

# INDONESIAN SUGAR SELF-SUFFICIENCY

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## Introduction

Sugar is one of agricultural products stated as special products in World Trade Organization negotiation, in the same basket as rice, corn and soybean. Indonesia is making arduous efforts to increase domestic production to strengthen food endurance and lift up rural quality of life, and of course to come up to a self-sufficient state of sugar that yet to come.

In 2002, sugar self-sufficiency program was released and targeted to be reached in 2007, which then delayed to 2008 and again prolonged to 2009. Will it be delayed again to 2010 as production target of 2,80 million ton in 2009 would most impossibly be attained and direct consumption would also increase to more than 2.70 million ton? The same phenomenon occurs for soybean target, which achievement was delayed twice (from 2008 to 2010-2015).

This article analyzes sugar self-sufficiency economy, with special interests on social, economic and political consequences strategically need special attention.

## The Moving target of Sugar Self-Sufficiency

The moving target is not a good political decision or policy intervention, as various criticisms will surely emerge, specifically of its inconsistency and moreover when this target is unable to be reached in 2010.

After the political reform of 1998, the government intervention in areas of sugar trade and farm revitalization has not relatively been beneficial. From economic and political side, if outcomes of the policy intervention are creating new problems, as what has happened in sugar smuggling and raw sugar penetration in the domestic market, then it is almost sure to conclude that the formulation of organization, implementation or the delivery system is also having problems.

Here there will be no discussion whether the production target of 2.8 million ton in 2009 will be attained or not, but the fact is that now the rate of consumption is also getting higher to more than 12 kg per capita a year along with the increase in

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people's welfare. The consumption of industrial sugar (raw sugar) is around 2.15 million ton (1.1 million ton for big industry and 1.05 million ton for medium and small industries), so that in total consumption would be 4.85 million ton or even more. Meanwhile, the domestic production in 2007 is estimated to be around 2.40 million ton.

The fluctuated production of sugar can be explained by its production technology, cultivation system, and wetland sugar cane sensitivity toward climate change (Table 1). The farmers mostly apply low cost but not beneficial technics, such as stem trimmings rather than new plant seedlings in generating new plants. The other problem is that farmers are not eager anymore to cultivate sugarcane and change to other much more lucrative commodities, such as paddy, soybeans, and horticultures.

**Table 1. Production and Productivity of Sugarcane**

Year	Plantation Area of Sugarcane (000 ha)	Sugar Production (000 ton)	Productivity (ton/ha)	Sucrose Content (%) <sup>a</sup>
1995	496.9	2,104.7	4.24	6.98
1996	400.0	2,160.1	5.40	7.32
1997	378.1	2,187.2	5.78	7.84
1998	405.4	1,928.7	4.76	5.49
1999	391.1	1,801.4	4.61	7.01
2000	388.5	1,780.1	4.58	7.40
2001	393.9	1,824.6	4.63	7.02
2002	375.2	1,901.3	5.07	6.88
2003	340.3	1,991.6	5.85	7.21
2004	344.8	2,051.6	5.95	7.12
2005	381.8	2,241.7	5.87	7.12
2006	384.0	2,266.8	5.90	7.12
2007 <sup>b</sup>	395.0	2,400.0	6.08	7.20

Notes : a. Sucrose content data from Indonesia Sugar Council / Dewan Gula Indonesia (DGI)

b. 2007 and 2007 data is a preliminary figures, from various sources

Source: Central Agency of Statistics (BPS)

Indonesia is really having potential to suffice its sugar consumption from domestic farming. However, all energies and wisdom of this country in doing policy intervention are not able to support each others to focus on the self-sufficiency target. Once again, the crucial issue is not in its position whether Indonesia should be protective or liberal in its sugar sector development, but the consistency of policy interference is really needed to give precise incentive signal for all of market players □

farmers, traders, manufactures and consumers, including the ultimate players - producer importers and listed importers.

In this context, policy intrusion in Indonesian sugar production system is one of prerequisites for self-sufficiency of sugar. I have once stated that there must be a reconstruction of production base in this sector and an increase in technical and economical efficiency in all sugar refineries in Indonesia. These two aspects need to be revitalized as expecting sugar production increase from sucrose content is almost impossible because it is incredibly low (around 7%). In ordinary situation, it is ridiculous to expect a rise in production and productivity of sugarcane under so low price of sugar incentive resulting from technical and economical inefficiency of refineries. Also that bank and non-bank financial institution supports are very trivial, so that sugar production sector is really miserable. As mentioned earlier, sugar cultivation has change much because other remunerative commodities are more interesting for farmers. If the sugar farming cannot be managed well the growing of the other produce will most likely disturb the self-sufficiency program and others like food tenacity, production diversity and farm economic benefit. From last experience we could see that the wet-land sugarcane plantation has decreased wet-land paddy production. In addition, because other commodity are more lucrative, many farmers moved from wet-land to dry-land sugarcane planting, which made it less productive.

The policy to boost production and productivity of sugarcane looks just in vain. Since 1998 when the sugar sector was freed from centralistic program of Sugarcane Intensification Program introduced by Suharto regime, the farmers have been busy with finding more rational economic choices, while the government has been seeking for real measures regarding increasing access to capital, market information, revitalization of farmer organization, and bargaining power of farmers to negotiate with sugar refineries and other market players. In operational level, the government must hold a dialog with the autonomous local governments to obtain policy strategies to enhance farmers and other public welfare.

Many studies have been done to anticipate the shift of sugarcane farming to other economically benefiting ones, which find some recommendations such as the emergence of some rational choices to intensify dry-land even outside Java (see Arifin, 2004). The government has to be more serious in following up the alternative policy analysis results or the change in this farming pattern.

In this kind of production system, steps toward sugar self-sufficiency can be started by boosting sucrose content, as one percent hike in this value will generate additional production of 300 ton of sugar (*P3GI*, 2008).

The capacity of refineries and human resources is still possible to raise crystal production to 8 ton per hectare. This strategy can be carried out through a conventional method in cultivation in the forms of planting high yielding variety of plants, provisioning pure and healthy seedling, optimizing planting time, managing watering system, proper fertilizing, pest and disease control, etc. To jump up productivity during harvest and post harvest periodes, some actions can be taken, such as on time start of cane cutting and crushing

Besides the conventional method, raising sucrose content can be done through a more comprehensive breakthrough method, such as improving cane production management incentive starting from profit sharing system, sugar transfer system, sugar quality measurement, price incentive and other policies like reliable financing scheme and land consolidation, for instance block system establishment (see P3GI, 2008). If the two methods could be combined properly, it is possible that the content percentage could come to a level of 11% or even 13% if conducted consistently.

Therefore, the rearrangement of micro business aspect and strategy reposition should be directed toward corporate culture change that must be implented in all over refineries in Java, especially those owned by the state. They must learn from the management of the big and modern private companies like Sugar Group, Gunung Madu Plantations (GMP), Kebun Agung Group, etc. This means that in macro level the policies for revitalizing of sugar sector and restructuring of agro-industry must be conveyed to efforts in leveraging competitive advantages of overall industry. If this is effective, we do not have to worry on sugar insufficiency, for domestic production of sugar would most possibly exceeding 3 million ton, meaning that the topic of next discussion will be how to find access of Indonesian sugar in the world market.

## Trade Management

Regulation in the trading system of Indonesian sugar industry and other strategic commodities is not really new, as historically Indonesian agricultural economy has been tinted by legal presence of the government policies.

The policies were basically aimed to regulate import of sugar through Decree of Minister of Industry and Trade *No.643/MPP/Kep/9/2002*. However, this regulation seems to only give privilege to producer-importers to import raw sugar and to listed importers to bring in white sugar. The listed-importers are four state-owned domestic producers having certain qualification (for example: *PT Perkebunan Nusantara (PTPN) IX, PTPN X, PTPN XI, and PT Rajawali Nusantara Indonesia (PT RNI)*). On the other side, this regulation also gives opportunity to develop refined sugar industry which job is to

whiten the imported raw sugar (this kind of sugar should not be consumed directly). The important thing of this bylaw is that the raw and refined sugar imported by the producer-importers must only be used by sugar processing industry as raw material and is prohibited to be sold freely in the market.

Although the state-owned companies do not have enough experiences on importing sugar this ruling has worked for sometime. This is shown in the wide difference between international price (US\$200 per ton) and the domestic one (Rp 3 million per ton or equivalent to more than US\$300 per ton), so that this has triggered smugglings of sugar. To anticipate this problem the government then issued new decree in 17 September 2004 (*No.527MPP/Kep/9/2004*), inviting the role of Indonesian Logistic Board (BULOG) and PT Perusahaan Perdagangan Indonesia (PT PPI).

Some analysts have made valuation on this regulation effectiveness so far. For instance, Khudori (2005) said that import regulation was indeed contributed to increased production and automatically farmers income as well. Nahdodin and Rusmanto (2008) explicitly stated that the regulation was fairly effective in protecting sugar producers based on price indicators. This import rule did not bring market monopolist so that the marketing margin did not widen and harm consumers. However, this is still not be able to protect the producers from price distortion between the world and the domestic market.

Lesson could be derived from the performance of the sugar market management during the last five years is that the policy mandate is very difficult to be carried out by the administration undergoing problems of transparency and accountability (*see Arifin, 2007*).

### **Refined Sugar Phenomenon and World Trade Dynamics**

For the last four years, Indonesian sugar economy has been getting more complex with the presence of domestic sugar industry restructuring and fast development of refined sugar industry. Besides to raise economic value added, the refined sugar industry also has its different market with that of white sugar, as it mostly supplies domestic food and beverage industry. It is indebatable that refined sugar industry has a potential to invite formidable investments and to create employment.

In economic language, the refinery industry would open up more flexible business for sugar producers to process raw materials based on industry potentials owned. From agricultural technology, the cultivation of sugarcane in land having high

phosphor content would be more lucrative for refined sugar, while in that having low phosphor content, raw sugar maybe more beneficial. In its early development, this industry could utilize raw sugar for its basic materials, and sometime when better industry structure is formed it could support fast increasing sugar consumption. .

Yet, the introduction of refined sugar industry actually has created new phenomenon. Whitening factories, which are initially aimed to assist sugar sufficiency for food and beverage industry, receive privilege to import raw sugar as well as refinery factories in forms of import duty exemption and other facilities. The refinery industry must ideally have planted sugarcane in an integrated way with the whitening factories, but seems not.

In a relatively very short time the refinery industry developed tremendously with 5 big factories in Java having capacity of 2 million ton. Four of these have been active and operate under 70% capacity (PT Angels Products - 500 thousand ton, PT Jawamanis Rafinasi - 500 thousand ton, PT Sentra Usahatama Jaya - 540 thousand ton, PT Permata Dunia Sukses Utama - 390 thousand ton). The fifth company, PT Dharmapala Usaha Sukses (250 thousand ton), has not produced but mostly imports raw sugar of around 28 thousand ton. In 2009 there will be more refineries of 850 thousand ton capacity with a total investment of US\$ 100 million (in Ujung Pandang - 200 thousand ton, Cilegon 250 thousand ton, and Lampung - 300 thousand ton (*Republika*, 23 November 2007).

Furthermore, this has been worrying the state producers, as these private importers might sell raw sugar to the domestic market, which means that these state factories and their farmers might loose their market as imported sugar is cheaper in price. This sounds possible as law upholding and the policy administration quality are relatively weak.

New complication with the presence of refinery industry is not only regarding its privilege on import duties but also regarding its potential to set aside the domestic sugar from the market of food and beverage industry. This industry consists of many big foreign companies, which tend to use imported sugar (because of quality advantage) rather than the product of state factories and farmers. The situation will be more complex when these big food and beverage factories have status as producer importers which consequently have special right to import raw sugar.

Total import of sugar in 2007 is estimated to reach 450 thousand ton of white sugar (Indonesia Sugar Council), 1.8 million ton of raw sugar (Indonesia Refined Sugar Association), and 2.4 million ton in total (USDA). This amount is relatively small as compared to the world total production of 167.1 million ton over 2007/2008. If the

consumption is 155 million ton, then the volume sold in the world market would be 50.8 million ton plus a stock of 46.6 million ton. The world production is contributed by Brazil (32.1 million ton), India (31.8 thousand ton), China (13.9 million ton), Thailand (7.2 million ton). As a result Brazil also becomes the biggest exporter ( 20.6 million ton), which far exceeding Thailand (5.3 million ton) and India (3 million ton).



**Figure 1. World Sugar Price Trend, 2003-2008 (cent US\$ per kilogram)**  
*Source: Commodity Market Review, World Bank, March 7, 2008 edition*

Even though there has been a rise of 2.8 million ton in the world production, on average the world prices rose by 12.2 percent in the last two months. Now the price is US\$ 264 per ton, or highly increased as compared to last year of US\$ 202 per ton. Brazil is still a dominant market player and now it tries to boost its production to make ethanol from sugar to provide new alternative of energy so that it potentially will bring the price to go up.

The phenomenon of world price rise should be seen as an opportunity to increase domestic production and productivity of sugar industry, especially in accordance with the revitalization idea of state-factories that has been introduced since ten years ago. It is difficult to produce optimally for these state refineries as their machines are too old and out of date. Only 19 of 50 factories that have productivity rate of more than 7 ton per hectare.

If Indonesian government still wants to develop its sugar factories in an efficient and effective manner, therefore, state intervention is really needed. The

scheme taken must not just be an ordinary structure as currently exists, but a combination of proper short term pragmatic and long term strategic policies, with clear time frame and accountability. It will be more sophisticated if these policies are equipped with alternatives of strategies in case the policies taken find hurdles and challenges during implementation.

### **End Remarks: Future Policy Action**

Before taking policies, some considerations must be taken into account, such as regional to global environment and internal condition of stakeholders (farmers), refineries and traders. The trend of surging sugar price since mid 2007 should be considered as a momentum for boosting production and productivity of sugar Industry.

Finally, change in policies is really needed in the future because sugar self-sufficiency will never come true if only utilizing business as usual ways. For instance, the revitalization of sugar refineries could be done by establishing one or two holding companies that are integrating up-stream industry to down-stream industries.

It is also needed to make comprehensive evaluation and deeper study, including financial and investigative audits on the refined sugar industry as transparent as possible. In addition, the sugar industry is inevitably needs policy intervention so that it must have certain incentives in some areas of development (like those in infant industry).

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