

Evaluating Government Policy for Food Security: Indonesia

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Introduction

- Increased attention to Food Security around world
- Food is basic need, widely produced, w/ surpluses, but many people still hungry
- Food Security means escaping from hunger and famines, and even their threat
- Many definitions of what food security means, often vague, sometimes contradictory
- This paper: Better definition to allow evaluation of plausible effects of policies; Indonesia case study

Definition and Key Issues

- USAID Definition:
 - “When all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life”
- A Better Definition of Food Security
 - *“food security is measured by the ratio of food expenditures to a family’s budget or income”*
 - Achieving food security: *keep food expenditure share of family income below some critical percentage*

Using better definition

- Allows examination of factors affecting numerator separate from those affecting denominator
- Food price effects on numerator:
 - Increases in domestic prices of food staples (e.g., rice in Indonesia in September 1998)
 - Decline in world price (LR trend decline in real P)
- Income Level effects on denominator
 - Economic recession lowering incomes in country or region of country
 - Asian Financial crisis in 1997-1998 and lost jobs, sharp fall in real wages

Four Aspects of Food Security

1. Focus is on consumers and shortfalls in food consumption, not the primary focus on farmers
2. The level of aggregation is important. Problem is at local/household level but policies usually at national level.
3. Time element: difference between temporary food security problem due to weather, conflict and chronic food problem due to poverty
4. Food availability vs food accessibility. Except for wars or weather, availability not the issue

Other Issues

- Food Self-sufficiency:
 - Increased domestic production via trade barrier
 - Higher prices in domestic market, larger share of domestic supply in market
 - *Reduces* food security by lowering national income *and* by raising food prices
- Growing incomes lead to changes in structure of food demand; well served by trade and not well served by self-sufficiency in particular commodity

Does this approach exclude farmers?

- This approach with emphasis on consumers may appear to ignore farmers; but farmers should be included
- Farmers sometimes net consumers if farm is small and if farmer poor (e.g., landless)
- Farmers produce more when world prices rise, can be important part of total food supply if efficient
- Goal: Policies to help farmers *and* food security such as open border, increased farm productivity, more efficient marketing chain, consumer preference for domestic foods

Policies to Increase Food Security I

- Lowering food prices for consumers:
 - Across-the-Board:
 - Lowering trade barriers (e.g., lower tariffs, expand quotas)
 - Provide a consumption subsidy
 - Targeted Consumer Subsidy
 - Sell food item at subsidized price, but only to poor people
 - Sell low quality foodstuff at subsidized price (only poor buy it)
 - Use across-the-board subsidy but only to poor district
 - Advantage of Targeting (negative: needs budget outlay)
 - Focuses on only those in need, so is cheaper to finance
 - Allows farmers to enjoy market prices yet cut prices to poorest

Policies to Increase Food Security II

- Increasing domestic production: does not always increase food security
 - Measures to increase domestic production improve food security *if food prices kept down* and *if measure is economically efficient* (usually taxpayer financed)
- Policies that affect farmers and food production:
 - Increase domestic production efficiently
 - agricultural research and extension, rural infrastructure, increased productivity and competition in post-farm gate sector
 - Subsidies to farmers may be economically inefficient but can increase food security if food prices lowered

Policies to Increase Food Security III

- Increasing Household Incomes
 - Policies that increase overall macro economic growth rate for country
 - Efficient macro policy including appropriate exchange rate
 - Attention to industrial sector, and others
 - Trade deregulation
 - Investment in improved infrastructure, including rural areas
 - Improve integration of urban and rural labour markets
 - Policies that alleviate poverty
 - Investments in schooling and health, specifically including rural areas; focus on groups/regions judged to be food insecure

Policies to Increase Food Security IV

- Trade-Related
 - Imports can
 - give wider consumer choice,
 - require holding smaller stocks,
 - lower food costs, and
 - allow country to exploit its comparative advantage
 - May be more price risk using world markets
 - Can be offset with private contracting, futures markets
 - Risks of using world rice market have abated in recent years
 - Supply assurances from food exporters, to maintain export supplies under all market conditions, would help
 - Multilateral supply assurance agreements

Indonesia: Rice Policy I

- Major policy focus on food security over past 30 years, covering more than rice
- General policy attention to economic health of rural areas, offset other elements of “urban bias”
- Particular focus on rice self-sufficiency (Suharto)
- Broad efforts to reach this goal
 - Agency (BULOG) to procure rice, hold stocks, trade
 - Early work on improved rice technologies
 - Large fertilizer subsidy
 - Infrastructure (rice...irrigation; non-rice...roads, ports)

Indonesia: Rice Policy II

- Domestic prices roughly followed world price
 - Balance between consumer and producer interests
- Considerable efforts at within-year stabilizing as part of food security efforts
 - Procurement at harvests, sale in short periods
- BULOG policies actually were price-stabilizing
 - Not only within year but between years
 - Rice imports often brought in when needed, at times of poor harvests to keep prices from rising excessively
 - Acquired stocks to raise farm prices as needed (floor p); losses on stock disposal were covered by govt.

Indonesia: Rice Policy III

- Little trade-off between food security and rice self-sufficiency
 - Self-sufficiency investments on rice developed into a relatively efficient industry, roughly able to compete with imported rice at world prices, even now
- Agency used its market clout in buying processed rice to exert competitive pressure on millers and traders, in keeping marketing chain efficient
- Negative? Agency costs were high. Benefits as high? Quite likely in earlier years.

Indonesian Rice Policy IV: Future?

- What next for BULOG, rice policy? Hot debate
- Self-sufficiency job now done, rice market has developed with lots of competition in trading and milling,
- Food security in rice now high, in large part due to strong economic growth over 30 years raising wages in both urban and rural sectors
 - This kept lowering food share of household income.
 - Poverty also alleviated considerably, reducing number of Indonesians at risk of food insecurity, until Asian financial crisis provided a setback.

Other Agricultural Policies

- Non-rice food crops (sugar, soybeans, flour, garlic)
 - Mostly import restrictions, now partially deregulated
- Tree crops (oil palm, coffee, cocoa, some spices):
 - Export taxes on some, investment subsidies, domestic price control on cooking oil, some marketing boards
- Livestock
 - Elaborate import restrictions on dairy; poultry and livestock only restricted by limited entry into breeding stock
- Horticulture
 - Some import bans, a marketing board in citrus

Food Security Scorecard: 1

- Rice:
 - Import/export monopoly tended to raise domestic prices above world prices since mid-1980s but not by large amounts nor systematically; small food security cost
 - Inter-year and within-year operations tended to stabilize prices; small gain to food security by reducing price peaks, but small loss to food security by higher prices in harvest periods from stock buying.
 - Some gain in food security from the greater likelihood of rice price stability, but not directly captured by our measure
 - Altogether, little clear net effect of BULOG on our definition of food security, despite the large efforts at stabilization and improving food security in rice

Food Security Scorecard: 2

- Non-rice food crops:
 - Clear effect of BULOG in these commodities raising prices, notably in sugar. No evidence of stabilizing behavior. This reduces food security by raising the food share of total income. These price increases were significant but have been declining
- Tree Crops, including spices:
 - Almost without exception these varied policies lowered domestic prices, raising food security.
- Other: Dairy policy raised milk prices and lowered food security.
 - Fruit/veg's: small increase in prices, decrease in food security

Food Security Scorecard: 3

- Investments in Infrastructure
 - By lowering marketing margins, food prices to consumers are lower; also has increased incomes.
 - Food security increased on both counts
- Research and Extension
 - Increased productivity with modest declines in prices, increasing food security by small amount
- Summarizing Effects on Prices: Small
 - Modest effects of all commodity/price policy on food security, especially on rice.
 - Some effects on increased incomes for the two categories above, increasing food security

Food Security Scorecard: 4

- Income Effects
 - Small effects on increasing incomes from agricultural policies, with probably largest effects arising from infrastructure and research expenditures
 - Macro Policy in achieving rapid economic growth in non-agricultural sector has had a large increasing family incomes (lowering the food share)
 - Contributing factors: Stabilizing macro policy, trade deregulation, Investments in Education and Health
 - Investments in Rural areas for Infrastructure, Education and Health expenditures
 - And well functioning of labor market to link rural areas with the rising urban wage rates

Summary and Conclusions 1

- Food Security defined more narrowly to permit better evaluation of policies in this area
 - Percent of household budget spent on food; the lower the percent, the more food secure is the household, region or country
- Many policies can contribute to this goal, not just from declines in food prices but also from increases in the denominator, household incomes
- Using this definition for food security, food self-sufficiency is usually in conflict with food security due to its usual effect on raising food prices

Summary and Conclusions 2

- From our case study on Indonesia:
- On the P side, very mixed results on food security of the country's agricultural policies. No systematic consumer price effects for rice, and other commodity price effects mixed in aggregate
- Price stabilization effects only for rice
- Rural infrastructure: plausibly some P gains to consumers, at least from increased competition and low costs in marketing margins
- Due to no substantial declines in food prices, for either reasons of no large productivity gains or no systematic taxing of agriculture here, there are no commensurate food security gains.

Summary and Conclusions 3

- Food security has primarily increased from increased incomes, leading to a large decline in the food share of household incomes
- Rapid economy wide economic growth
- Connected to rural areas by well-functioning labor market, and government spending in rural as well as urban areas
- Rapid growth strategy and its determinants are central in achieving substantial improvement in food security; policy *outside agriculture* is critical

Summary and Conclusions 4

- *Postscript: Post 1998*
- Economic growth negative in 98-99; now positive but still slow
- BULOG's stabilization efforts have been erratic to zero on rice; pulled out of other commodities
- Rice prices increased in 1998; a large targeted consumer subsidy on rice has helped maintain food security
- *Conclusions:* Food security probably worsened for Indonesia in 1998, being offset to some degree by the targeted consumer rice subsidy. Wage rates showing some sign of increasing enough to offset 1998 inflation losses.