Research Intelligence

The impacts of increases to the price of sugar on supply chains and the wider economy



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Introduction

On 28 October, 2023, the Office of the Cane and Sugar Board announced a THB 4/kilogram hike in the price of sugar, but worries over possible impacts on the public encouraged the Ministry of Commerce to intervene and to place a halt on this. The matter then passed to the cabinet, and with costs rising for sugarcane growers, a THB 2/kilogram price rise was approved that will clearly have both positive and negative effects across manufacturing supply chains and on the economy overall. On the positive side of the balance sheet, these increases will help to raise prices for sugarcane in the 2023/2024 growing season, with associated benefits for farmers thanks to the industry's 70:30 profit-sharing agreement, while higher retail prices will also benefit sugar mills. However, these same higher prices will be counted as a loss for members of the public who are direct consumers of sugar given that average annual spending on sugar is now forecast to climb by THB 42.9/person. Indirect consumers, that is downstream industrial users of sugar, will likewise face total additional annual costs of THB 2.07 billion, though companies will naturally attempt to pass higher costs on to final consumers by raising their prices, and so the inflationary effects of combined direct and indirect price rises are expected to add 0.08%-0.10% to inflation.

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Why do sugar prices need to rise?

Increases in the official cap on retail sugar prices are needed to address: (i) the high costs faced by farmers for energy, fertilizer, pesticides, and labor rising (especially during the fresh sugarcane harvested); (ii) growth in export prices that has outpaced those on the domestic market; and (iii) the need to collect payments for the Sugar and Cane Fund.

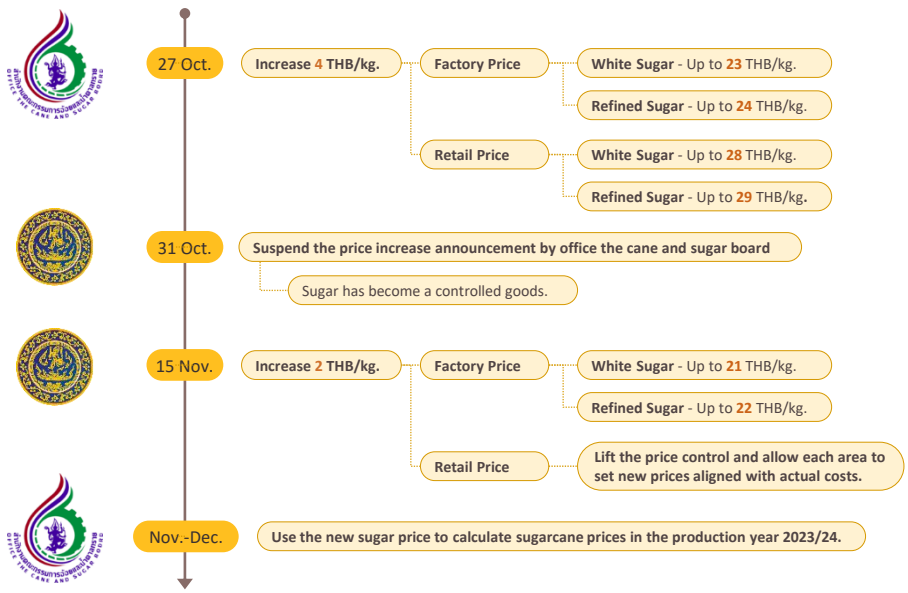
Given these motivations, on 27 October, 2023, **the Office of the Cane and Sugar Board (OCSB, part of the Ministry of Industry) approved new factory gate prices for sugar** that raised previous prices by THB 4/kilogram, the first THB 2/kilogram going to cover the elevated costs that growers now have to bear, and the remaining THB 2/kilogram being earmarked for the Cane and Sugar Board[1/]. These new prices would thus be used to determine the industry profit share and to set prices for sugarcane and sugar.

- Factory gate prices for white sugar were raised from THB 19/kilogram to THB 23/kilogram.
- Factory gate prices for refined sugar were raised from THB 20/kilogram to THB 24/kilogram.

In addition, retail prices for white and refined sugar were also hiked by THB 4/kilogram, bringing these from respectively THB 24 and THB 25 to THB 28 and THB 29. These increases were to be with effect from 28 October, 2023.

However, just 3 days later, the Ministry of Commerce convened a meeting of **the Central Committee on the Price of Goods and Services (CCP), and this then passed a resolution to place price controls on granulated sugar,** further recommending that on the following day (31 October), this should be confirmed by the cabinet. The latter did so, and an announcement in the Royal Gazette then declared that with immediate effect, prices of granulated sugar were to be controlled by the government. Motivated by a wish to keep prices low and to avoid imposing additional costs on the public, the earlier price rise instituted by the OCSB was therefore reversed.

Figure 1:
Mandatory sugar price



Source: Krungsri Research

1/ This would be used to maintain price stability and, to reduce problems with air pollution, to make additional payments to farmers supplying fresh sugarcane to mills without needing to draw on central government funds. In the 2022/2023 growing season, the Ministry of Industry requested THB 8 billion in funding to support payments of THB 120/tonne to farmers supplying mills with fresh sugarcane.

Following this, on 14 November, **the CCP met again, agreeing to make adjustments to the price of sugar and to other regulations connected to the sugar industry.** These came into effect on 15 November and consisted of the following.

1) **Sugar will remain on the list of goods for which prices are controlled by the authorities.**

2) **Prices for sugar have been raised by THB 2/kilogram** (including 7% value added tax brings the total increase to THB 2.14/kilogram). In detail, this will involve the following.

   2.1 Factory gate prices have risen by THB 2/kilogram, meaning that prices for white sugar went from THB 19/kilogram to THB 21/kilogram, while for refined sugar, prices rose from THB 20/kilogram to THB 22/kilogram. These prices will then be used to calculate sugarcane and sugar prices as per the OCSB's cost plus scheme[2/], but the additional THB 2/kilogram price rise intended to raise funds to pay for the OCSB's environmental initiatives was declined on the grounds that further research of the effects of this on stakeholders was required.

   2.2 Controls on the retail price of sugar that were enforced in Bangkok and the surrounding region were lifted, and instead, individual areas will henceforth be able to set their own prices. It is hoped that this will better reflect the fact that for retailers across the country, variations in transport costs mean that the overheads incurred in securing sugar supplies may vary. In addition, these changes will help to protect against the risk of international complaints of price fixing in Thai markets.

3) **Measures controlling the export of sugar by the CCP have been lifted**, and the subcommittee overseeing this area has been dissolved. Oversight of sugar exports is now managed by the OCSB, although the Board has instituted additional measures to ensure that supplies of sugar are sufficient to meet demand and that hoarding does not occur[3/]. To this end, exporters are required to report total exports and remaining stock to the Department of Internal Trade on the 10th day of every month.

With these changes made, the OCSB will be able to use the adjusted sugar price to calculate the reference price for sugarcane for the 2023/2024 growing season, which starts in December. This will provide the basis for making payments to sugarcane growers[4/] and to mills as specified in the industry's profit-sharing scheme, under which 70% of net profits from domestic and international sales of sugar in that production year goes to farmers, with the remaining 30% accruing to mills (this is the 70:30 profit share).



2/ The 'cost plus' scheme is used by the OCSB to calculate domestic sugar and sugarcane prices. These may fluctuate in line with farmers' and mills' production costs, transportation fees, and other management fees.

3/ This includes setting minimum stocks for mills that will cover around 1 month of demand, or some 2 million sacks (one sack is equivalent to 100 kilograms) or as requested by mills. Companies are also required to report sugar exports, thus enabling the OCSB to ensure that domestic supplies are sufficient but not excessive.

4/ Sugarcane prices are calculated per tonne according to the formula: [0.7 * (net income from domestic and export sales)] / (the quantity of sugarcane being pressed).



What impacts can be expected from raising the price of sugar?

Krungsri Research predicts that the increase in the price of sugar will have a broad range of consequences, both direct and indirect. Impacts will be felt across the length of the sugar supply chain, but beyond this, consequences will also be experienced by the economy in general and by the population at large.

- **Sugarcane growers: For farmers, the changes will be positive** since the 1984 Sugarcane and Sugar Act specifies that the prices paid to sugarcane growers are calculated according to the 70:30 profit share. As a result of the rising cost of labor, fuel, and fertilizer, earlier pre-increase retail prices of THB 24-25/kilogram had slipped to what was a low level relative to average production costs that now came to THB 19-20/kilogram, and because payments are determined with direct reference to the retail price, raising this will benefit growers.
- **Sugar mills: Rising sugar prices will be positive for sugar mills** since the earlier prices were below the average of around THB 27-28/kilogram prevailing on global markets. Moreover, domestic retail prices had also weakened relative to the cost of securing supplies of sugarcane, which had themselves been pushed up by higher production costs. This then dragged on profits and so as with farmers, higher retail prices will benefit mills via the increase in returns calculated via the industry profit share.
- **Consumers of sugar may be divided into two major groups: individuals and households are regarded as direct consumers of sugar, while downstream industrial purchasers may be considered indirect consumers.** The impacts of the hike in prices on these two groups is described below.
    - **Household consumers: Impacts on individuals and households will be negative**. Although price rises may vary from one area to the next according to local production, transport, and shelf placement costs, in reality, consumers will face price rises that will be in excess of THB 2/kilogram. At present, sugar mills distribute 1.42 million tonnes of sugar annually to wholesalers that then redistribute this via retailers to the general public and to small-scale operators in the restaurant, beverage, confectionary, and bakery industries. Across the country, this is equivalent to 21.5 kilograms per person per year, and so these price rises will translate into additional annual expenditure of THB 2.83 billion, or THB 42.9 per person per year[5/] (Table 1).

Table 1:
The estimated impact on the industrial sector due to the rise in the price of sugar.

Consumption Type	Sector	Quantities (Tonnes, mn)	Burden Increase* (THB, mn / Per Year)
Total	**Total**	**2.45**	**4,904.2**
Direct	**Household**	**1.42**	**2,834.3**
	Per Capita**	**21.5 Kg.**	**42.9 THB**
Indirect	**Beverage**	**0.43**	**854.3**
	Food (Include Canned Food and Fish Sources)	**0.30**	**598.1**
	Dairy products	**0.19**	**380.5**
	Bread (Include Beer and Spirits)	**0.06**	**117.2**
	Medicine and others	**0.04**	**89.7**
	Confectionery	**0.01**	**30.1**

Source: Sugarzone, Krungsri Research
Note : * Calculations are based on a THB 2/kilogram price rise and 2022 industrial sugar consumption.
** Calculations are based on 2022 population of 66.1 million.

5/ Calculations are based on the quantity of sugar consumed directly in 2022 and price rises of THB 2/kilogram (source: OBSC and Krungsri Research).

- **Downstream industrial consumers** will see differing levels of impacts according to the structure of that industry's production costs, their production capacity, their relative market strength, and their ability to pass higher costs on to end consumers.
  - **Players in downstream industries that purchase sugar wholesale or directly from mills: The effects of more expensive sugar will be negative for this group.** Currently, industrial users of sugar consume 1.03 million tonnes annually[6/] and so a price rise of THB 2/kilogram will add THB 2.07 billion to overheads. The largest industrial consumer is the beverage industry, which buys 0.43 million tonnes of sugar a year and so overall, this will see costs rise by THB 854.3 million. Beverage manufacturers are followed in importance by food processors (consumers of 0.30 million tonnes of sugar, implying additional expenses of THB 598.1 million) and manufacturers of milk products (buyers of 0.19m tonnes, and therefore exposed to cost increases of THB 380.5 million) (Table 1).

    The extent of the impacts from the price rises on any given industry are partly determined by its cost structure, and in particular, the contribution of sugar purchases to overall overheads. In the case of manufacturers of sweets and snacks (the most sugar-intensive manufacturing segment), sugar purchases represent on average a full 33.0% of all production costs. Thus, a THB 2/kilogram hike in the price of sugar can be expected to increase overall production costs by 3.4%. The second most sugar-intensive industry is the production of carbonated drinks, where sugar accounts for an average of 24.9% of all manufacturing costs, implying a 2.6% increase in overall production overheads as a result of more expensive sugar (for details of the impacts on other industries, see Table 2). However, this is not the whole picture, and at the level of companies or individual factories, production capacity will also play an important role in determining the scale of the impacts. This is because operators that benefit from significant production capacity will be able to generate greater economies of scale, thereby lessening the extent of any negative consequences. In addition, production capacity will also strongly influence bargaining power, and companies that are in a strong negotiating position may be able to maintain their current cost structure by pushing price hikes back upstream to mills, or by accepting these additional costs but then passing them on to downstream consumers in the form of higher prices.
  - **Players in downstream industries that purchase sugar retail: Retail sugar prices will rise and so impacts will also be negative for these players,** especially for restaurants and smaller producers of beverages, sweets, and bread. It will be much more difficult for these players to pass on costs to consumers than for large corporate manufacturers and those that are distributing through convenience stores. These companies typically increase prices in whole-baht increments, but because the hike in the cost of sugar is somewhat limited relative to consumption, players are more likely to leave prices unchanged and to try instead to maintain sales and preserve market share. This is with the exception of players that are in a strong negotiating position, for example because they have a solid brand, they have a loyal customer base, or they are in a particularly favorable location; in these cases, companies may be able to pass on cost increases to consumers.

Table 2:

The proportion of sugar usage in each industry under the sugar refinery supply chain and the proportion of production costs in the industrial sector increased from increased sugar prices.

Sector	Sugar Cost Proportion (% Share)	Proportion of additional costs from adjustments sugar price 2 baht/kg. (%)
Confectionery and snack	**33.0**	**3.4**
Soft drinks and carbonated water	**24.9**	**2.6**
Distilling and blending of spirit	**21.8**	**2.2**
Bakery	**14.6**	**1.5**
Dairy products	**14.0**	**1.4**
Monosodium glutamate : MSG	**13.9**	**1.4**
Canning and preserving of Fruits and vegetables	**10.3**	**1.1**
Coffee and cocoa and tea processing	**7.7**	**0.8**
Other food products	**7.1**	**0.7**
Canning and preserving of meat	**1.7**	**0.2**
Drug and medicine	**1.3**	**0.1**

Source: Office of the National Economic and Social Development Council (NESDC)'s 2015 Input-Output Table, Krungsri Research

6/ Calculations are based on 2022 data on indirect sugar consumption (source: OCSB and Krungsri Research).

- **The economy overall: The net effect of the increase in factory gate sugar prices and the lifting of controls on retail prices will be to add slightly to inflationary pressures.** Sugar prices are expected to rise by 8.0%-10.5%[7/] but the effect of local factors, especially of transport, will vary and taking these into account, the total impact of these changes on prices will be in the range of 10%-15%[8/]. The direct effects of this on inflation[9/] will work out as an overall increase of 0.01-0.02%, but food processors, and producers of beverages, milk products, bread, snacks, and other goods (Table 2) will pass on a portion of their higher costs to consumers through raised prices, and thus the overall impacts on inflation will be to increase this by 0.08%-0.10%[10/]. Moreover, in practice, companies in downstream industries typically raise prices in whole-baht increments and so the actual impacts on inflation may be higher than this analysis indicates.

7/ Assumes a difference between old and new sugar prices of THB 2/kilogram.

8/ Calculations are based on the difference between old and new sugar prices of THB 2/kilogram and average fuel transport costs for wholesalers and retailers of 3%-5% (source: 2015 NESDC Input-Output Tables).

9/ This does not consider the additional impacts on the cost of living of more expensive goods that contain sugar.

10/ Calculations are based on the additional costs to businesses of a THB 2/kilogram increase in the cost of sugar (Source: 2015 NESDC Input-Output Tables).

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