment needs for others.
3. Facilitate assessment, ex ante, ex post, and during the course of projects.



# Livestock Development Goals (LDG)

- Goal 1: Eradicate extreme poverty:** Halve between 1990 and 2015 the proportion of people whose income is less than 1\$/day.
- Goal 2: Increase smallholder food security and protein sufficiency:** Promote policies to secure smallholder subsistence, and livestock as a source of income and protein. Reduce by 2/3 the risk of malnutrition by 2015.
- Goal 3: Increase smallholder value-added:** Double budgets for smallholder extension services by 2015, with emphasis on policies that raise productivity and facilitate market access.
- Goal 4: National registry of indigenous livestock varieties:** Each country shall maintain a complete inventory of domestic livestock varieties, including detailed scientific and economic descriptions, and promote conservation of legacy genetic material.
- Goal 5: Improve animal health:** Promote higher standards for husbandry, including hygienic and humane production and processing practices.
- Goal 6: Combat HPAI, TADS, and other diseases:** Avert HPAI pandemic and reduce the incidence of TADS by 1/2 by 2015.
- Goal 7: Ensure sustainability:** Integrate the principles of sustainable development into livestock policies and programs. Promote sustainable patterns of land and water use, agrochemical and pharmaceutical application, and breeding.
- Goal 8: Develop a global partnership for livestock technology sharing and marketing standards:** Clearing house for dissemination and sharing of Intellectual property, genetic material, and other technologies related to livestock production and downstream processing/marketing.

## 2. Livestock and Livelihoods







# Livestock: Economic Perspective

- More income from **natural resources** through:
  - Access to common land resources
  - Utilization of marginal resources, e.g. 'waste land' not suitable for crops
  - Re-cycling crop by-products
  - Increase in output of crop production (fertilizer)
  - Savings
- More income from **family labour** through:
  - Better use of heterogeneous labour resources
  - Balance seasonal labour demand for crop farming
  - Use of labour for processing of primary products (value added capture)
  - Release labour for more productive purposes (animal traction)



# How can livestock help the poor?

## 1. Income

1. Meat
2. Sustainable flows: eggs, dairy, etc.
3. Services

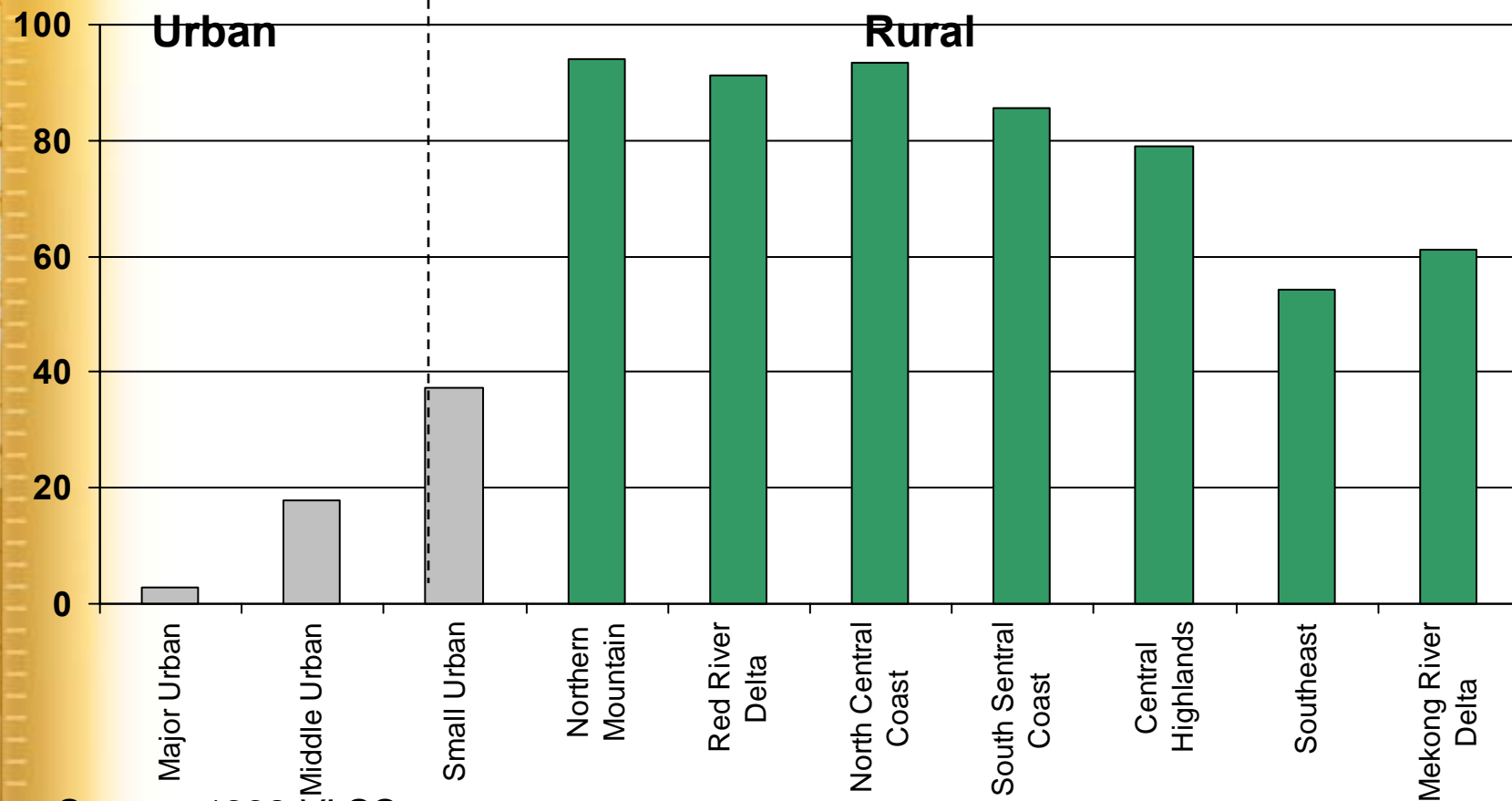
## 2. Agricultural productivity

1. Traction (labor substitution)
2. Fertilizer
3. Recycling organic waste

## 3. Asset/savings

# Livestock Ownership in Viet Nam

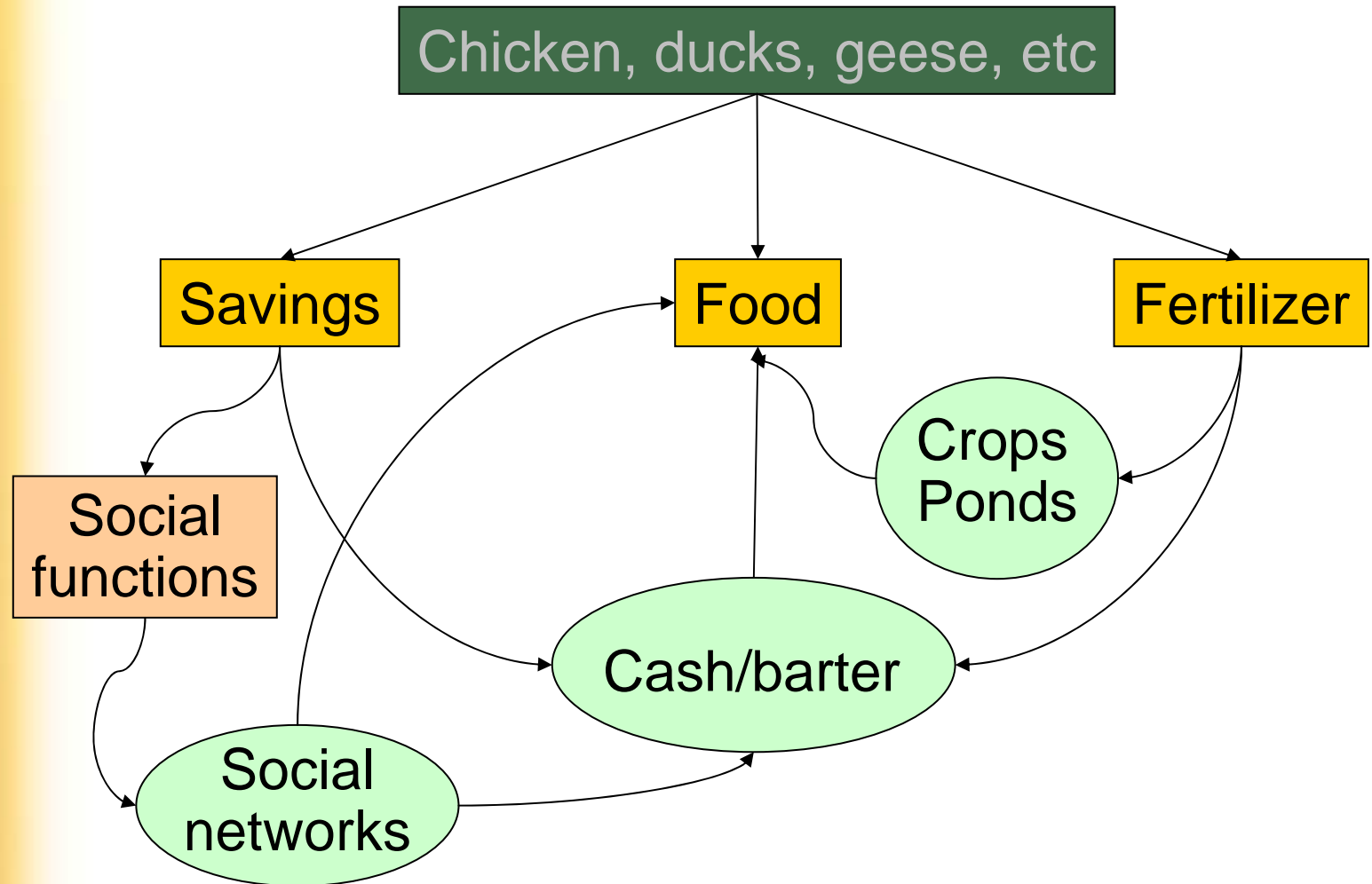
% Households owning livestock



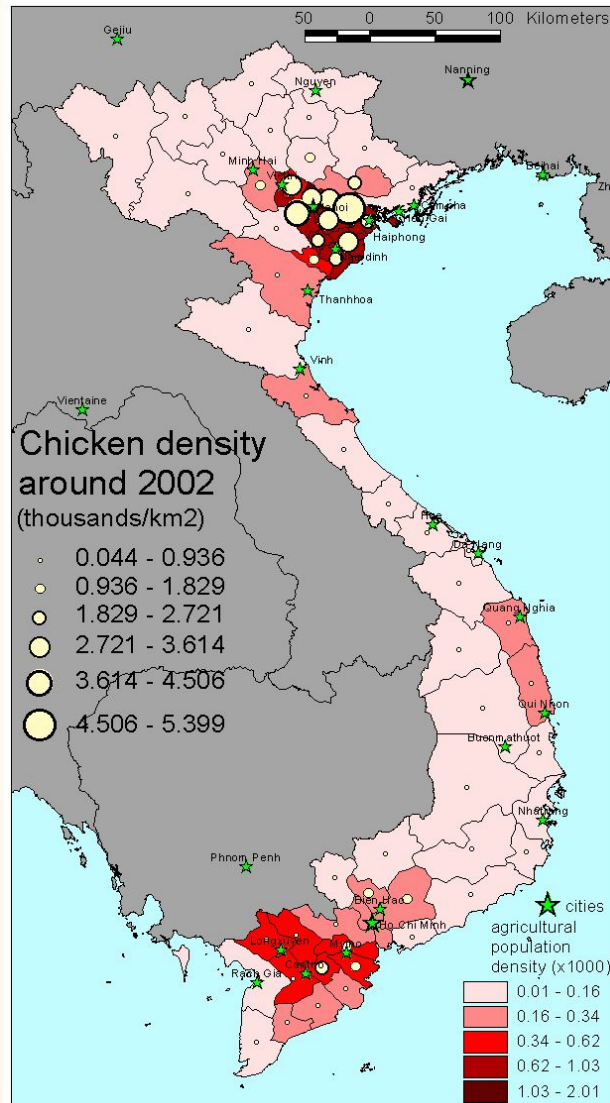
Source: 1998 VLSS



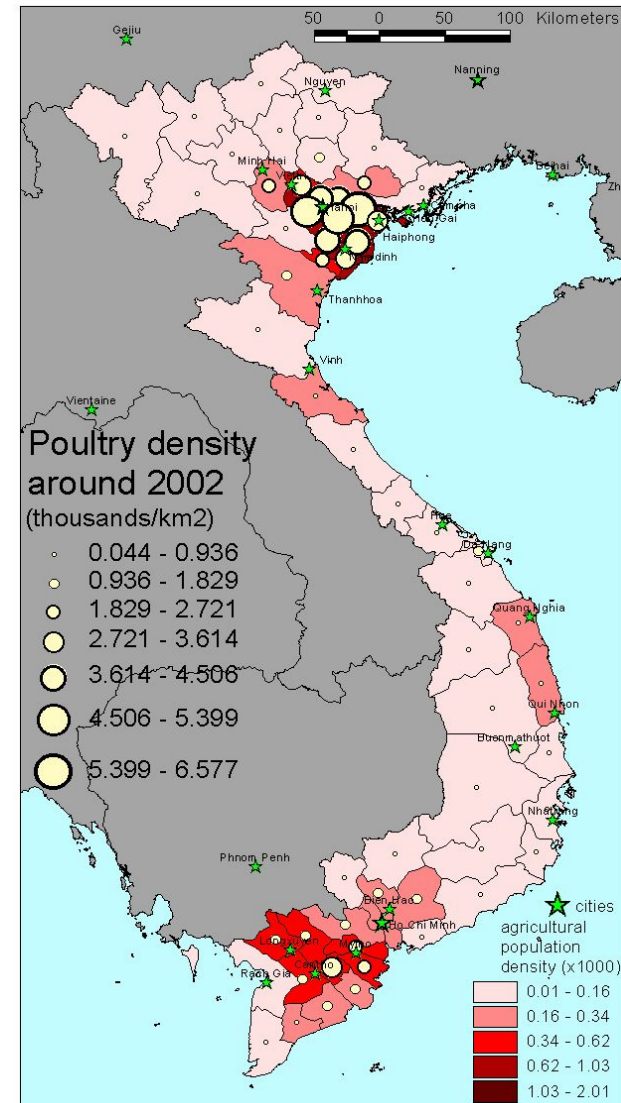
# Focus on the Role of Poultry in Poor Households



# Poultry is Concentrated with Population

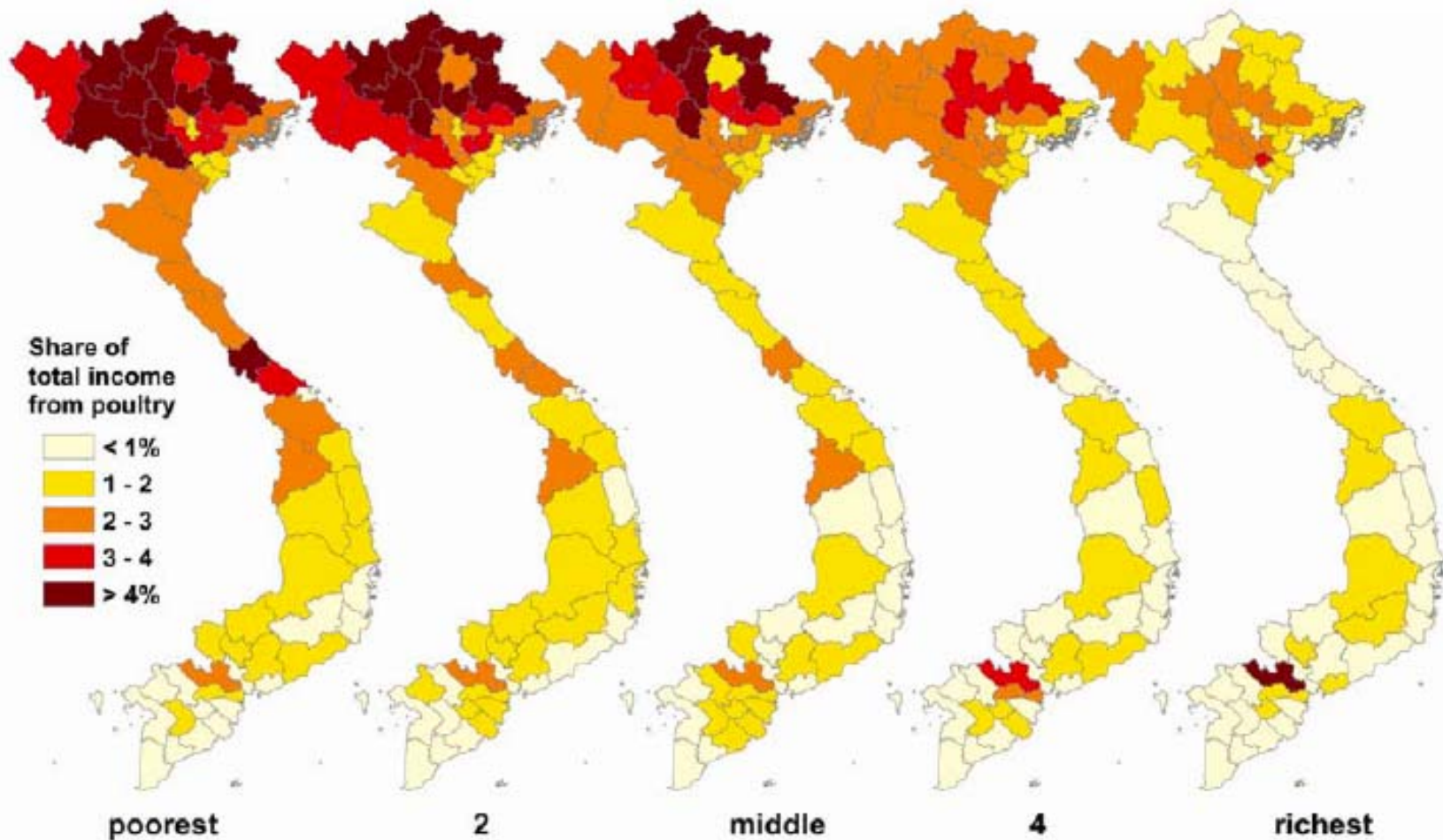


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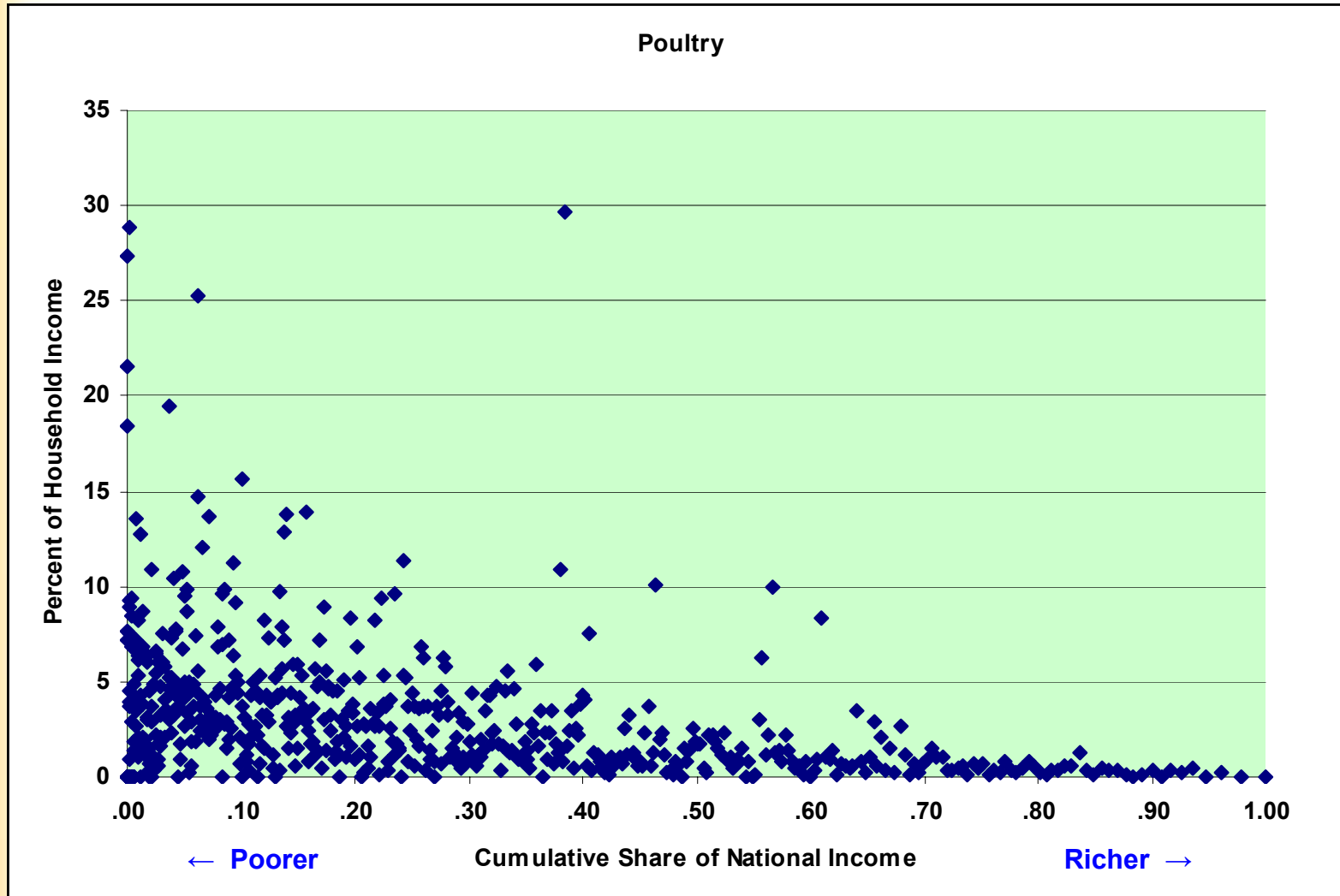
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# But the poor are more reliant on poultry for income



Source: VHLSS 2002

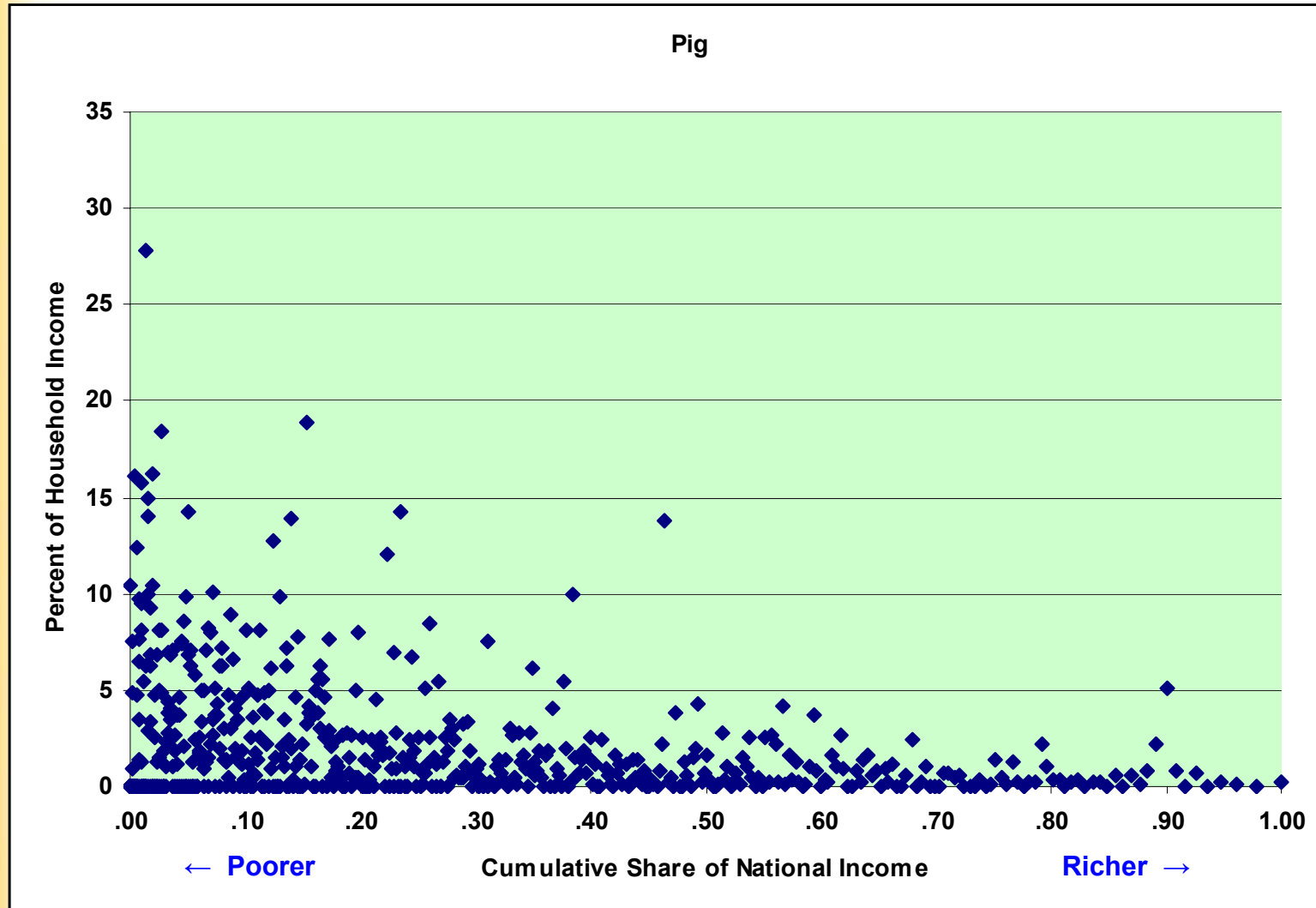
# Livestock Income and Poverty: Poultry



Notes: Six hundred data points, representing rural and urban income quintiles for each of thirty provinces. Data are ordered from left to right by increasing per capital household income.

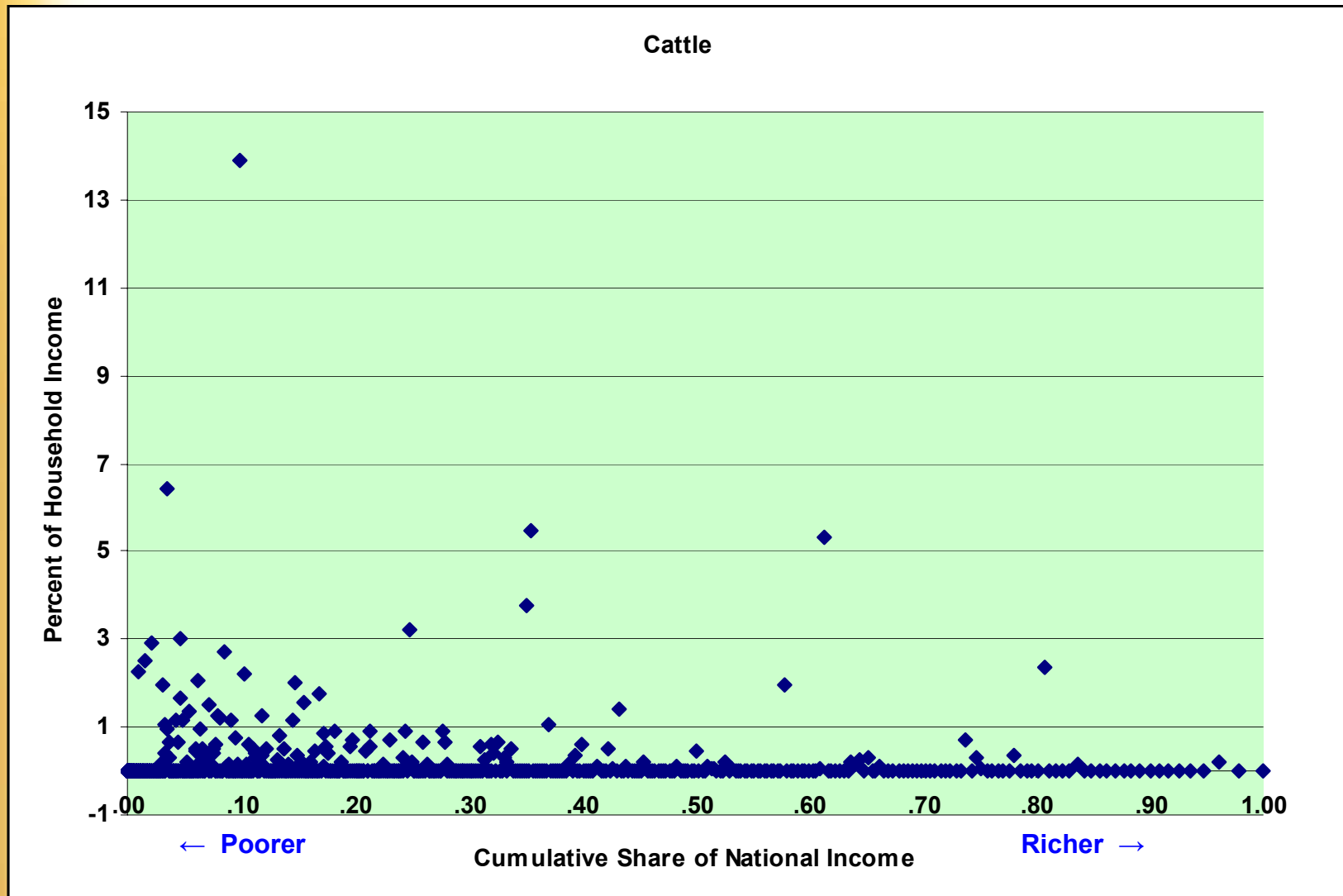


# Livestock Income and Poverty: Pigs



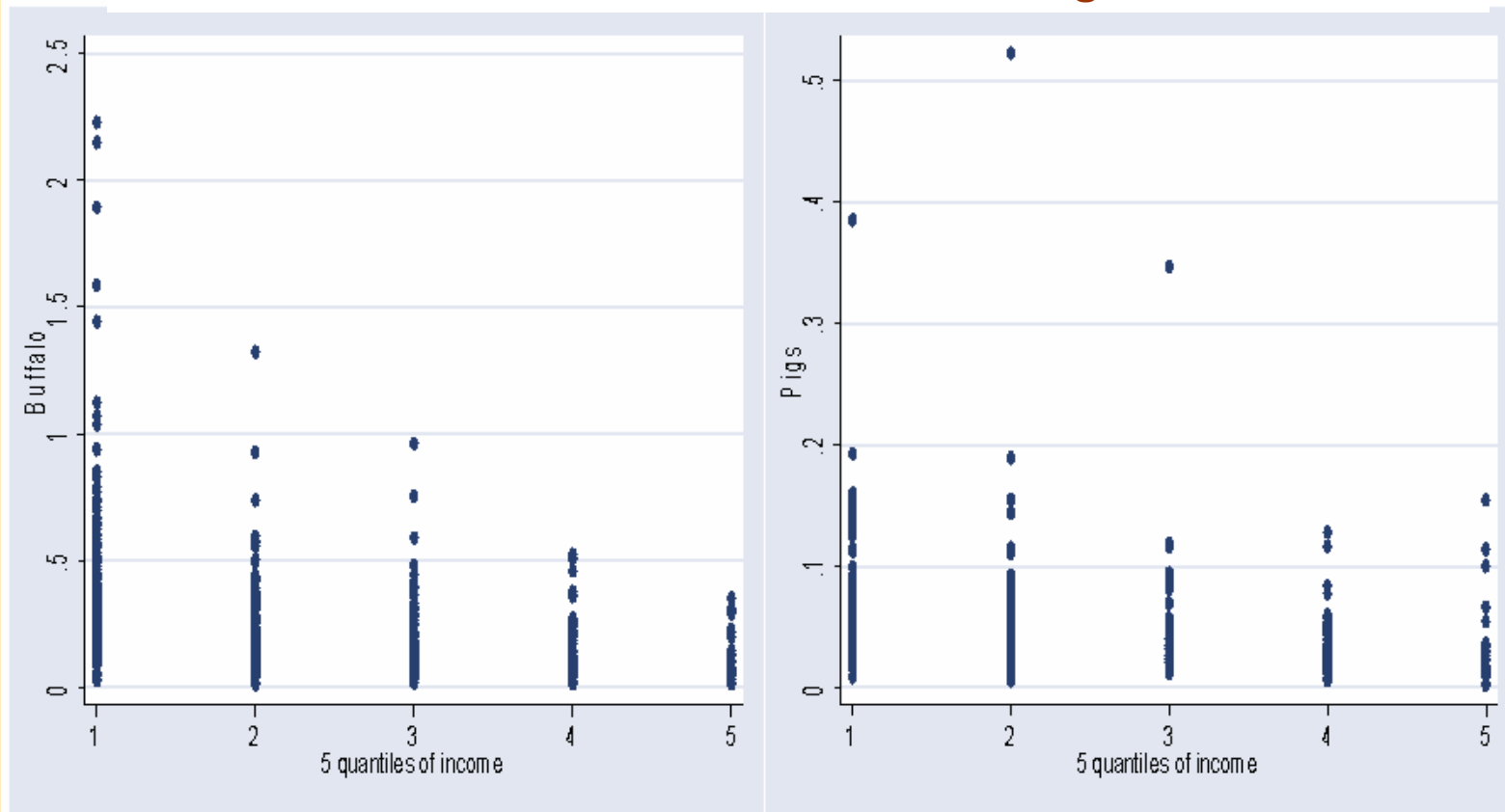


# Cattle Income is Smaller and More Uniform



# Livestock and Savings

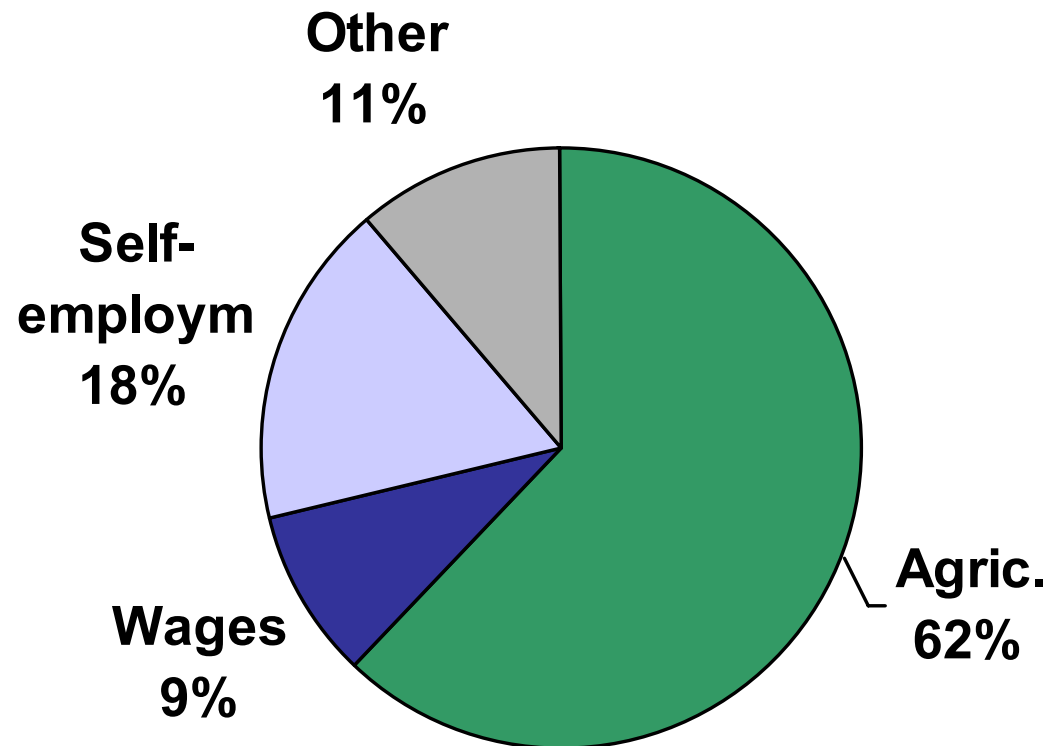
**Pigs are important to both income and savings,  
cattle/buffalo more to savings**



**Note: Vertical axes measure Buffalo and Pig asset values as a multiple of HH income.**

# Rural Incomes

## Sources of rural income



**Average: USD750/household/year**

**Poverty line: app USD650/hh/year**

Source: 1998 VLSS

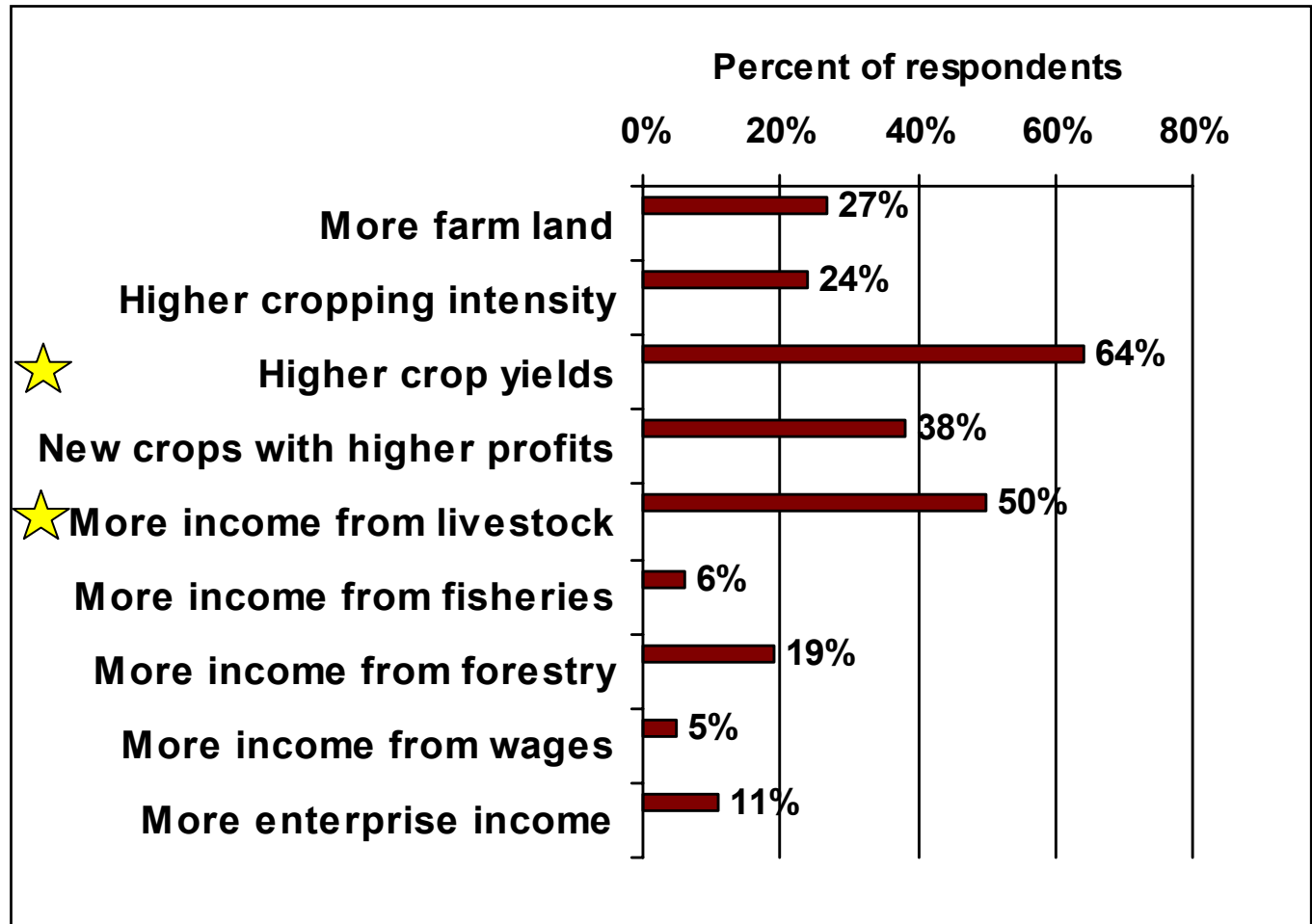
# Commercialization of Rural Production

Quintile	1993 Marketed Share in			1998 Marketed Share in		
	Crop Output	Ag. Output	Monetized Income	Crop Output	Ag. Output	Monetized Income
Poorest	23	34	53	30	33	57
2	26	29	56	37	46	67
3	31	43	66	39	46	72
4	35	45	71	44	51	78
Richest	42	49	74	50	56	85
Total	30	38	63	38	45	70

Source: VLSS

Subsistence rates are high, the marginal income effect of higher productivity will be greater, the poorer the household.

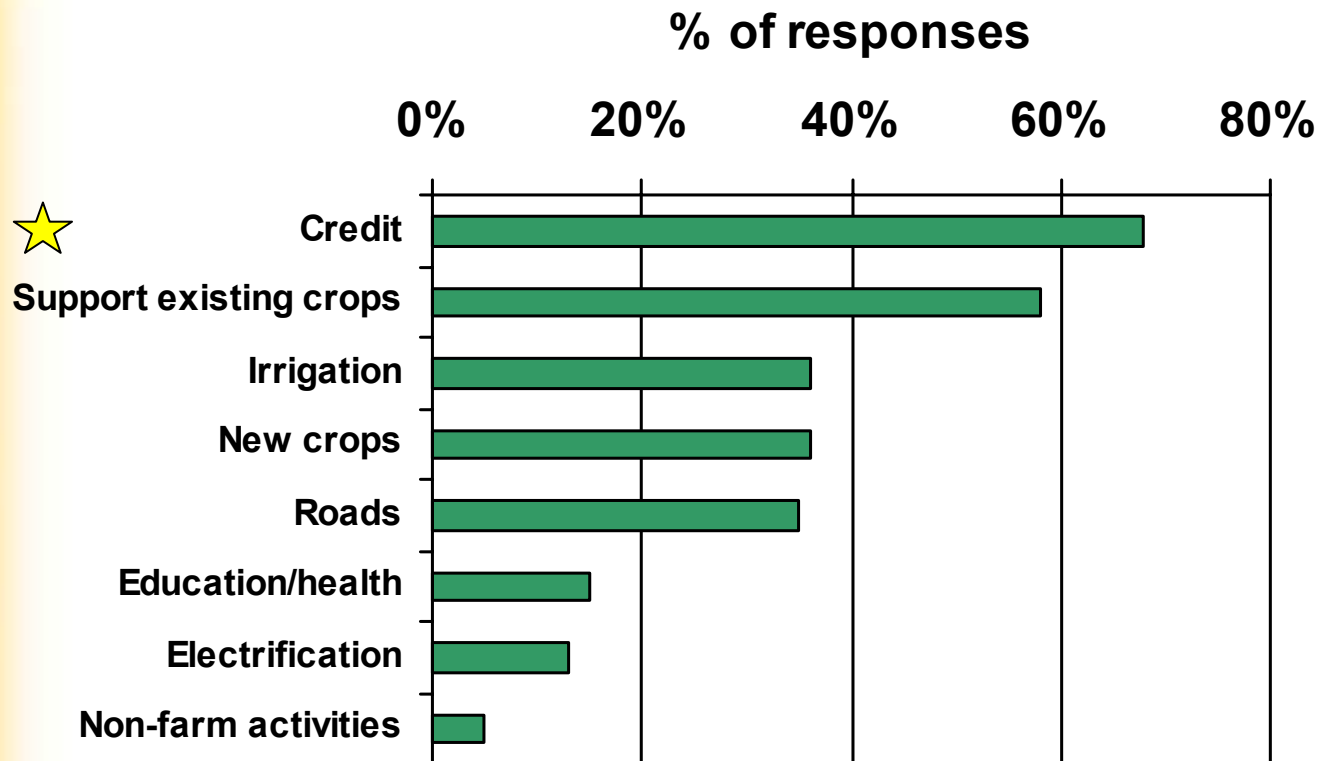
# Reasons for Improved Standard of Living



Source: IFPRI

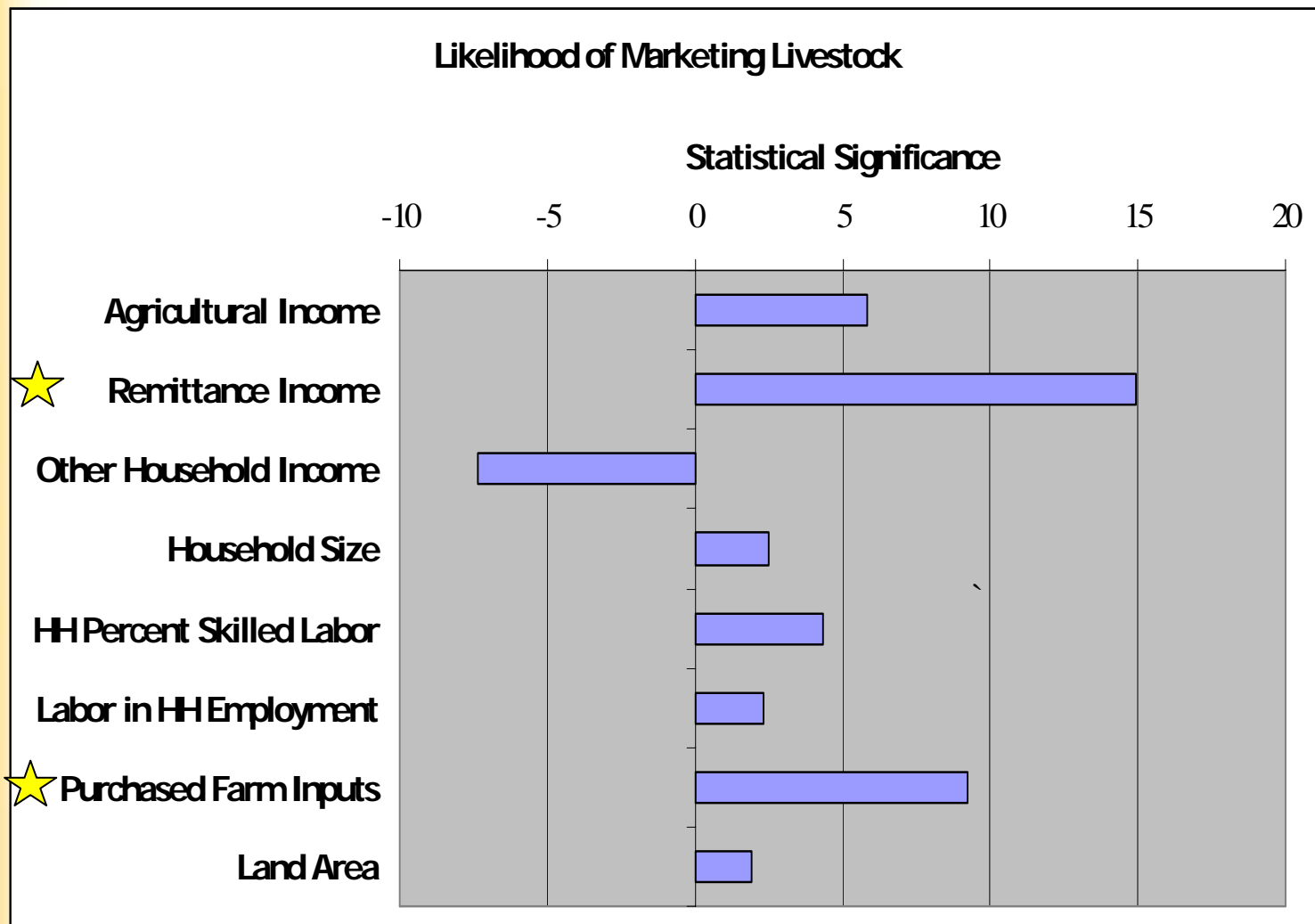


# Perceived Usefulness of Public Assistance



Source: IFPRI

# Likelihood of marketing livestock by NMR households (Logit regression results)





# Livestock Stakeholders

1. Rural Producers
  - Direct and indirect livestock benefits
2. Enterprise Producers
  - Income, employment
3. Food Processing Industry
  - Costs, income, employment
4. Consumers
  - Nutrition, purchasing power
5. Government
  - Nutrition, economic and social stability, fiscal
6. Rest of World
  - Nutrition, Poverty/Development, R&D



### 3. Introduction to IPALP

To support the larger agenda of its Pro-Poor Livestock Promotion Initiative (PPLPI), FAO has developed a research facility to evaluate economic effects of livestock and policies related to them.

Integrated Poverty Assessment for Livestock Promotion (IPALP) is a suite of analytical methods that elucidate local incidence of national and regional policies toward the livestock sector.

Among the livestock policies to which IPALP will be addressed is animal health and disease control strategies, including HPAI.



# IPALP Perspectives

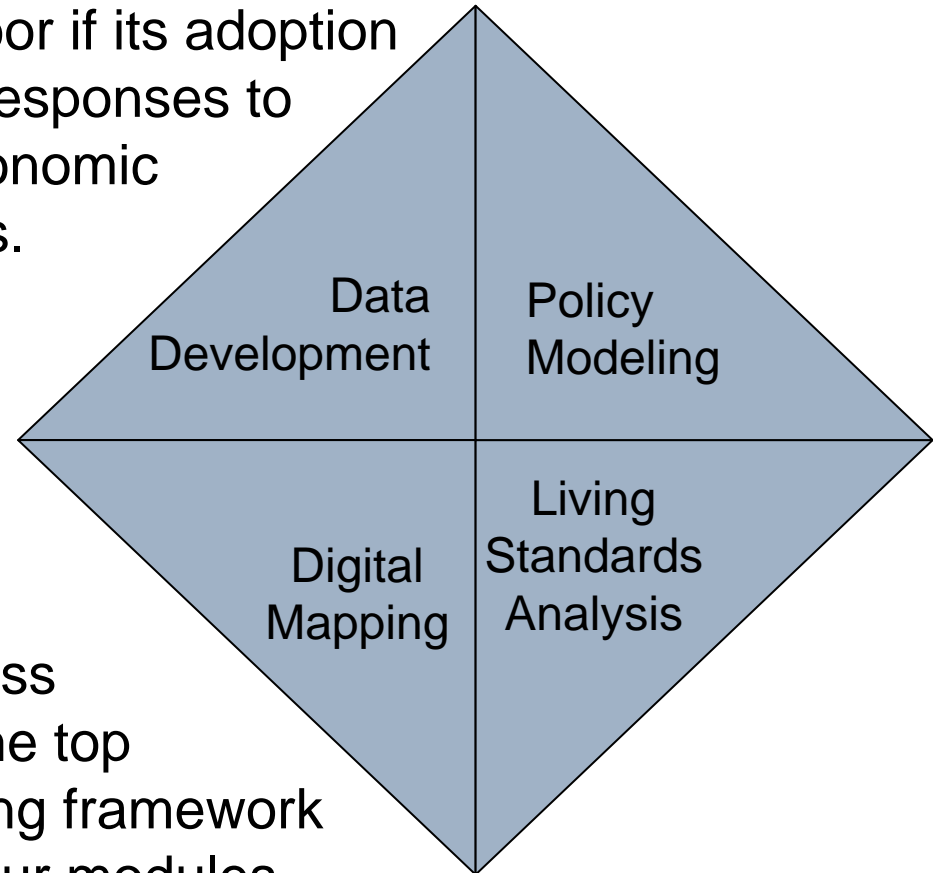
IPALP synthesizes four perspectives:

- Analysis of initial macroeconomic conditions
- Microeconomic analysis of initial conditions
- Dynamic simulation of policies and external economic conditions
- Microeconomic assessment of PPLPI Related Policies



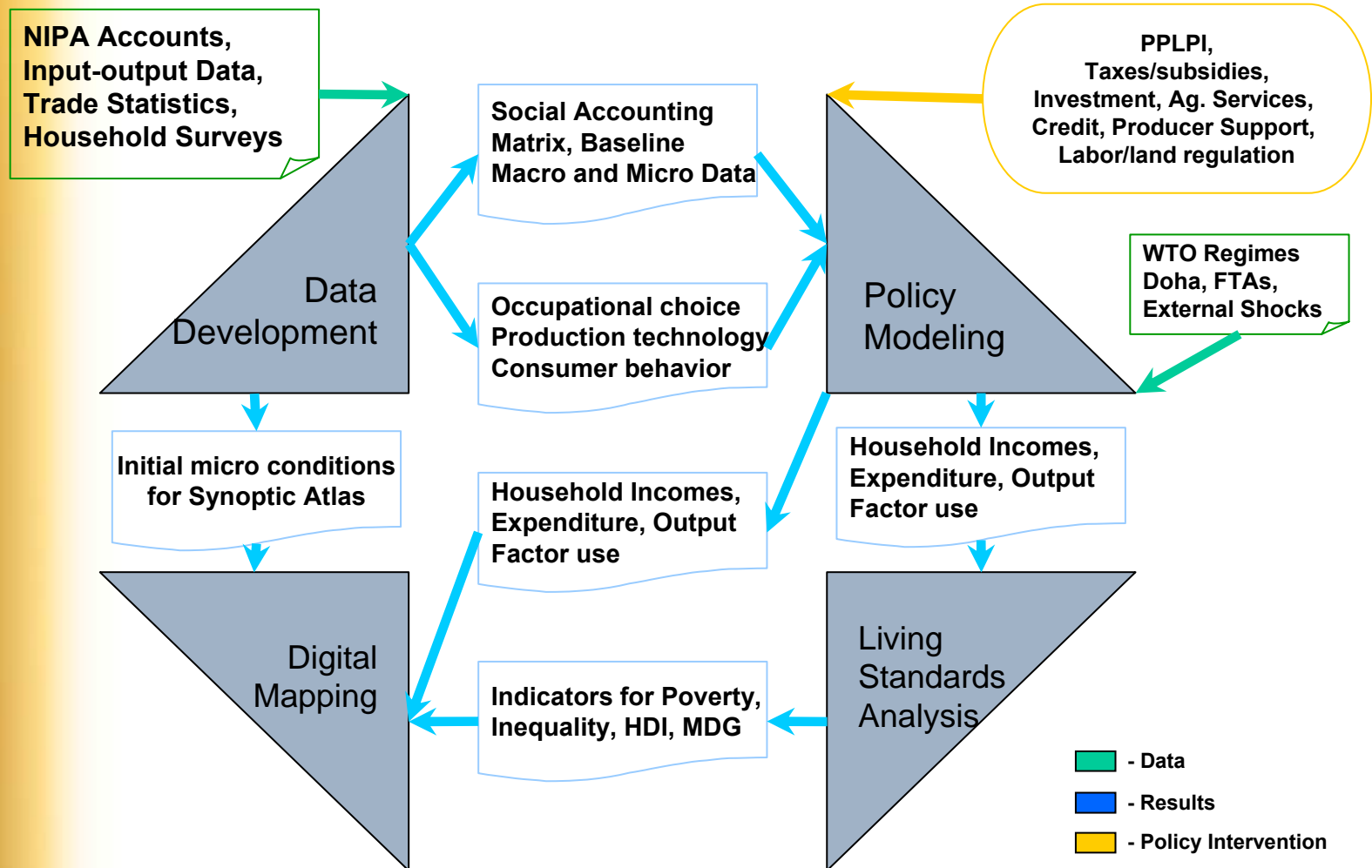
# IPALP Structure

Livestock will help the poor if its adoption is compatible with local responses to regional and national economic conditions and incentives.



To capture linkages across the economy and from the top down, a four-fold modeling framework is used. Each of these four modules has now been developed in prototype form.

# Detailed Methodology





# IPALP Components

1. **Data development**
  - A comprehensive inventory of data related to the overall economy, including macro and micro information, with particular reference to rural conditions and the livestock sector.
2. **Policy Modelling**
  - With a highly disaggregated dynamic CGE forecasting model, a baseline scenario for growth is compared to a variety of national policy scenarios, including PPLPI, generic development strategies, trade policy, WTO accession, market reform, tax policies, etc.
3. **Living Standards Assessment**
  - Using the microeconomic results obtained from the previous two components, we will apply state of the art assessment tools to evaluate the effects of PPLPI and other policies on poverty, inequality, and other living standard and human development indicators.
4. **Digital Mapping**
  - GIS mapping is applied to data on initial conditions and results of policy simulations. This synoptic economic atlas provides a transparent set of assessments that can be widely disseminated and compared across case studies.



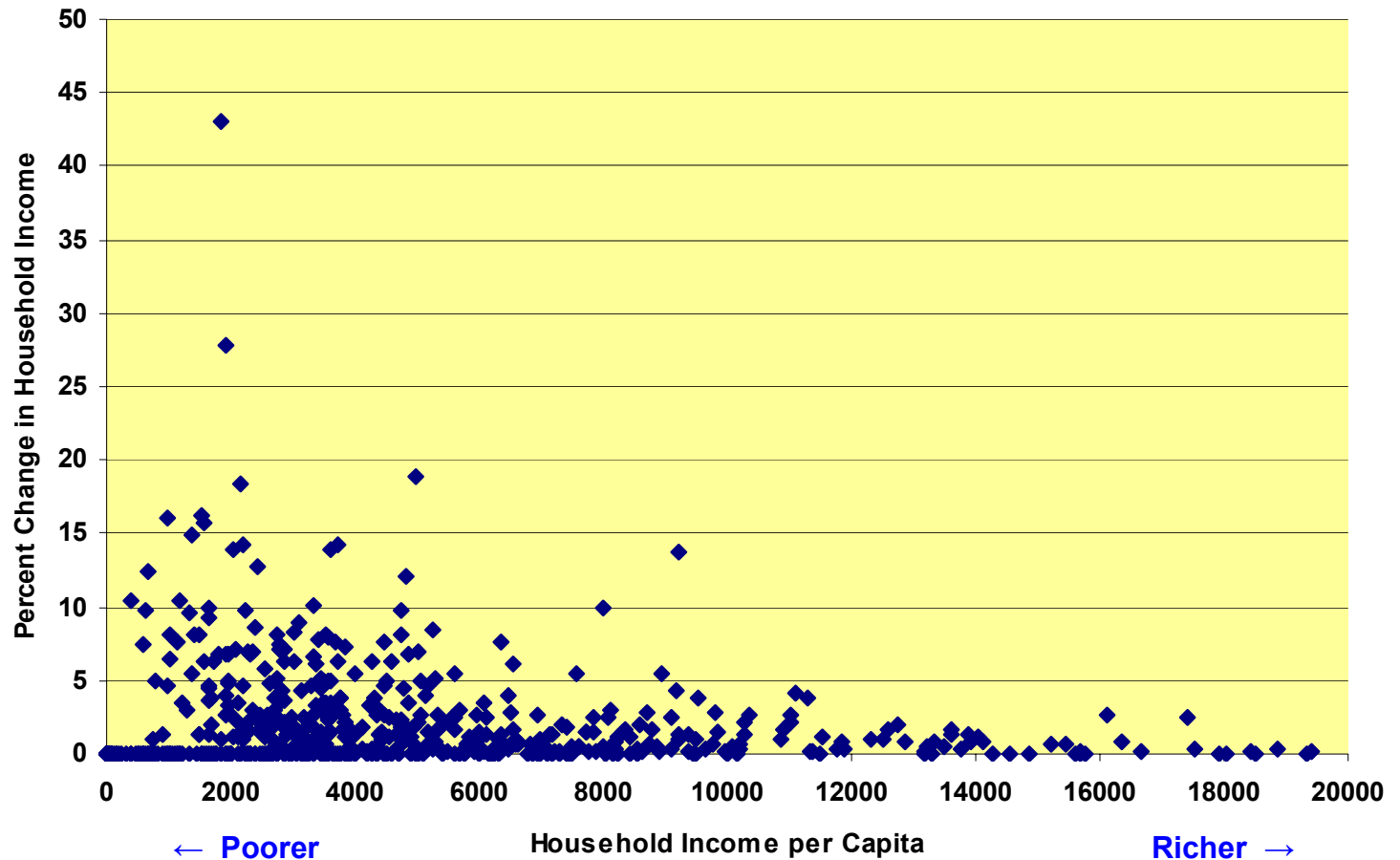
## 4. IPALP Applications

1. Livestock promotion:  
Micro-simulation

2. Market access:  
Economywide linkages

# Livestock Promotion at the Household Level

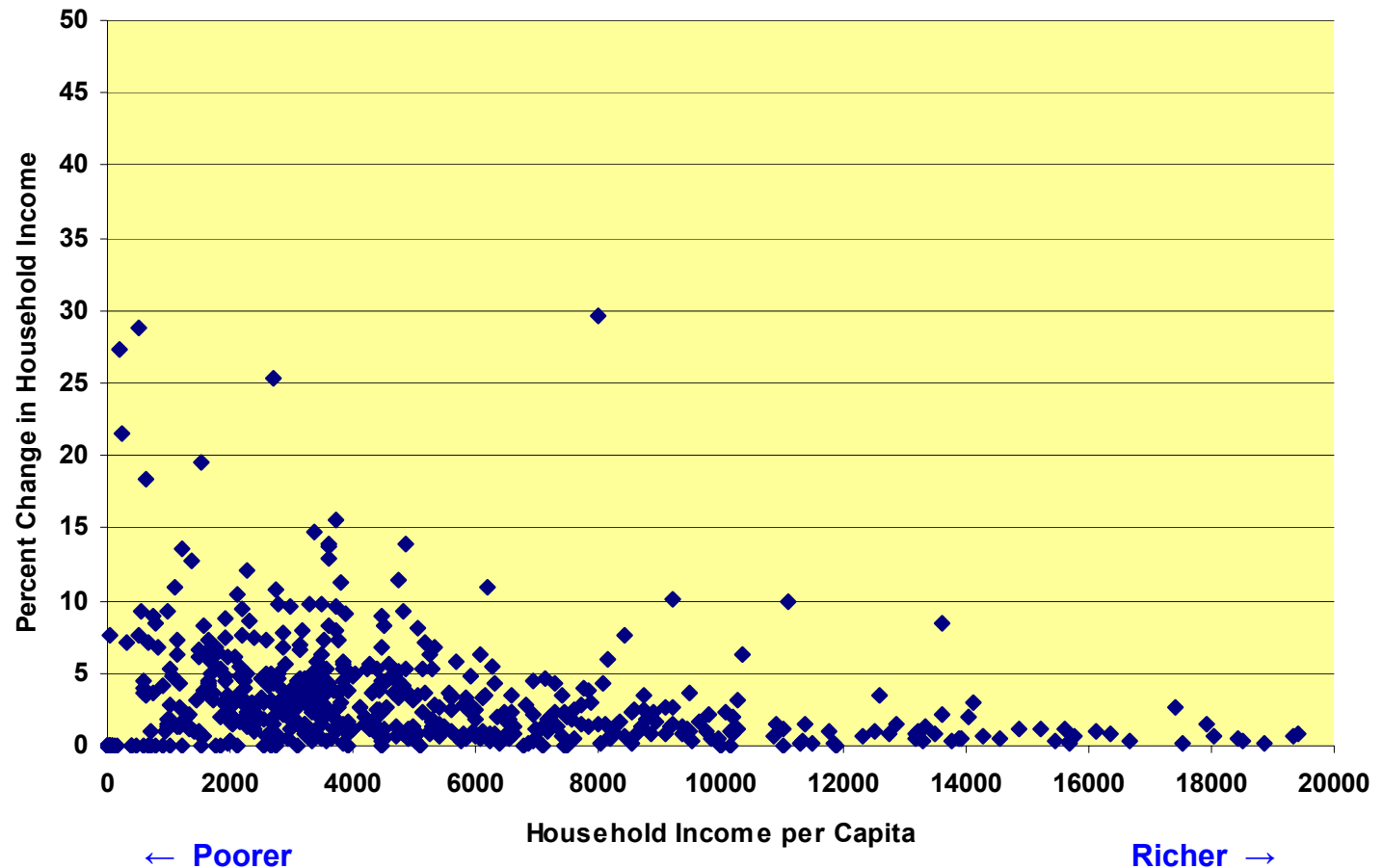
Poultry: 7% annual productivity growth 2005-2015





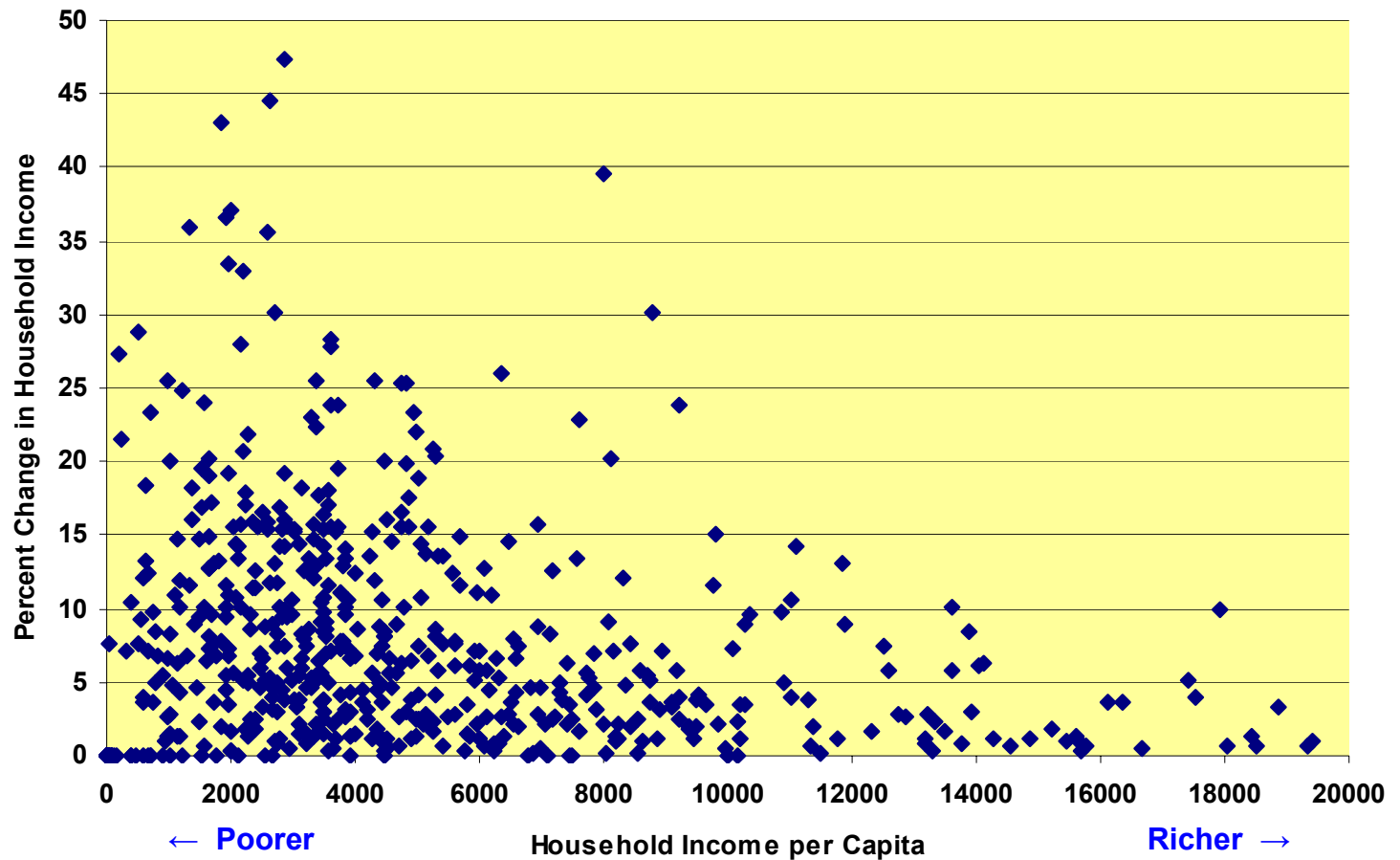
# Productivity Growth in Pig Production

**Pigs: 7% annual productivity growth 2005-2015**



# Livestock Investment is Pro-Poor

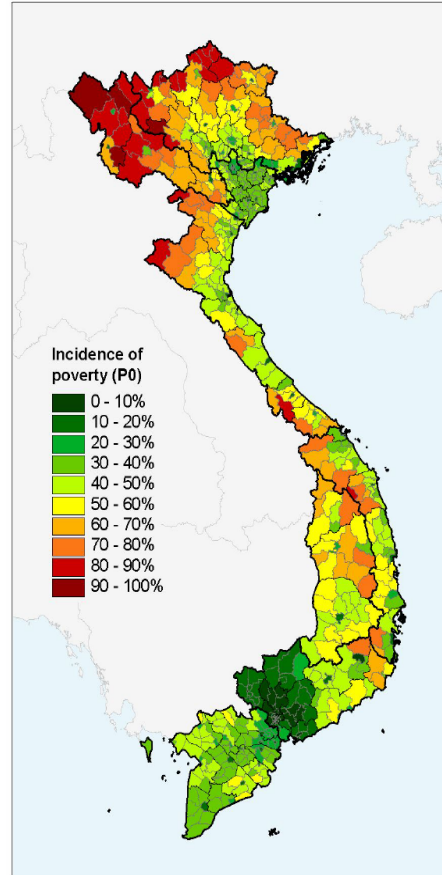
All Livestock: 7% annual productivity growth 2005-2015



# A Basic Policy Challenge: How to Help the Poor?

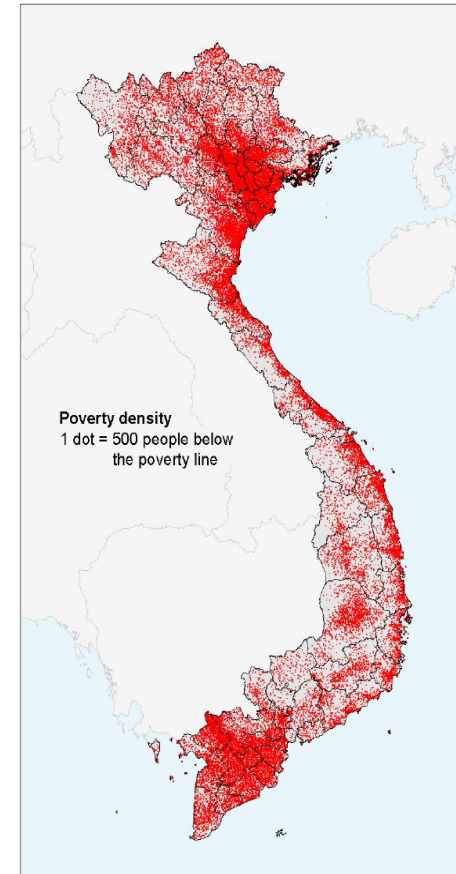
## Poverty Incidence

Figure 3. Map of the incidence of poverty ( $P_0$ ) of each district



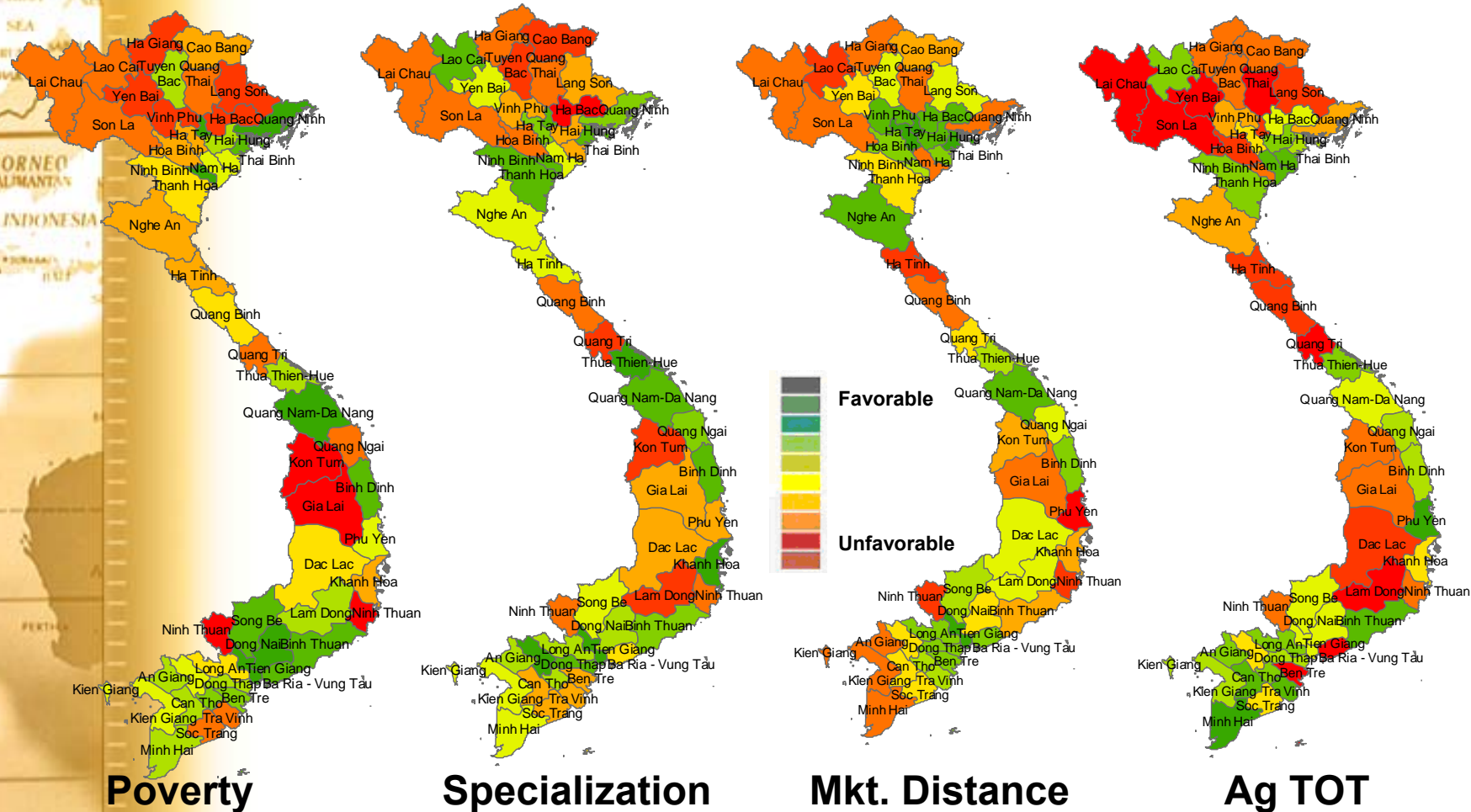
## Poverty Density

Figure 9. Map of the density of poverty



Source: IFPRI

# Poverty and Related Variables





# Poverty and Market Access: Dual Policy Implications

- Extreme poverty requires a significant commitments to facilitating market access, including infrastructure investment and extension support.
- The majority of Viet Nam's poor, however, can be reached with more conventional enterprise instruments, like credit, marketing, and product supply-chain/quality support.



# Economywide Linkages: External Markets and Poverty

- WTO accession is expected to bring many benefits to Viet Nam. How and to what extent will it help the poor?
- Initial IPALP simulation results indicate that external trade can be a catalyst for poverty alleviation in Viet Nam.





# What can trade liberalization do for Livestock?

## 1. Demand

1. Aggregate domestic income growth means accelerating meat and other animal product demand
2. External demand – may or may not grow, but is not likely to be a significant influence on small holders

## 2. Supply

1. Technology transfer
2. Capitalization from cash remittances



# IPALP Trade Simulations

The three scenarios were :

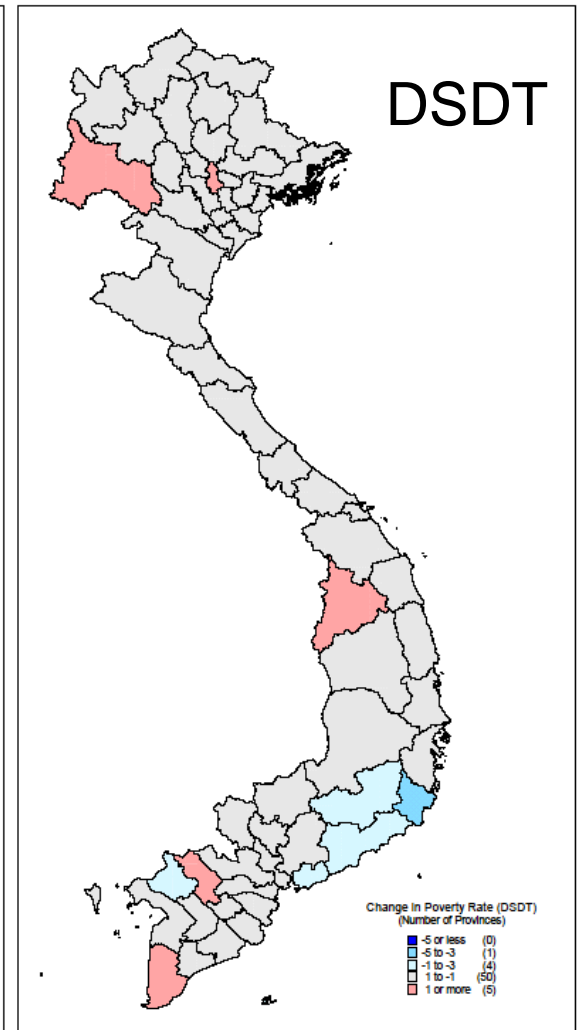
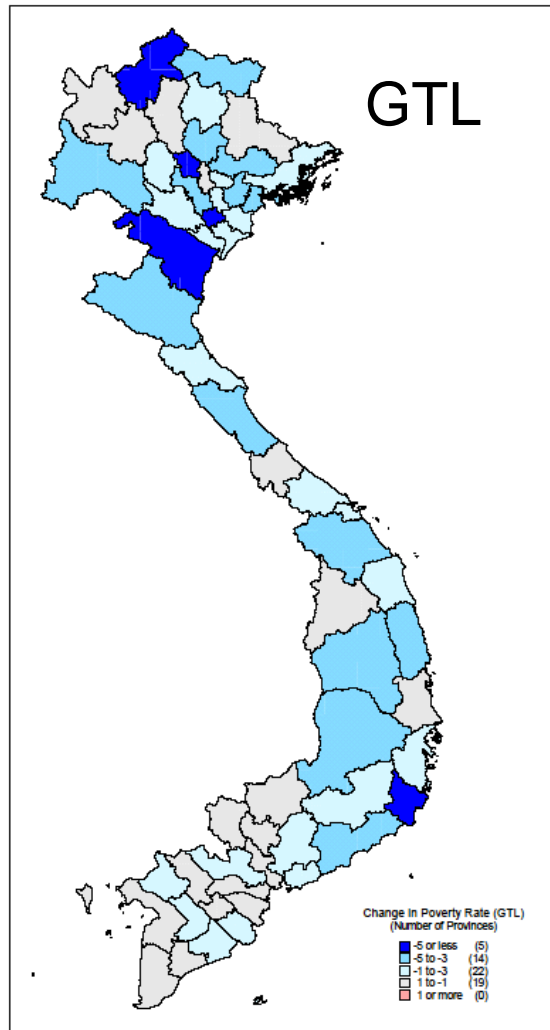
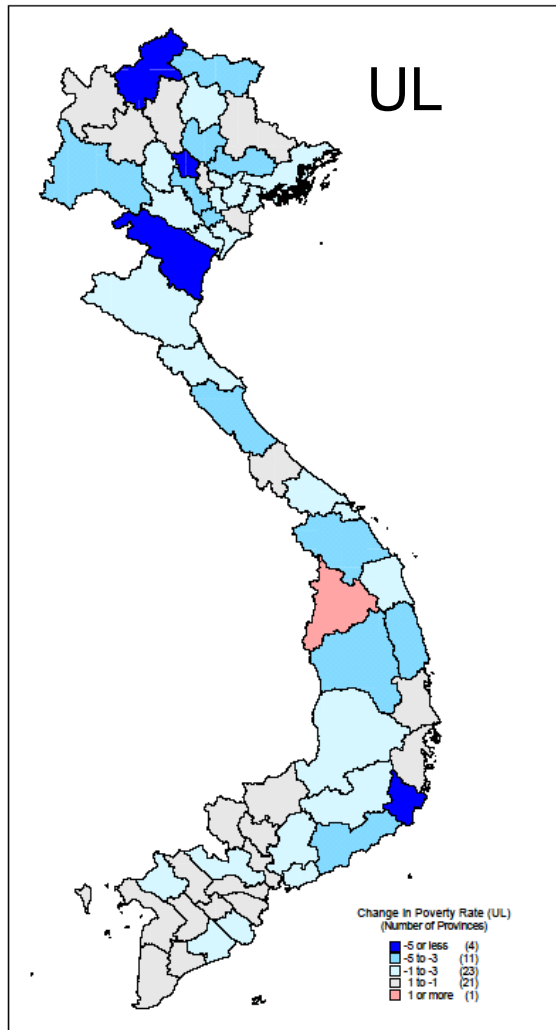
1. Unilateral Trade Liberalization (UL)
2. Global Trade Liberalization (GTL)
3. Doha's Current Negotiating Package (DSDT): Removal of most trade barriers by WTO members, with developing countries exempted as in the current negotiating framework

The results show substantial poverty alleviation, primarily in urban, port, and (Chinese) border areas.

Both UL and GTL are beneficial, with the latter more so because of reciprocity.

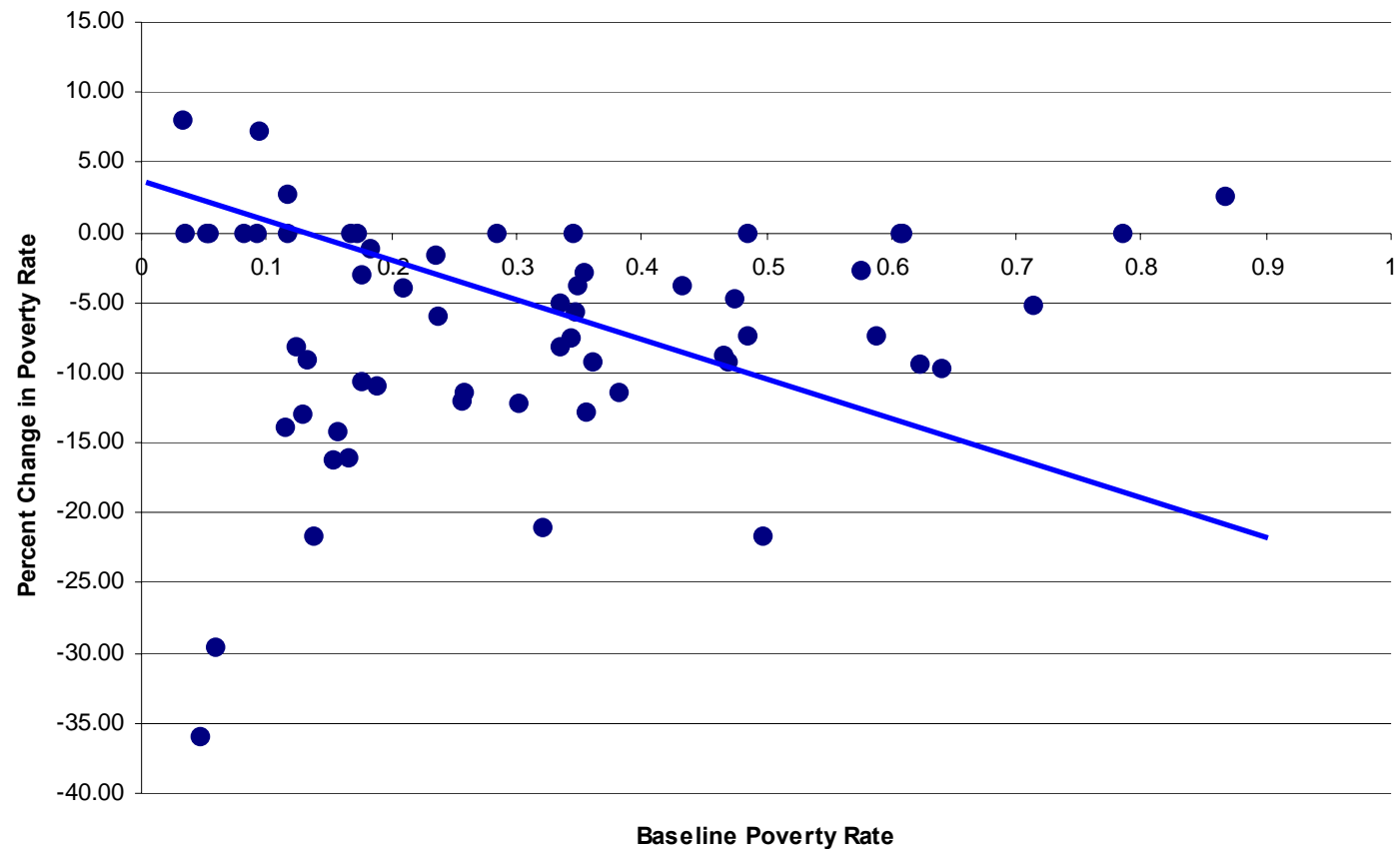
Doha is neutral or even adverse because Viet Nam is not yet a WTO member.

# Changes in poverty rates



# Provincial Poverty Results (UTL)

Outcomes are quite diverse, but poorer provinces generally experience more poverty alleviation. (by province)



## A vertical strip of a map showing the South China Sea, Borneo, and parts of Southeast Asia. Labels include SOUTH CHINA SEA, BORNEO, KALIMANTAN, INDONESIA, and PERTIKA. The map is oriented vertically, with the top showing the South China Sea and the bottom showing the Indonesian archipelago. The word 'BORNEO' is prominently displayed in the center, with 'KALIMANTAN' below it. To the right, 'INDONESIA' is visible, and further down, 'PERTIKA' is labeled. The map is a sepia-toned historical or thematic map.

A scatter plot illustrating the relationship between the Baseline Poverty Rate (X-axis) and the Percent Change in Poverty Rate (Y-axis). The X-axis ranges from 0 to 1, and the Y-axis ranges from -40.00 to 10.00. The data points are represented by blue dots, and a blue regression line is fitted to the data, showing a negative correlation. The regression line starts at approximately (0, 4.5) and ends at approximately (0.8, -35.0).



# Discussion