Food Systems Transformation in Indonesia: Exploring Consumers' Demand for Certified Organic Agricultural Products

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IFPRI

ICASEPS

Australian Government
Australian Centre for International Agricultural Research

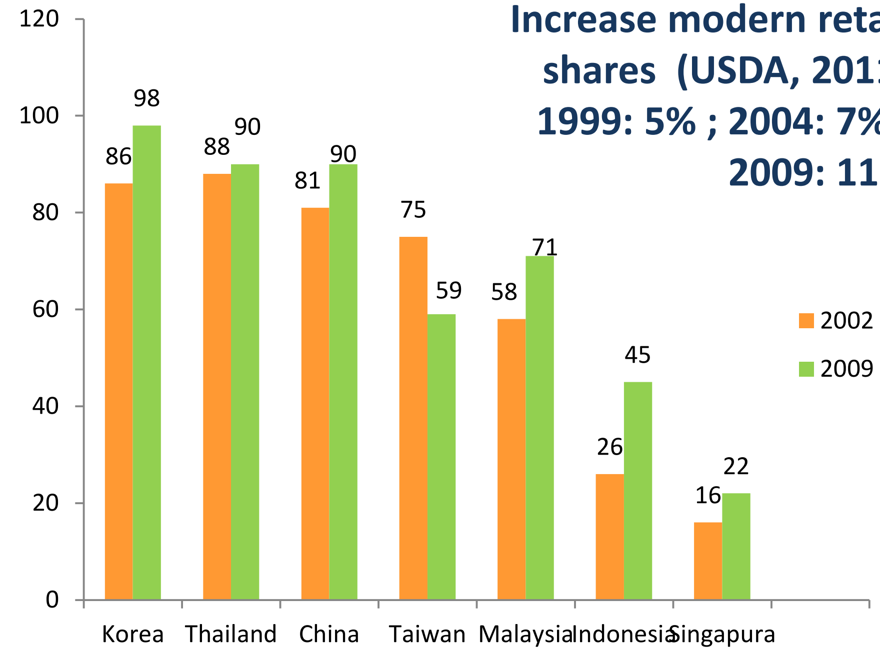
Introduction

- **Global demand for food products with credence attributes**
  - Steadily increasing since the late 1990's
  - Particularly for claims associated enhanced quality and food safety
    - e.g. organic, pesticide-free, from particular region
- **S.E. Asia**
  - Growth just beginning
  - Hypothesized that food scares are driving some of this concern
    - chemical residues;
    - microbe contamination and spoilage (e.g. food-borne diseases);
    - veterinary diseases (e.g. Avian Influenza)
  - What are drivers and potential for future growth?

Indonesia

- The impact of expansion of modern food retailing (supermarkets), distribution and wholesale firms, create "demand for product-specific characteristic" (Tandon, 2011)
- Food Safety (e.g. pesticide residues) and process attributes (e.g. pesticide use) have emerged for high-value agricultural products (Posri et al., 2006; Mergenthaler et al., 2009; Ahmad and Juhdi, 2011)
- Supermarket chains play a role as a "standards setting organization"(Hatanaka, et.al., 2005)
- Quality signalling can help consumers to identify and judge the quality of the products before purchase (Caswell, 1998)

Increase modern retail shares (USDA, 2011) 1999: 5% ; 2004: 7% ; 2009: 11%



% of Urban Shoppers Using Hypermarkets Regularly

Hypermarket penetration has grown most significantly in Korea, Malaysia and Indonesia during the last 10 years, while over 60% of shoppers in China and Thailand now use them as their main grocery channel (Nielsen, 2010)

“Asymmetric information lead to failure of the organic markets”

Fact-1: Credence marketing claims are often not certified by a third party e.g. organic rice in Wet Market (Pasar Gede, Surakarta)

Fact-2: Self – Claimed Fresh Food Products with credence attributes were marketed in high-end hypermarket in Bogor, West Java

Fact-3: Indonesian Gov't introduce labelling based on TPC as the only feasible alternative

ORGANIK INDONESIA

MoA certification programs for certified organic on food products incl. fresh produce

Objectives

- **Describe consumers' awareness and perceptions for high-value agricultural products with credence attributes**
  - **Focus on pesticide free and organic products**
- **Identify the most trusted certification bodies**
  - **Focus on fruit and vegetables, shrimp and poultry products**
- **Estimate consumers' willingness-to-pay (WTP) and determinants of WTP for certified organic products**
- **Discuss implications for the development of *inclusive* and *efficient* certified organic systems in Indonesia**

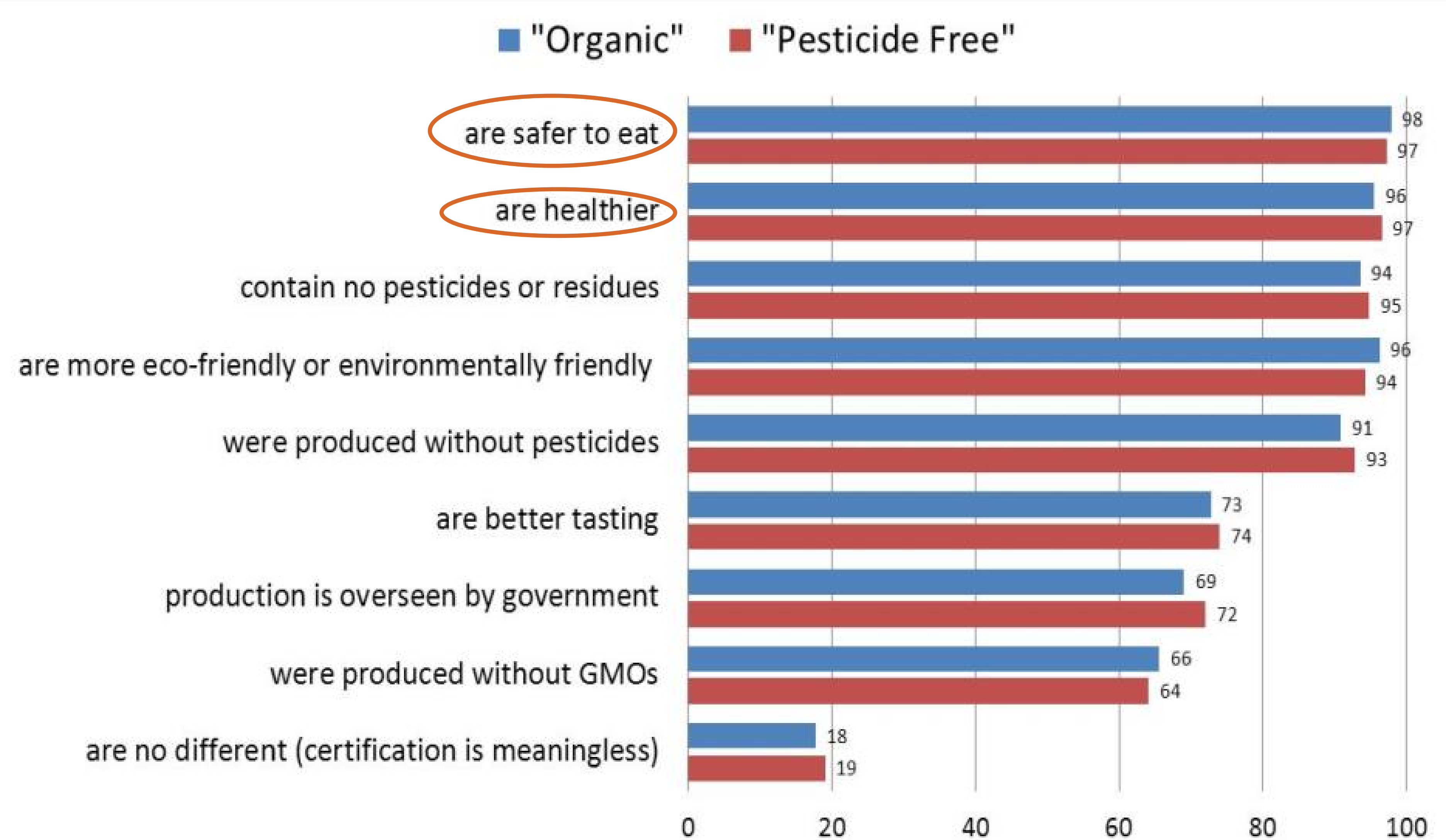
Research Location

Research Methods

- **Sample/Data**
  - **1180 urban consumers in 3 cities (Surabaya, Bogor and Surakarta) were interviewed by trained enumerators**
  - **October – December 2010**
- **Sampling Method**
  - **Systematic Random Sampling Technique**
- **Data Analysis**
  - **Cragg or double hurdle models were used to examine determinants of consumers' demand for certified organic agricultural products.**
    - **decision to buy (participation)**
    - **willingness to pay a premium (consumption)**

Urban Consumers' Perceptions of Certified "Organic" and "Pesticide Free"

% of respondents who agreed that Certified Organic (n= 608) or Pesticide Free (n=645) is…



Stated Willingness-to-Pay for "Certified Organic" Food Products

FINDINGS:

- 67% - 69% willing to buy certified organic if price was "right"
- On Average, Indonesian urban consumers were willing to pay a price premium of 20% for certified organic products
- Not significant differences in premiums across product categories

Products	% regularly Purchase [product]	Normal Price (Rp/kg)	% willing to buy "certified organic" if the price was right	Average WTP (% extra from normal price)
Chilli	98.5%	24,900	67.8%	19.6%
Mango	94.4%	7,500	67.2%	21.8%
Chicken	96.3%	24,300	67.4%	18.4%

Cragg Model- WTP for certified organic

PARTICIPATION (would like to buy certified organic products)

More likely to buy

- Higher education
- Higher income
- Hypermarket/Supermarket users
- Contaminant and Health concerned
- Use food labels regularly

WTP (maximum extra price or "premium"

Willing to pay more

- Female
- Higher income
- Lives in Surabaya and Bogor
- Having experiences in purchasing organic products

Willing to pay less

- Contaminants concerned for chilli and chicken model
- Price concerned consumers

Market Failures in Organic Market
(Illustration adapted from Giannakas, 2001)

Organic products are “credence goods” + Information about the nature of the products is “asymmetric”

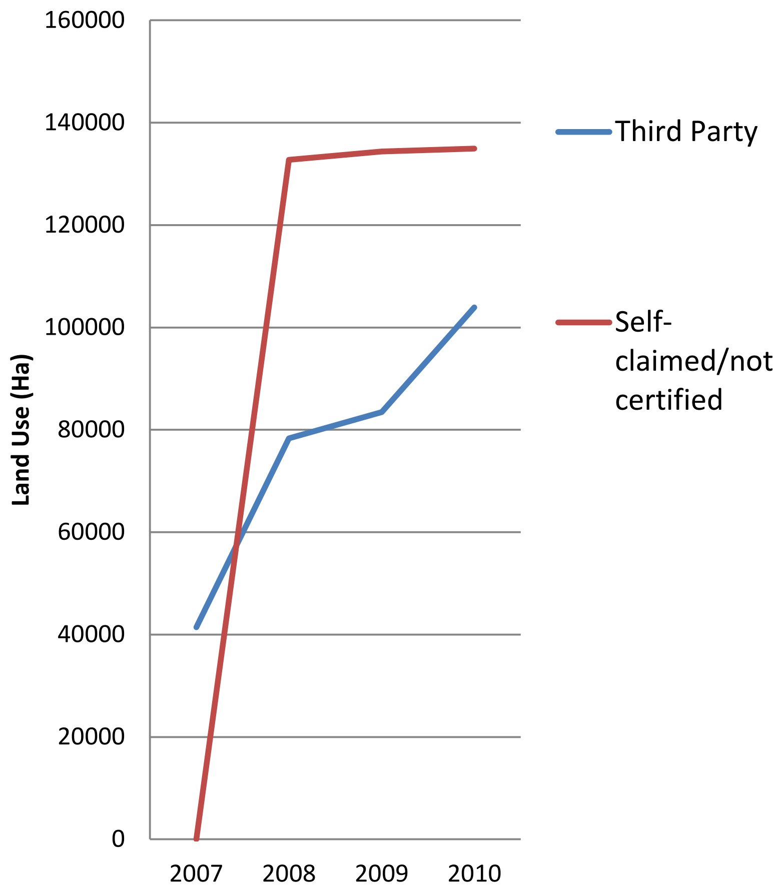
NO SEGREGATION means, conventional and organic products are marketed together and the price received by the producers is the same regardless of which products is produced

The profitability of the organic farmer become lower compare to the conventional. When supply of organic food was not “incentive compatible”, market forces lead to failure of the market to satisfy expressed by the consumer demands

Supply-side market failure can be avoided by solving the information problem faced by consumers

Certification and labelling food can serve as a signal of the nature of the productions

Land Use for Organic Farming in Indonesia



Facts, in 2010:

- **Total organic producers were 13,363**
- **60.6 % of land use dominated for organic coffee with export market.**
- **Organic fruits and vegetables and rice were dominated by self-claimed products and marketed locally.**
- **PGS initiative was introduced in 2008.**
- **To date, total organic farmed who operated under this scheme less than 6 hectares.**

Organic Movement in Indonesia at a glance

Certification

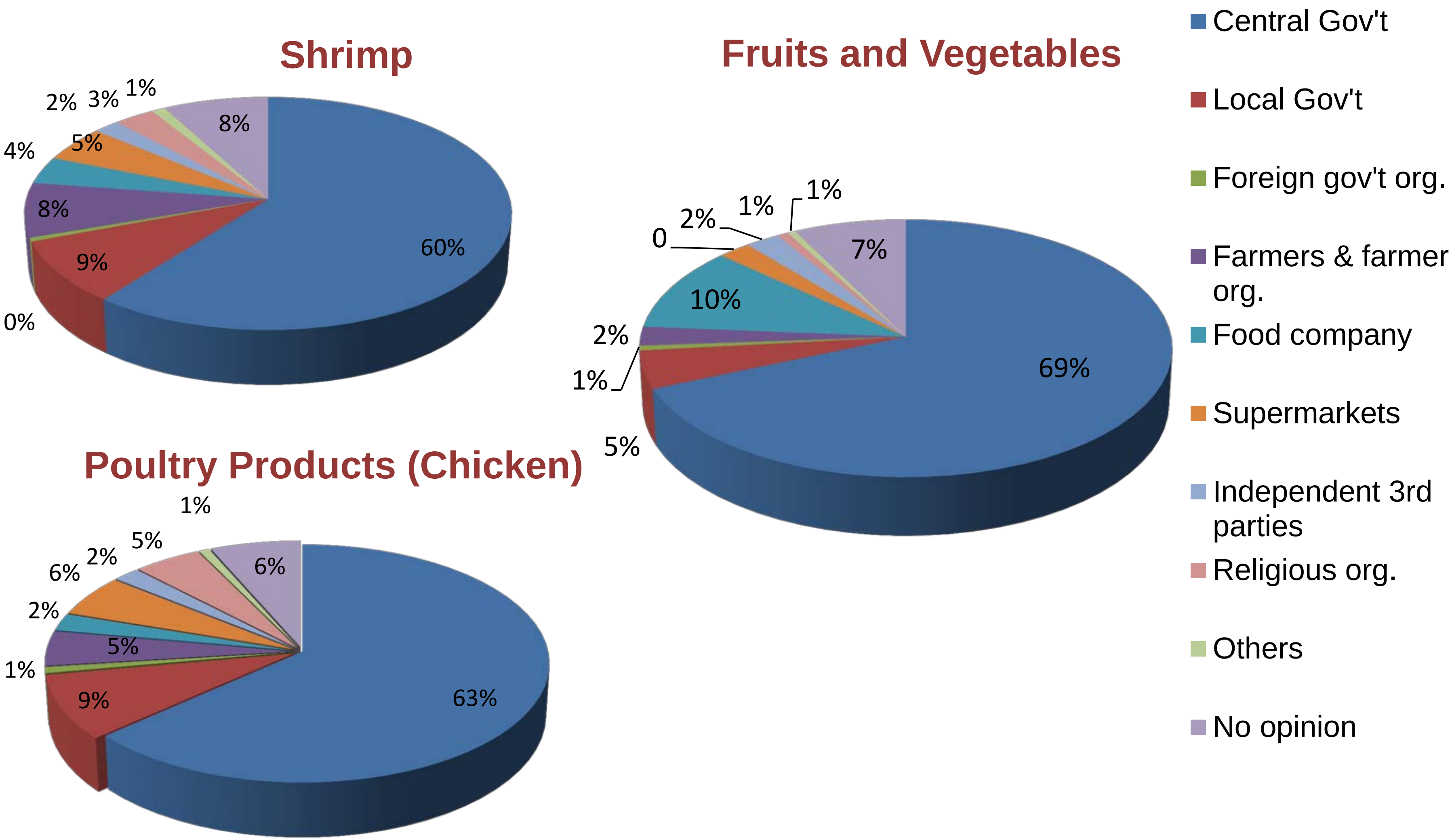
- Indonesian Gov (MoA) only acknowledge TPC (Organic Indonesia) as the national logo
- Currently 7 national organic certifiers are accredited by MoA
- TPC is too costly, barrier to entry into modern retail markets for smallholder farmers
- Enforcement of the label (Organik Indonesia) is weak

Marketing

- Self-claimed product is marketed domestically
- Estate crops (e.g. coffee, cacao, tea) are export-oriented
- Organic rice and vegetables are marketed locally
- Indonesian NGO (e.g. IOA) tried to facilitate market access for farmers through certification-introduced PGS system to smallholder farmers
- Farmer group in Boyolali exported organic rice.
  - Started the certification from PGS scheme, upgraded into TPC from international certifier (IMO)

Most trusted entity to certify production methods?

> 60% trust/prefer Central Government



Empowering Certification

- **The government has responsibility for:**
  1) Inspecting the food;
  2)Determining its safety;
  3) Providing assurances to the public about the safety of the food supply.
- **MoA must consider the implications of the organic movement in Indonesia**
  1) **Supply induced development? - excess supply, short distribution channel, the movement largely driven by ethical considerations.**
  2) **Consumer led development? – demand increased, outstripped supply, able to comment price premium, an upsurge in conversion to organic farming.**
  3) **Development induced? – Gov't initiated program to support conversion of farms to organic.**

Empowering Certification

- **Before empowering the certification, the government should consider the following:**
  a) **Economic of scales of the organic producer : small, medium or large scale?**
     a) **e.g. acknowledged PGS or PAMOR for small holders farmers who has organic farm less than 0.5 hectares; TPC only for large scale farmers (company) or farmer group who has access to export market.**
  b) **Market destination: local, modern food retail or export?**
  c) **Perceptions of the market**

- **Certification and labelling should reduce market failures, this requires a process:**

  Stage 1 – Internal Control System

  Stage 2 - PGS, under certifies by PGS Certifier e.g. IFOAM

  Stage 3 – Third Party Certification

Take Home Messages

- **Organic <u>IS perceived</u> to be healthier**
  - Concerning because organic is not necessarily more healthier…
  - Potentially quality could be higher based on value chain processes and certification programs
- **Consumer information is core to coherent policies**
- **Certification and standardization are vital to maintain credence of organic and a viable "high value" market for producers**
  - "certified organic" versus "self-claimed organic"
  - Simplify the certification process, PGS could be the alternative?