



POLICY NOTE

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Competition Issues in the Sugar Industry in the Philippines

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The Philippines is one of the top sugar-producing countries worldwide; sugarcane is the fifth largest crop in Philippine agriculture by value of output. Recently, competition issues in the sector were highlighted with the first ever decision of the Philippine Competition Commission (PCC) to block a merger-to-monopoly deal between Universal Robina Corporation (URC) and Central Azucarera Don Pedro, Inc., who own mills in Balayan and Nasugbu, Batangas respectively. The PCC has commissioned this study, which focuses specifically on the sugar industry, providing: an overview of the sugar industry; a description of each product; an assessment of the competition issues at different stages of sugar production and distribution, the identification of anti-competitive laws and regulations; and recommendations to address those issues.

OVERVIEW OF THE INDUSTRY

The sugar industry value chain

The value chain of sugar industry produces brown or white sugar for institutional and industrial users, together with some by-products. Sugarcane planters harvest the cane and transport it to sugarcane mills. Each mill extracts the cane juice, which is treated into a thick syrup. The syrup is then turned into raw sugar. Raw sugar is colored brown and ready-to-use; often though raw sugar is further refined into white sugar. Households account for only 32% of domestic consumption and only about 18% is purchased by institutional users (i.e., restaurants, bakeries, hospitals); half of domestic consumption can be attributed to industrial users, namely food and beverage manufacturers (Ang, 2019; Philippine Statistics Authority, 2018). By-products of the sugar industry include molasses (used in cooking and production of ethanol, whether potable or non-potable) and bagasse (for power generation).

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Economies of scale in the milling stage raise a competition concern. There are, as of 2020, only 27 mills throughout the country; in most regions, only one or two mills are in operation to serve all of the planters therein. The reason for the low number of mills is the large fixed investment outlay which requires a large production scale in order to remain economical. Moreover, planters may face limited choices in terms of processors, as high transport and transaction costs may prevent planters from finding alternatives. This creates a likely situation in which mills can become dominant in their respective localities, thus increasing the possibility of abuse. If, on the other hand, there are a few mills in a mill cluster, the clustered mills may enter into anti-competitive agreements.

Historical background

The history of the sugar industry explains its present economic and institutional features. Large-scale farming of sugarcane began back in the Spanish colonial period during the 1700s. In the 1900s, the Philippines became an American colony, opening the US market to preferential and, eventually, free trade in Philippine sugar. In 1937, the Philippine Sugar Administration was established; it became the Sugar Quota Administration (SQA) upon Philippine Independence in 1946. The SQA was tasked with allocating the administration of export, domestic reserve, and world sugar quotas, and the issuance of negotiable warehouse receipts or *quedans*. The Philippines continued to maintain its preferential access to the US market even after independence, becoming the top exporter to this market. New centrifugal technologies led to the establishment of large-scale sugar mills. Initially, mill investors went into output sharing agreements with planters. These changes, together with the reliance on direct-to-mill railways to deliver cane, weakened competition and led to the formation of mill districts for collective bargaining between the planters and the mills (Larkin, 1993; Padilla-Fernandez, 2000). Initially mills and planters agreed to output sharing, which was standardized as a

semi-mandatory scheme under the Sugar Act of 1952 (RA 809).

The US Sugar Act provided a guaranteed market for Philippine sugar up to 1974. Production soared from 1960-61 to 1971-72, and mill capacity more than doubled (by 1974-75 output had reached 2.4 million tons). Under Martial Law, the Philippine government opted to monopolize the export of sugar; this was abolished upon the restoration of democracy in 1986. In its stead, Executive Order (EO) 16 of then-President Aquino established the Sugar Regulatory Administration with the mandate to, among others, *"establish and maintain such balanced relation between production and requirement of sugar and such marketing conditions as will insure stabilized prices at a level reasonably profitable to producer and fair to consumers; and to promote the effective merchandising of sugar and its products in the domestic and foreign markets so that those engaged in the sugar industry will be placed on a basis of economic viability."*

Policies and regulations

Pervasive government intervention raises serious competition concerns for the industry.

The historical development of the sugar industry accounts for a set of institutional features that makes it unique among the agricultural industries of the country.

Mill districts and output sharing. The production of cane and raw sugar is geographically consolidated into mill districts. Within the mill district, planters associations are organized for coordinating deliveries, facilitating the flow of information, the delivery of services (such as preparation of *quedan*), and the application of government regulations. One of these is the sharing of raw sugar and molasses between the sugar mill and the sugar planters as provided by the Sugar Act. The shares range from 60 percent (when mill output is low) up to 70 percent (when mill output is high). However, the sharing system is subject to well-known inefficiencies owing to the disincentive effect of the compulsory sharing.

Quedan system and market segmentation. The SRA requires that all raw sugar that is produced or marketed within the country be covered by a quedan which it issues. The quedan is proof of ownership of a certain amount of sugar, available at a specific warehouse (typically at a sugar mill). The SRA allows the quedan to be used as a negotiable instrument backed up by the value of the sugar in stock. However, the quedan is also used by the regulatory agency to segment the market for sugar. At the beginning of each milling season, the SRA issues a Sugar Order (SO), which mandates that the mills divide all planters' shares and mill shares into various classifications, which are as follows:

- Sugar with A-classification may be exported only to the US market;
- Sugar with B- classification may be sold only in the local market;
- Sugar with C-classification is not allowed to be sold (unless reclassified by SRA);
- Sugar with D-classification can only be marketed for export (outside of USA).

Historically the quedan grew out of the need to allocate preferential market access to the US market during the colonial period until the early 1970s; however, even as the US market premium mostly vanished, the allocation mechanism was kept largely in order to stabilize domestic prices.

Licensing and registration. The SRA imposes registration requirements over various sugar industry-related activities. Registration and licensing allow the SRA to identify who the key players are in the production and merchandising of sugar, thereby supporting its ability to enforce its industry policies and regulations.

Imports and exports. As mentioned earlier, the export of sugar is restricted to sugar A or D. The more restrictive policy is however applied to importation, mainly to ensure price stability. Restrictions on imports are imposed to prevent domestic prices from falling, thereby protecting producers; however, imports are allowed when there is an anticipated shortage leading to an increase in domestic price. These restrictions are consistent with its function of stabilizing the price of sugar. To support the import policy, inter-island shipping of sugar requires a permit, for the SRA to prevent the movement of illegally imported sugar throughout the archipelago.

Customs duties. Imports are subject to customs duties payable to the Bureau of Customs according to the two-tier tariff scheme negotiated under the WTO. Outside the Minimum Access Volume (MAV) of sugar, the tariff rate is 65 percent. However, imports of sugar from ASEAN countries are levied only a 5 percent duty.

ANALYSIS OF THE VALUE CHAIN

From planting to processing

The study conducted numerous interviews and meetings with sugar industry players. It elicited assessments from members of sugarcane planters' associations on the state of competition in the industry. These associations were located in the mill districts in Tarlac and Cagayan. Table 1 summarizes the planters' subjective ratings of their relationship with the mill and how well competition attenuates any dominant economic position in their relationship.

Table 1: Average ratings of services and payments from the mill by planters (0 = strongest disagreement, 4 = strongest agreement), 2019

	Accurate estimate of sugar content	Fair sharing scheme	Satisfactory payments and services	Mill abuses dominant position
All	2.5	2.7	2.8	1.7
Tarlac associations	2.3	3.0	3.2	1.5
Cagayan associations	3.0	2.2	2.2	1.9

On average, planters expressed moderate agreement that the sharing scheme, as well as the payments and the services of mills, is fair. In Cagayan for example, the sharing scheme is 60-40; planters agreed that this is fair considering the low output of the mill district. Meanwhile in Tarlac, the mill share is lower (32 percent), owing to its higher output. Similarly, the perceived distortion in the measurement of sugar content is at worst moderate. For both Cagayan and Tarlac, at least one Association deploys a licensed chemist for assessing the mills' estimation of sugar content.

Planters do have various choices with regard to which crop to plant, and they are not necessarily tied down to the sugar industry. In Luzon the main alternatives to sugar are other temporary crops such as rice and corn. When the price of sugar drops relative to the other crops, planters are readily able to shift to more profitable crops.

The mill operators are also trying to avoid underutilisation of their mill by persuading farmers to plant sugarcane and deliver to them. Aside from obtaining quedans and molasses certificates, mills realise cost savings by utilising the bagasse to generate power and save on their electricity consumption from the grid. Some sugar mill power plants are large enough to sell some of their excess electricity back to

the grid, and therefore earn supplementary income.

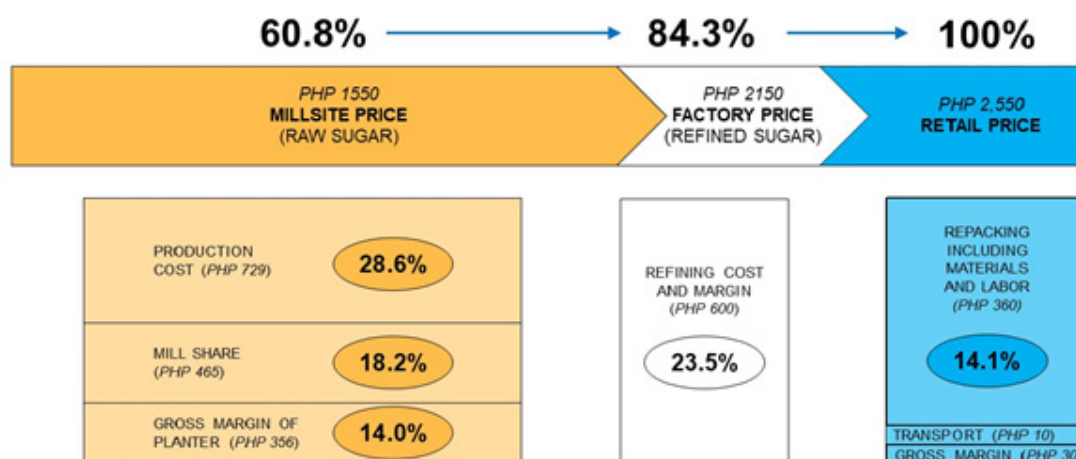
From processors to end-users

End-users consist of either firms, such as in those in the food and beverage industry (FBI), or households. Sugar needed by end-users is classified into three quality grades: refined white sugar; washed raw sugar; and basic raw sugar. Households buy either refined white sugar or washed raw sugar; users in the FBI typically use refined sugar. The key informant for the wholesale/retail segment affirms that customers make little distinction by brand (despite labeling to the contrary). Buyers tend to go for the price, except for those in the A or B class of consumers who may be health conscious. In the lower market segments, competition is intense and margins are very thin. Meanwhile, the key informant for the FBI affirms that the most critical requirement for their sugar supply is quality; the large FBI players contract directly with accredited mills who can meet their quality standards.

Price formation

Cost build-up. The average price of refined sugar as of end-February 2020, based on PSA data, is Php 51 per kg, equivalent to Php 2,550 per LKG. (Note that the suggested retail price of DTI is now Php 50 per kg, the

Figure 2: Cost build-up along value chain for retail sugar, 2019



Sources: SRA Roadmap and key informant interview.

prevailing price at end-2019). A breakdown of the retail price build-up along the value chain is shown in Figure 2. The first stage collapses cane production and raw sugar owing to the nature of planter and miller's compensation. The second stage is refining the raw sugar; the third stage is the repacking and distribution of refined sugar to various retail outlets such as supermarkets and sari-sari stores.

The millsite price of raw sugar is already about 61 percent of the retail price; the factory price of refined sugar is 84 percent. The production cost of cane (estimated using SRA data for 2012, corrected for CPI inflation to 2019) accounts for about 29 percent of the retail price; processing cost (imputed as the mill share) is another 18 percent. The refining stage (combining processing cost and refiner's margin) is another 24 percent. Finally, retailing involves repacking and distribution (14.5 percent), while the retailer's gross margin is 15 percent.

Note that each of the gross margin items themselves include costs, the breakdown of which is beyond the scope of this study. The 15 percent gross margin of the retailer includes cost of shelf display, storage, cost of capital, transaction cost, and associated labor; the gross margin of the cane producer includes the time cost of farm and business management, the opportunity cost of capital, and so on.

Pricing at the millsite. For raw sugar, price is determined on a weekly basis. The reference price is that in Negros Occidental that is obtained via a "bidding" process. This is initiated by the planters' associations offering their quedans to traders. The traders in the area

then communicate their bids; the price of the transaction is posted electronically and made available to other planters' associations. The price, which results from Thursday's bidding, is posted on Friday. Prices are distinguished between washed sugar, and commercial grade (raw) sugar. The Negros price is used as a reference but may not actually be the price of the transaction. Most planters (both in Tarlac and Cagayan) opt to leave sales in the hands of their respective association marketing agents. The sale of quedans is done by obtaining the price quotation of the trader. After receiving the quotation, the association decides whether to accept the price or not; the bases for comparison are the price bulletins mentioned earlier. In their experience, the quotation and the mill site prices elsewhere in the country are very close (differing by just Php 50 per LKG), hence the association usually takes the trader's offer.

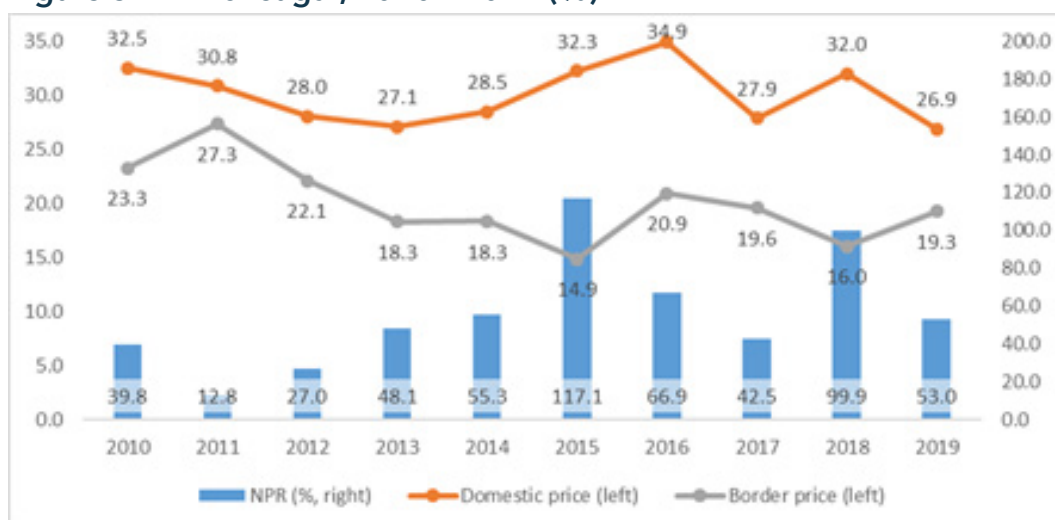
There are apparently enough traders active in the raw sugar market to prevent price manipulation. In Regions II and III, 13 registered traders are competing for quedans; in Region V 8 traders are competing; and so on. Moreover, these traders are free to operate in various regions outside their place of registration (as no doubt the NCR-based traders are doing).

Table 2 describes the subjective ratings of the planters regarding the state of competition in sugar and molasses trading. Regarding the fairness of pricing, the interviewed planters moderately agree that the pricing of raw sugar is fair, though they tend to feel that molasses pricing is less fair. They perceive that there is little collusion to keep the buying price low.

**Table 2. Average rating for trade in sugar and molasses
(0 = strongest disagreement, 4 = strongest agreement)**

	Fair pricing of sugar	Fair pricing of molasses	Choice in selling sugar	Choice in selling molasses	Collusion among buyers of sugar	Collusion among buyers of molasses
All Planters	2.3	2.8	2.4	2.3	1.8	1.5
Tarlac planters	2.6	2.8	2.2	2.0	1.3	1.1
Cagayan planters	1.9	2.7	2.8	2.8	2.4	1.9

Figure 3: NPR of sugar, 2010 - 2019 (%)



Sources: PSA; World Bank Pink Sheet.

Price gaps between domestic and foreign markets.

Figure 3 shows the nominal protection rate (NPR), in percent; this computes the difference between domestic and border price as a percentage of the border price. The NPR averaged 56 percent since 2010; however, 2010-12 were years of elevated world prices with unusually low NPRs. From 2013 onwards, the NPR averaged 69 percent. The high domestic price is due to non-tariff barriers; the QR in sugar has effectively transferred a surplus of around 35 percent of gross market value from consumers to producers in 2012-2014 (OECD, 2017).

Statistical analysis confirms that changes in world price translate only weakly to changes in domestic price. This is fully consistent with the fact that non-tariff barriers constitute a formidable barrier to entry of foreign suppliers into the Philippines. The state of competition in the sugar industry therefore depends mostly on the interaction between the local players.

Price gaps within the domestic market.

Though the domestic price persistently remains above the world price, prices may still be set competitively among domestic players. One way to check this is if indeed mill site prices are set as to rule out geographic arbitrage, i.e., if uncompetitive price-setting in one mill district can be nullified by seeking out better terms of trade in other mill districts.

First, the authors checked the deviations between mill site prices relative to that of Negros Occidental (using PSA estimates). Figure 4 highlights the provinces of Batangas, Leyte, and Bukidnon (in addition to that of Negros), which has the most number of data entries for the period (1990 - 2018) from Luzon, Visayas (outside Negros Island), and Mindanao. Using Negros price as base, the price index of provincial price is shown in the blue bars of Figure 4. Note that prices in the other provinces are on average lower than in Negros (perhaps reflecting quality differences). However, average discrepancies vary across provinces from 3.9 percent in Bukidnon to just 0.2 percent in Leyte. Moreover, the standard deviation of these discrepancies are also very large, ranging from 9 percent in Bukidnon to 19 percent in Leyte.

Statistical analysis is able to determine the impact of the Negros price on the Leyte price only. In the long run, the Negros price affects the Leyte price on a close to one-for-one basis (in percentage terms). However, further analysis of the speed of adjustment shows that the Leyte price adjusts to changes in the Negros price gradually rather than quickly. Geographic arbitrage eventually dissipates price differences across mill districts (accounting for transport cost), but the adjustment process is slow and uncertain.

Figure 4: Measures of differences between monthly sugar price in Negros and selected provinces, 1990 - 2018



RECOMMENDATIONS

The following recommendations are oriented towards the competition policy of the Philippines as provided under the Philippine Competition Act. The Act prohibits setting up barriers to entry or acts that prevent competitors from growing within the market **except** those resulting from superior product or process, business acumen, or legal rights **or laws** (Section 15(b)). Notwithstanding this exception, it remains the function of the PCC (Section 12(r)) to advocate the pro-competitive policies of government, including advising the Executive Branch on the competitive implications of government actions, policies, and programs. Without minimizing the legitimate social objectives pursued by existing laws (such as EO 18), namely price stability and preserving the economic viability of the sugar industry, the following recommendations are framed consistent with this function of the PCC:

Liberalize the importation of raw and refined sugar at ATIGA and MFN tariff rates. The closure of the domestic market to competition from foreign suppliers is a key factor behind the vulnerability of the domestic industry to competition failures. As with the fertilizer industry and other sectors, the presence of large domestic processors due to economies of scale need not vitiate competition if foreign suppliers can compete freely with domestic

processors and send prices down to world market levels plus freight cost and tariffs (equal to 5 percent for imports from ASEAN, and 65 percent for imports from outside the ASEAN).

Reexamine the sharing system and consider the shift to sugarcane procurement. The sharing scheme places a rigid market arrangement between planters and mills. A more straightforward way to create market flexibility and open up competition is to shift to sugarcane procurement; in the case of mill district clusters (such as those found in Negros island), this will lead to competitive price bidding for sugarcane. Moreover, the shift out of the sharing system will remove a key source of inefficiency in the sugar industry. Boosting efficiency and competitiveness of the domestic sugar industry is even more critical if and when the preceding recommendation on liberalizing imports is adopted.

Government may need to support domestic price stability by setting a price floor, as done in Brazil and India; this may be especially needed in areas where only a single mill is in operation (rather than a mill cluster). Ideally, the price floor shall be set to where planters are paid the value of marginal product, while mills still obtain a reasonable return on investment at the long-run equilibrium price of sugar.

A shift to a cane purchase system should be accompanied by a prohibition on the forward integration of mills to trading. Under a cane purchase system, mills will come into possession of all the sugar stocks; currently they are also owners of all the warehouses for sugar. These advantages may confer on them a market leadership position and open opportunities for coordinating stock-release and price-setting. The prohibition on the purchase of additional stocks will open up opportunities for other players to enter the marketing chain of the sugar industry.

Continue and strengthen the quedan as a warehouse receipt system and not a means to segment markets. The quedan explicitly divides the market and poses entry barriers to market segments and would constitute a direct violation of competition law were it not for the exception provided in Section 15(b). Note though that the liberalization of sugar importation will nullify the industry segmentation enforced by the sugar classifications. Users of sugar will be able to freely purchase cheap world market sugar, eventually enforcing a single prevailing price in the domestic market. However, the quedan itself, as a warehouse receipt system, need not be abolished.

Maintain market transparency and enforce free domestic transport of sugar. The transparent discovery and dissemination of mill site prices, thanks to industry associations and the SRA, should be maintained after sugar industry reform. Liberalized importation will vastly reduce the incentive to smuggle imported sugar, obviating the need for placing undue restrictions on the inter-island shipping of sugar. ■

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