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Food Security and Rice Price Policy in Indonesia: Reviewing the Debate

BAPPENAS/DEPARTMEN PERTANIAN/USAID/DAI FOOD POLICY ADVISORY TEAM

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Reviewing the Debate

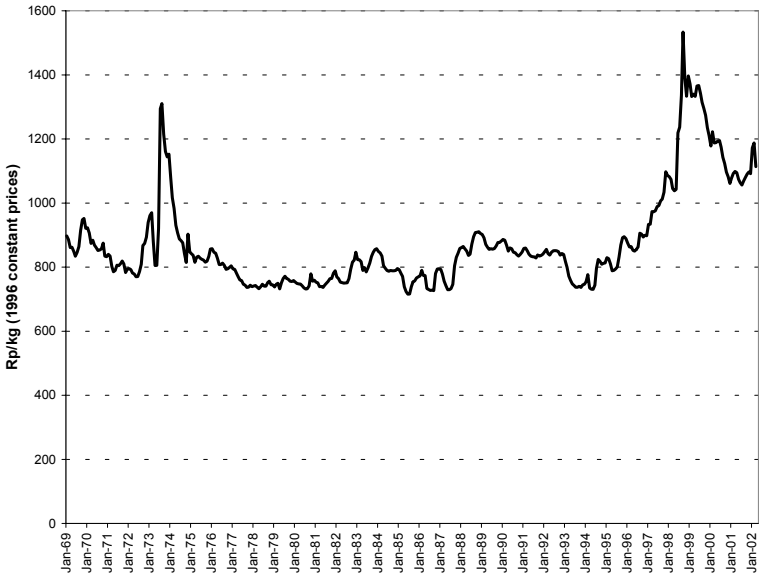
Food security is always an emotional issue. Claims that a "time bomb" is ticking for Indonesia's food security if rice imports are not reduced have raised fears in the general population. Understandably, politicians are seeking answers that will reassure the public while gaining support for their parties. Food security is also, always, a political issue.

Lost in the recent debates has been a recognition that food security is primarily an economic issue, for only good economic policies can ensure food security on a sustainable basis for both the country as a whole and the millions of households individually. From this perspective, the food security time bomb in Indonesia's future is not potential reliance on rice imports ten years from now.[1] Instead, the time bomb is poverty and the failure to restructure Indonesia's economy in a way that stimulates rapid growth in both rural and urban areas.

The current high level of rice prices in Indonesia makes this economic restructuring quite difficult (see Figures 1 and 2).[2] Even higher rice prices, with imports again firmly under Bulog's control, will make it nearly impossible. For this reason, the current political environment in Jakarta is heading Indonesian rice policy toward a disaster for the poor, who always bear the brunt of bad economics.

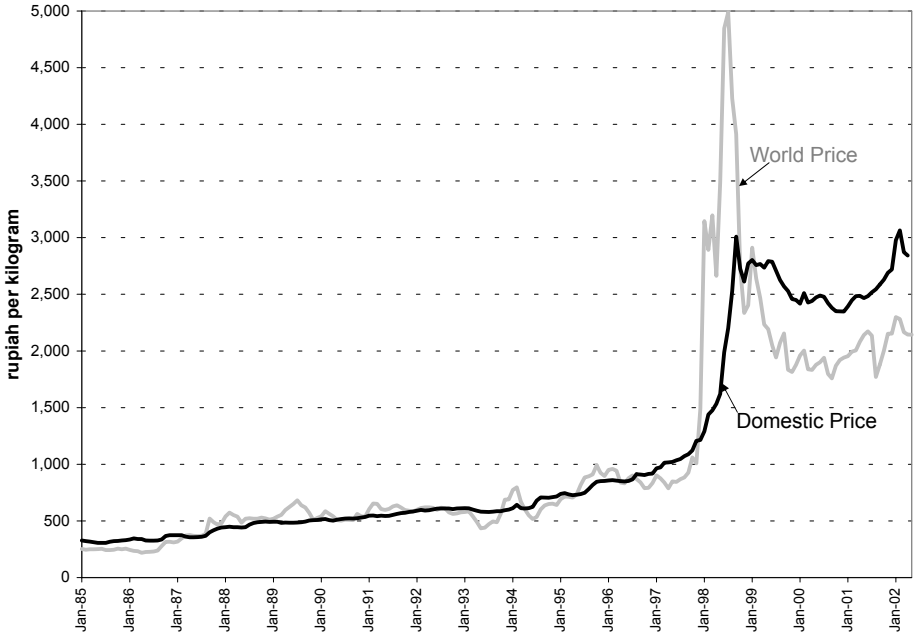
[1] See Peter Rosner, "Does Indonesia Face a Food Security Time Bomb?" FPSA Working Paper, May 8, 2002.
[2] Figure 1 shows that the real price of rice (the price of rice adjusted for Indonesian inflation) is abnormally high by historical standards, and Figure 2 shows that the domestic price of rice is unusually high relative to the world price.

Figure 1: The Real Price of Rice, January 1969 to March 2002



Note: The real price of rice is calculated as the nominal price (the retail price of medium quality rice as reported by Bulog) divided by the CPI.
Source: Nominal rice price from Bulog, CPI from BPS

Figure 2: World Price and Domestic Price of Rice



Note: The world price is the price of Thai 15% broken rice. The Thai f.o.b. price is adjusted to the Indonesian retail market by adding $20 per ton for movement from Bangkok to the Jakarta wholesale market and adding a 10% wholesale-retail markup. The domestic price is the retail price of medium quality rice as reported each month by Bulog.
Source: World price (Thai 15% broken f.o.b. Bangkok) from *The Rice Trader*. Domestic price from Bulog.

Just as in the United States, Europe, and Japan, Indonesia's political parties are competing for farmers' support in the name of food security and higher incomes for family farms. The costs of this competition are horrendous to consumers, taxpayers, or both. The costs in the United States are foregone budget priorities—no prescription drug relief for the elderly, for example. With considerable blame also attributed to farm policies in Europe and Japan, a further result is badly distorted world markets for staple food commodities. Apart from the budget and consumer costs, Europe and Japan also incur a cost for their high farm prices through macroeconomic distortions and somewhat slower economic growth—the farm sector in the United States is not big enough to have much macroeconomic impact. The costs in Indonesia, unfortunately, will be more tragic—more people in poverty, more hunger and malnutrition, and significantly slower economic growth with worse distribution.

These are serious charges against Indonesia's current political determination to force up the already high price of rice in domestic markets. But most economists agree these will be the results of the policy approach now being recommended by Bulog and its supporters in Parliament.

If the economics are so bad, why are higher rice prices so popular, at least in political circles and in the press? Three interconnected arguments are made to support higher prices, each with enough truth to be deceptively appealing. Upon careful consideration, however, their appeal vanishes.

The three interconnected arguments involve (1) U.S. subsidies to domestic rice growers and exports, (2) a thin and unstable world rice market, and (3) a slowdown in Indonesian rice production that has returned the country to importer status. The link among the three arguments is the rice price. U.S. subsidies drive down the world price (with the U.S. intending to monopolize the world market according to some conspiracy theories), forcing Asian rice producers out of business by reducing profitability of growing rice, thus making the world market even more unreliable. In this view, the response by Indonesia to such a strategy should be higher domestic rice prices, encouraging rice self-sufficiency and food security, to be implemented by isolating Indonesia's rice market from the world market.

The political appeal of these arguments is obvious, especially because there will be large profits to be made by Bulog in executing the strategy. But the arguments are wrong on three counts: (1) they do not account for the role of higher rice prices in the level of poverty in the

country; (2) they fail to recognize the impact of high (and higher) rice prices on economic growth; and (3), ironically, they fail to recognize the crucial role of international trade in rice in Indonesia's own food security (and the trivial role that U.S. rice exports play in both). These problems are taken up in turn.

A. Rice Prices and Poverty

Rice is the most important commodity in Indonesia, especially for the poorest members of society. It is not surprising that the level of rice prices is the single most important determinant of poverty at the household level in the short run. In the long run, rice prices also exert significant influence on poverty alleviation by conditioning the rate of the structural transformation and sectoral contributions to it.

In the short run, the effect of rice prices on the poverty of individual households hinges on the household's status as a net buyer or seller of rice. High prices clearly benefit net sellers of rice, and the larger are net sales the larger are the benefits. Low prices benefit net buyers of rice, especially those who do not produce any rice at all. This is the classic food price policy dilemma, and it is never a problem that is easily resolved.[3]

Urban dwellers are all net buyers of rice. This group includes the wealthiest members of society, but wealthy households are only a small fraction of urban households. In addition to the urban middle class, there are large numbers of urban poor. Rice accounts for a substantial portion of total expenditures of these poor households. In normal times (pre-crisis), rice constitutes 20 percent of total expenditures for the poorest quarter of urban households. For the poorest 5 percent, this share rises to 25 percent (but it was even higher at the peak of the crisis).

The share of the population living in urban areas is also growing over time, another manifestation of the structural transformation. During the 1990s, the level of the rural population was virtually stagnant, but the urban population grew at a rate of about 4.5 percent per year. Because of this differential population growth, the share of the poor that reside in urban areas is growing over time as well.

[3] This dilemma provided the integrating analytical theme for *Food Policy Analysis*, by Timmer, Falcon and Pearson.

Although the relative importance of the urban poor is growing, the majority of the poor reside in rural areas and will for a long time to come. In rural areas, the most important productive asset is land, and land ownership is a key determinant of both wealth and whether any particular household is a net buyer or seller of rice. *On Java, 45 percent of all rural households do not own any land.* While not all of these households are poor, the great majority of them are in the lower rungs of the income distribution.

Another 20 percent own less than one-quarter hectare of land, which is just enough to provide the average per capita consumption of rice for a family of five (if all the land is planted to rice and not to other crops). *Together, these two groups account for nearly two-thirds of rural households on Java*. By and large, they are much poorer than farmers with larger amounts of land, and they are not likely to be net sellers of rice. *For these households, lower rice prices mean higher real incomes and less poverty*.

Even Indonesia's larger landowning rice farmers are not wealthy in absolute terms, but in relative terms most of these households fall in the middle (third) quintile of the overall income distribution. On Java, only one-third of rural households own enough land to produce a surplus of rice for a family of five. These are clearly not the poorest of the poor. In fact, the image of abject poverty is of someone without enough food to eat. Almost by definition, this is not a farmer with enough land to sell a surplus of rice to the market.

It is also important to realize that, on average, land-owning, rice-surplus farmers generate only about half of their family income from rice. A decline in rice-based income does not lead to a proportional decline in household welfare even for these households. In summary, when urban households are included, only about 10 percent of households are better off from higher rice prices, and *very* few of these are among Indonesia's truly poor.

B. Rice Prices and Economic Growth

Rice prices are important for poverty alleviation not only in terms of their short-term direct effects on the poorest segments of the population. In addition, they play a key role in the structural transformation, both within the agricultural sector and for the economy as a whole. Within the agricultural sector, lower rice prices encourage rice farmers to diversify their cropping pattern by making rice less profitable to grow and by making it cheaper to buy rice from the market. These ex-rice farmers then begin to produce other crops such as fruits and

vegetables, allowing consumers to diversify their diets and increase their intake of proteins, vitamins, and minerals, which are crucial for the reduction of malnutrition.

Crop diversification is occurring to some extent in Indonesia, although not very rapidly. In 1984, when Indonesia temporarily achieved self-sufficiency in rice, 41 percent of all cropped area was planted to rice. Today, the share is 38 percent, a relatively small change over a period of 15 years of rapid economic growth. By contrast, rice as a share of total cropped area in Malaysia declined from 25 percent in 1972 to 13 percent in 1998. Artificially high rice prices will impede the diversification process unnecessarily and lower rice prices can speed it dramatically by guaranteeing reliable and affordable supplies of rice in rural markets to farm households who chose to diversify or invest in nonfarm rural activities. One of the most important policies to support development of small scale rural industries in China, for example, was the freeing of foodgrain markets in rural areas in the early 1980s. Lower rice prices can stimulate small and medium enterprises (SMEs) in Indonesia as well.

This impact on investment in labor-intensive enterprises means that rice prices play a key role in the structural transformation of the broader economy. Low rice prices allow real wages to be higher for employees without any increase in the nominal wages paid by employers in the high-productivity industrial and service sectors of the economy. In conjunction with other factors, this combination of low nominal wages and high real wages stimulates the job creation and economic growth that are necessary for sustainable poverty alleviation. Excessively high rice prices will cause workers to demand higher wages to keep their real incomes from falling, as has happened in the Philippines, where domestic rice prices have been well above world market prices for the past 15 years. These demands on the part of workers are entirely legitimate, but their higher nominal wages discourage investment, both domestic and foreign. The end result is a slowdown of the productivity growth that is essential for poverty alleviation.

If there are so many benefits to low rice prices, why not drive prices well below market levels to create even more of these positive effects? *Artificially* low food prices have been tried as a development strategy in many countries, for example in Egypt, China before 1978, and the former Soviet Union, but they have always failed. Such a strategy reduces farmers' incentives to produce, hindering long-term productivity growth in the agricultural sector. Perhaps as important, a strategy of artificially low food prices requires subsidies and results in substantial fiscal costs to the government. These costs then divert scarce government resources from

being used to provide the public goods necessary to create a dynamic rural economy, such as roads, education, and agricultural research. There are also efficiency losses to keeping domestic prices substantially below the trend in world prices.

What is the optimal level of rice prices? For rice importing countries, research has shown that maintenance of domestic rice prices above world prices by perhaps 10 percent may be optimal in terms of maximizing the multiplier effects from increased agricultural incomes, while minimizing the impact on poverty in the short run. However, any large, sustained deviation of domestic prices from world prices in either direction will lead to substantially sub-optimal outcomes and slow the rate of economic growth.

C. Rice Prices and Food Security

Indonesia's rice economy is now mid-way in a transition from being a sector heavily regulated by a centralized Ministry of Agriculture and stabilized by a well-financed food logistics agency (Bulog) to being a market-oriented sector which depends on farmer and consumer decision making to allocate resources efficiently. The large gap between domestic and world prices that emerged during the financial crisis in 1997 narrowed between late 1998 and mid-2000, but has widened again since then. Thus Indonesia's rice prices remain substantially above world prices--in contrast to the long-run parity seen from the mid-1970s to the mid-1990s.

The key question at this juncture is how to complete the transition to a market-oriented rice economy while recognizing the constraints on policy initiatives that face the government. To answer this question, it is worth reviewing briefly how rice prices were stabilized and maintained on the long-run trend in world market prices before the financial crisis and why the policies that achieved that desirable outcome are no longer appropriate.[4]

In summary, Bulog defended a floor price and a ceiling price through a combination of the following policy instruments:

-- monopoly control over international trade in rice,

--access to an unlimited line of credit (at heavily subsidized interest rates in the early years; at commercial rates with a Bank Indonesia guarantee in the later years),

[4] The details of this story are contained in "Food Security in an Era of Decentralization: Historical Lessons and Policy Implications for Indonesia" by C. Peter Timmer. This paper is part of the output from FPSA and is available at the project website: www.macrofoodpolicy.com.

--procurement of as much rice as necessary by Dologs to lift the price in rural markets to the policy-determined floor price, and

--extensive logistical facilities, including a nation-wide complex of warehouses, which permitted seasonal storage of substantial quantities of rice (including the one million tons for the "iron stock" that was considered essential for Indonesia's food security). These rice stocks, accumulated through domestic procurement in defense of the floor price and, when these supplies were inadequate, through imports, were then used to defend a ceiling price in urban markets. In the early years, the ceiling price was explicit and announced publicly; in the later years, it was informal, providing local Dolog officials more flexibility in maintaining stability of rice prices.

This was a heavily interventionist approach to formation of rice prices in Indonesia. Still, few observers doubted the need for such intervention in the late 1960s and through the period of instability in the world rice market in the 1970s. An econometric assessment of the 25-year period from 1970 to 1995 concluded that *Bulog's stabilization efforts paid very high dividends in fostering faster economic growth during Repelita I and II, apart from the additional benefits provided by enhanced political stability*. But even this positive assessment concluded that benefits were diminishing as rice became a much smaller proportion of the value added in the economy and as a share of consumers' budgets. By the mid-1990s there was clearly a need to design a much more market-oriented price policy.[5]

This need for reform of rice policy was driven by two forces. First, the price stabilization program was very expensive in budgetary terms, because heavy subsidies had to be provided to Bulog to maintain large stocks, subsidize exports when surpluses accumulated, and subsidize imports when domestic supplies were short. The increased corruption in the agency in the mid-1990s further called in question the use of public funds to support the price stabilization role.

Second, successful stabilization of rice prices enhanced the profitability of growing rice and biased farmer decision making toward its cultivation. This bias was desirable at the time as new rice technology and extensive investment in rural infrastructure, especially irrigation, meant farmers had to learn how to manage a new production possibility frontier. In addition, Indonesia was exposed to a very thin and unstable world rice market in the 1970s and

[5] See Timmer, "Does Bulog Stabilize Rice Prices? Should It Try?" *Bulletin of Indonesian Economic Studies*, August 1996.

additional domestic rice production enhanced its food security. But as early as the 1980s, the bias toward rice production was causing serious difficulties in diversifying Indonesia's agriculture toward higher- value crop and livestock systems.

A long-run decline in the price of rice in world markets, and significantly greater stability in world prices, have now sharply lowered the opportunity cost of rice to the Indonesian economy.[6] In 1998, for example, the country was able to import over 6 million metric tons of rice in the wake of the worst drought in recent history—caused by an historically severe el Nino—with very little impact on the world rice market. With Indonesian rice imports returning to the "normal" levels of earlier years after 1998, world prices have continued their long-term decline. In the face of these long-run opportunity costs of growing rice, farmers will need to diversify out of rice to have better income-earning prospects in the future.

The alternatives to the high-cost and inefficient approach to rice price policy in the 1980s and early 1990s were already under discussion in the mid-1990s.[7] Although various analysts had differing priorities for reform, the core ideas were similar. Indonesia should rely much more heavily on rice imports for its food security, including taking the lead in forming a free trade zone for rice in East and Southeast Asia (possibly to include Bangladesh and India as well). Substantial investments in rural infrastructure to improve efficiency of rice marketing would be needed so that traders and farmers would buy and store nearly all of the harvest. Continued development of rural capital markets would also be needed to ensure that the financial liquidity traditionally provided by Bulog procurement in defense of the floor price would be available from the formal banking system at reasonable rates to farmers and traders.

Greater variability in seasonal prices would be permitted so that these farmers and traders could earn adequate returns on their investments. Such variability would not be a problem for consumers because rice had declined to a small and manageable share of their budget expenditures. In case of large increases in rice prices in world markets (much less likely with a large Asian free trade zone) or localized shortages, subsidies to poor consumers could be targeted through special logistical efforts (Bulog had already experimented with such a program during the drought in 1991—the pilot activity was called OPK!). Variable tariffs on

[6] See David Dawe, "The Future of the World Rice Market and Policy Options to Counteract Price Instability in Indonesia," FPSA Working Paper No. 3, and David Dawe, "The Changing Structure of the World Rice Market, 1950-2000," IRRI Los Banos, 2002.

[7] See Timmer, "Building Efficiency in Agricultural Marketing: The Long-run Role of Bulog in the Indonesian Food Economy," *Journal of International Development*, 1996.

rice imports were also discussed as a mechanism for stabilizing rice prices in Indonesia without the need for a costly logistical agency.

These discussions about improving the efficiency of the rice economy were put on hold during the financial crisis, although both the IMF and the World Bank pushed for liberalization of rice trade and a cutback in Bulog activities as part of their support programs. Indeed, it is these donor efforts that have pushed Indonesia into the transition that is currently underway, and it is clear the donors would prefer to see the process completed as rapidly as possible.

There is substantial merit to the market-oriented rice economy seen at the end of this transition, and it remains a highly desirable goal. But there are also substantial political barriers in the way of this outcome. One worrisome element of the current policy debate is that there seems to be little understanding of how the previous rice price policy was designed and implemented, what its true costs were, and what the implications might be for price stabilization if Bulog is converted into a commercially-oriented state enterprise and given monopoly control over rice imports. Thus the political discussions are being conducted in a near vacuum of institutional memory and experience with policy design and implementation.

What would a lower tariff on imported rice mean for the balance between domestic rice production and consumption? If domestic prices are kept closer to (but still *above*) world prices, will Indonesia sacrifice a satisfactory degree of self-sufficiency in rice? Self-sufficiency is a worthwhile objective if it is achieved because of high productivity, as happened in 1984. However, self-sufficiency in any commodity is of dubious value if it is caused by higher prices that result in adverse effects on poverty. For Indonesia to be more self-sufficient in rice without hurting the poor, the path is through agricultural research and productivity growth, not from policy-induced higher prices. Because the world rice market is so much more stable now than it was in the 1970s and early 1980s, the justification for self-sufficiency as a defense of Indonesia's food security is far weaker today. Now the justification is based on simple protectionism. Indonesia's food security will come from its economic growth and macro stability, not from its degree of rice self sufficiency.