



an introduction to the
global sugar markets

2019 – issue three





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sugar
sector
2015

AB Sugar

a world leading sugar business

AB Sugar is a group of businesses that operate across 24 plants in 10 countries and employ around 32,000 people. We make and sell sugar and sugar-related products to people and businesses around the world.

The heart of our business is making and selling sugar, but we do much more than that. As well as 'core products', made from

sugar beet and sugar cane, we also make 'co-products', which can include anything one or two 'steps' away from the sugar-making process: animal feed, soil conditioners, electricity, bioethanol and seed enhancements.

Our products are sold into industry sectors including food and drink, pharmaceutical, industrial, agricultural and horticultural, power and energy.

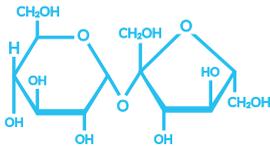


world sugar markets

demand and supply

Around three-quarters of the world's sugar is supplied from cane which is grown in tropical and sub-tropical regions, with around one-quarter supplied from sugar beet grown in more temperate climates.

Refined sugar is chemically and functionally identical irrespective of its source and regardless of whether it is produced from beet or cane. Many different players (including producers, traders, refiners, distributors and retailers), can be involved in delivering the final product to customers, depending on the sectors being supplied.



cane and beet sugar are chemically and functionally identical



grown in tropical and sub-tropical regions



grown in temperate climates

Global sugar consumption

Sugar is produced in over 100 countries and is used by two main food sectors; 'food and drink manufacturing' and 'retail'. The 'food and drink manufacturing' sector uses sugar across a wide range of products dependent on what type of functionality they are

seeking sugar to provide. The majority of sugar produced serves the food sector. The smaller market sector known as 'retail' is purchasing sugar that is often sold directly to consumers for use at home, or across businesses such as cafés and restaurants.

sugar is produced in over

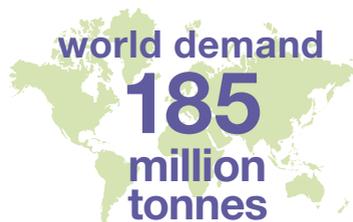
100
countries

two main food sectors:

food and drink manufacturing and retail

Total global demand

Global sugar consumption was over 185 million tonnes in 2017/18¹. Consumption is driven by long-term growth of around 2% annually which is expected to continue in the future.



How demand is delivered

Of the global demand, approximately two-thirds is met by local regional production, with the remainder (about 60 million tonnes annually) supplied from globally traded exports.

2/3

met locally
by regional
production



A significant proportion (usually about one-third) of this export trade takes place under historic bilateral and preferential agreements.

1/3 supplied from
globally traded
exports



A significant proportion
of export under historic
bilateral agreements

...of which up to 10% is delivered
through commodity exchange

sugar is traded in both raw and refined formats



55% raw
sugar

Semi-refined brown sugar is internationally
traded on the **New York 'Number 11'** market.

lower initial cost but requires
refining at destination



45% refined
sugar

Refined 'white' sugar is traded internationally
on the **London 'Number 5'** market.

higher initial cost but does not
require facilities for refining

sugar

the production process

Sugar production, whether from cane or beet, is a capital intensive process and is usually operated at scale to be competitive.

Beet sugar

The production of sugar from beet is generally done in a single step in advanced manufacturing facilities that include the full range of operations to extract the sugars from the crop, clean them and turn them into the refined sugar crystals we all recognise.

Cane sugar

The production of sugar from cane can also be done in a single step like beet, but more often takes place in two stages to supply the export sectors. In this case the majority of the processing is carried out at cane mills in the country of origin which produce partly finished 'raw' sugar, with only the 'refining' part of the process taking place at destination.

The investment needed to produce sugar from beet or cane in a single step process is therefore significantly higher than that needed just to refine raw sugar at destination refineries, and the operational complexity and jobs involved in the supply chains of the two procedures reflect this difference.

the journey of sugar production starts here for AB Sugar operations...

Sugar is **produced naturally** in sugar cane and sugar beet. These plants grow in several different regions of the world

The **harvested crop** arrives at one of our **processing plants**



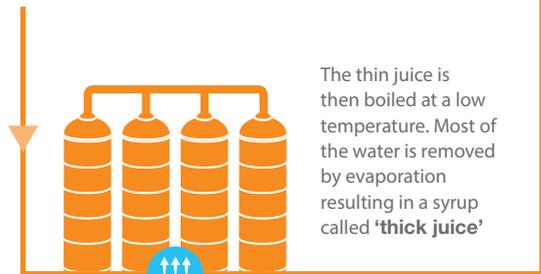
Beet and cane are processed differently but there are similarities

The raw juice passes through an important **purification stage** and is then **concentrated**



purification

A lime solution is added to the raw juice to remove any impurities and it is then filtered to make a clear **'thin juice'**



The thin juice is then boiled at a low temperature. Most of the water is removed by evaporation resulting in a syrup called **'thick juice'**

evaporation



The beet and cane are prepared

washed



sliced

Sugar beet is washed and sliced into strips



crushed

Sugar cane is cleaned and crushed into small pieces

Beet pulp or cane fibre (bagasse) are separated from the raw juice. Excess water is removed and recycled back to the process

extracted



Hot water removes sugar from the prepared beet or cane to make a 'raw juice'

The **extraction** process to recover the sugar begins. The freshly sliced beet or crushed cane is fed into the extraction equipment

The thick juice is passed to the **crystallisation** stage



crystallisation

The thick juice is heated and seeded with tiny sugar crystals, which grow into the required size

A natural end product

At the final stage, the sugar crystals are dried and cooled. Sugar is distributed in a variety of formats ready for both industrial and retail markets

centrifuges

The crystals are then washed in centrifuges to remove any remaining syrup, which can be returned to the crystallisation stage or used in co-products



dried and cooled



packaging and dispatch

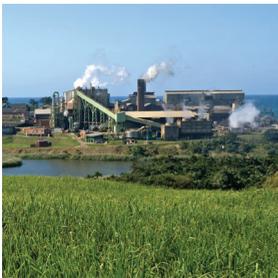
We produce around 5 million tonnes of sugar annually across 10 countries



world sugar markets and support policies

Sugar is a high profile commodity both politically and in terms of trade in many of the world's key producing regions.

Its production (whether from cane or beet) is also highly capital intensive, requiring large scale operations to be competitive. This overview covers how a handful of leading producers and their countries' support policies impact the market.



seven influential producing countries



World sugar production and trade is dominated by a small number of influential producing countries. The seven influential producing countries reviewed here (Australia, Brazil, Canada, the EU, India, Thailand and the

USA) contribute to over half of global production, and Brazil and Thailand account for about half of cross border trade. For more detailed information, see our full case studies from page 15.

Operating in a residual market

The world sugar market is a residual market characterised by extreme volatility, which often trades below global costs of production¹. Government sugar policies in a handful of countries, notably Brazil, Thailand and India, have a substantial effect

on the world sugar market's supply-demand balance and consequently on its trading price level. It is therefore not a normal clearing market and cannot be used as a sustainable 'benchmark' on which to base sugar industry policies or strategies.

trading below...



...the global cost of production



Support policies and subsidies

Most global producers – in particular Brazil, Thailand and India – have responded to these conditions by developing a substantial mix of policies and subsidies to support domestic production. Collectively these support policies have a profound distortionary effect on the world sugar market.

schedule of safeguards and concessions



WTO notifiable

- Quotas
- Export subsidies
- Aid for growers
- Price setting
- Aid for producers

not WTO notifiable

- Decoupled agri support
- Loans
- Debt write-off
- Tax schemes
- Import duties
- Market intervention
- Cross subsidies

These are usually WTO notifiable and include: quota systems, export subsidies, sugar and cane price setting, and direct aid for farmers or processors. These are commonly used in Thailand, India and the USA.

These are often not WTO notifiable and include: general (decoupled) agricultural support, loans, debt write-off, taxation schemes, differential import duties, market intervention tools and cross-subsidies. These are more prevalent in Brazil, the EU, Australia and Canada.

the EU sugar sector

The European Union (EU) is one of the world's top sugar producers – both in terms of scale and competitiveness. The majority of EU production is from sugar beet grown in 19 Member States, with leading country producers including France, Germany, Poland, the UK and the Netherlands¹.



Up to October 2017

EU sugar sector total demand

16 million tonnes

13.5 million tonnes

met by the **19** member states

Imports and exports

Up till 2017 the EU was a net importer of sugar. Relative to its demand from the food sector of about 16 million tonnes/year, total import availability reached 3.5 million tonnes/year at zero or low duty, of which up to 3 million tonnes/year was typically actually imported. In contrast EU sugar exports, which were restricted until 2017, averaged only about 1.3 million tonnes/year.

3.5 million tonnes imported

met mainly from duty free imports

1.3 million tonnes exported

due to reforms and restricted globally traded exports

A significant change in EU supply and demand balance after 2017

Increase in:
production and exports

Reduction in:
prices and imports

After 2017

As a consequence of policy reforms and abolition of quotas, the EU supply and demand balance changed significantly after 2017. EU production increased, prices fell sharply which reduced the demand for imports, and exports were no longer capped and so increased. As a result, the EU has since become a net exporter.

EU policy reforms

The sector has been progressively deregulated by two substantive reforms in 2006 and 2013. The first of these resulted in the EU beet sugar industry closing almost half its manufacturing sites and cutting production capacity by 4.5 million tonnes (30%)².

¹ EU Commission data (FCA)

² Between 2005 and 2015 the EU beet sugar sector closed 83 factories, cut over 24,000 direct jobs and lost 165,000 grower suppliers. CEFS and CIBE statistics, 2016

³ European Commission Sugar Management Committee trade reports, 2010/11 – 2015/16

⁴ Council-Parliament Regulation 1308/2006, Articles 17-20 and Articles 219-221

⁵ European Commission, voluntary coupled support for sugar beet, notifications by Member States, 15 April 2015

Sugar imports significantly liberalised

Sugar imports into the EU have also been significantly liberalised, in line with the EU's development and trade objectives. For example, unrestricted duty-free imports were introduced from 2009 for Least Developed Countries (LDC) and African, Caribbean and Pacific (ACP) countries, duty free imports were offered to Balkan countries, and an increasing number of free trade agreements are being agreed and introduced, mostly at zero duty³. Low duty (€98 per tonne) 'CXL' imports were also agreed for several countries including Brazil, Cuba, India and Australia. As a result of these changes, EU sugar import availability increased by 60% from about 2.2 million tonnes/year pre-2006 to 3.5 million tonnes/year by 2016/17. Of this, 2.7 million tonnes/year is now available duty free. The quantity actually imported each year fluctuates depending on the attractiveness of the EU market price compared to competing markets globally.



2.7 million tonnes of imports now available **duty free**



A substantially deregulated sector

The last stages in this reform process were completed in October 2017. The EU sugar sector became substantially deregulated, with sugar covered by the general provisions of the Common Agricultural Policy (CAP), including the decoupled basic payment scheme and crisis measures⁴. However, a few sugar-specific measures have remained in place beyond these general provisions, for example some limited voluntary coupled support has been agreed until 2019 for less efficient producers in 11 Member States⁵ for food and livelihood security and rural development.

This does not apply, however, for the more efficient Member State industries, including the UK's.

the UK sugar sector

The UK demand for sugar is currently around 2 million tonnes annually and comes from two main sectors; the food and drink manufacturing and retail markets.

Roughly 85% of the demand is from food and drink manufacturers, where it is used as an ingredient in food and drink products, with the remaining balance of around 15% demand by the retail sector for consumers, cafés and restaurants.

The majority of UK consumer sugar consumption is in the form of refined granulated sugar. A smaller, but still significant share of the market is taken by speciality products, such as demerara, muscovado, caster, fondant, icing sugars and more.



how demand is delivered



Supplied from domestically produced beet sugar grown in Eastern England



Imported from EU beet sugar processors



Supplied from imported cane sugar, which is finished, packaged and supplied by a refinery in East London



¹⁹ British Sugar: A homegrown success story.



3,000
growers

supply 8 million
tonnes of crop

The domestic beet sugar industry

Britain's sugar yields are comparable with the best performing global cane or beet industries and are **higher than Brazil's**

25%

yield increase
over the past
ten years



UK beet sugar production

UK beet sugar production is highly efficient¹, and is grown by 3,000 growers supplying about 8 million tonnes of crop annually. Sugar beet yields have been increased by 25% over the past ten years² driven by joint industry targeted initiatives, and are continuing to increase at over 2% annually

– higher than for most arable crops³. Britain's sugar yields are comparable with the best performing global cane or beet industries and are higher than Brazil's⁴.

Domestically grown sugar beet is supplied to British Sugar, which extracts the sugar and

converts it into a wide range of products⁵. British Sugar has a current installed sugar production capacity of about 1.4 million tonnes annually. It operates four advanced manufacturing plants in East Anglia and East Midlands.

The UK's single beet sugar processor

British Sugar has consistently invested in its operations to drive efficiency improvements, reduce energy costs and emissions, and improve operational flexibility – around £250 million has been invested over the past five years⁶.

Today it has some of the most advanced production facilities, and is one of the most cost efficient processors in the EU⁷ and is internationally competitive. In addition to sugar, it produces a wide range of co-products including: high performance combined heat and power electricity, renewable transport

fuel, renewable energy from anaerobic digestion, animal feed, horticulture, liming products and topsoil.

About 9,500 jobs are supported throughout the economy by the UK beet sugar industry⁸, mostly

in rural areas of East Anglia and the East Midlands, and over £200 million of corporation tax has been paid by British Sugar to the UK exchequer over the past five years⁹.

£250
million
invested

9,500 jobs
internationally
competitive

the UK sugar sector

continued

The refining sector

Raw sugar

The UK refining industry is supplied from raw sugar which has already been extracted from cane and partly processed in the originating countries' cane mills. Raw sugar in this partly finished state is imported from a variety of cane sugar producing countries. The mix of raw sugar supplying countries changes from year to year depending on availability and commercial considerations, but normally includes: African, Caribbean and Pacific (ACP) countries and Least Developed Countries (LDC), Brazil, Central and South America, and Australia.



**the mix of
raw sugar
supplying
countries
changes**

**refined sugar
imports
and refining
practices were
liberalised**

**2006
and 2013
sugar policy
reforms**



In addition to the increased EU access for zero and low tariff imports, EU import rules also allow tariff-free import and refining of world market sugars provided the resulting products are exported outside the EU.

To support globally competitive refiners, EU import laws allow tariff free refining of world sugars for world market sales.

Raw sugar supplies entering the UK are refined by T+L Sugars Ltd. (TLS) at their refinery at Silvertown in East London. The refinery has a potential

installed capacity of 1.2 million tonnes annually¹⁰, but has been operating at a lower level than this in recent years¹¹ due to competitive pressures from other refiners and technology developments in some of the cane sugar supplying countries. TLS also operates a specialist processing plant close to the refinery at Plaistow Wharf, which produces speciality sugar and syrup products¹². TLS is owned by ASR Group International Inc. (ASR).

¹⁰TLS website, 2017.

¹¹TLS statements in The Telegraph, 6 June 2015.

¹²TLS website, 2017.

¹³Mauritius completes move to refined sugar exports, Mauritius Sugar Syndicate article in Agritrade, 9 August.

Refined sugar

Sugar can also be imported into the UK in the form of refined white sugar and other specialist finished products. As part of the 2006 sugar policy reform, import and refining practices were liberalised – most imports were previously restricted to raw sugar and reserved for full-time refiners.

This encouraged some cane sugar producers like Mauritius¹³ to invest in refining technology in their home country, so enabling them to supply refined, instead of raw, sugar and capture a greater proportion of the added value.

Imports of this kind no longer need to be refined at destination, and can be supplied direct to customers. Although this change does not reduce the overall level of imports, it has contributed to the competitive pressure on refiners.



more refined
cane sugar
imported

competition from cane
suppliers who have
redefined their industries



case studies

The sugar policies implemented in a handful of global producing countries, namely; Brazil, the EU, India, Thailand and the USA, have a substantial effect on the world sugar market's supply and demand balance. In response to these conditions, most global sugar producing countries reviewed in this overview have put in place various support policy measures.

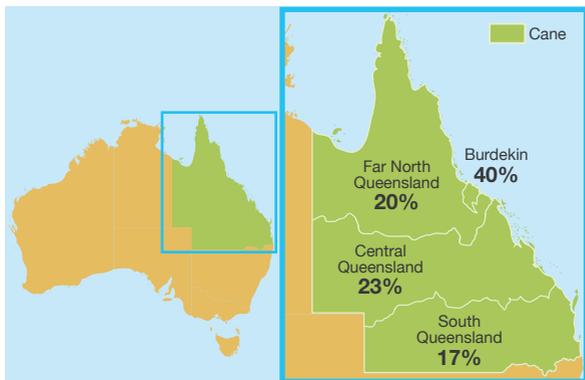
The following case studies review the sugar support policies used in seven of these influential producing countries, and is structured as follows:

Australia	16
Brazil	18
Canada	22
EU	24
India	26
Thailand	28
USA	30

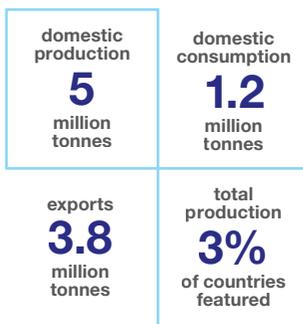


case study:

Australia



All of Australia's sugar production is in these areas.



Australia is a significant sugar net exporter. It operates a predominantly 'free market' sugar policy, but still offers indirect support for its farmers and intervenes in the sugar sector at times of climatic or market crisis.

The Policy Environment

Australia provides little direct support for its sugar industry, having abolished import duties and most production controls some time ago.

However, despite the natural protection afforded by its distance from other sugar producers, the government has had to provide support

at periods of depressed world sugar prices in the absence of any import protection.

Single desk 'pool' selling and exporting arrangements

Until 2006 all Australian sugar sales and exports were compulsorily handled by a single desk called Queensland Sugar Limited (QSL)¹. QSL controlled sugar contracting, export prices, storage, shipping and trading arrangements. This effectively reduced domestic competition and also provided substantial indirect government support for marketing, sales and exports

on behalf of mills and cane growers.

QSL has since been privatised and is now owned by the cane growers. It represents seven milling companies and 4,000 cane growers and so retains extensive control over Australian sugar export sales and trade. Although, since July 2014, sugar mills outside QSL can sell up to one-third of their production independently, QSL retains the right to sell two-thirds of this sugar plus all the sugar from their incorporated members. In practice, this means that QSL continues to manage the majority of Australian sugar exports².

It also operates six bulk sugar export terminals with a combined storage capacity of 2.5 million tonnes.

These arrangements, and the substantial government-financed infrastructure behind them, provide a form of indirect support for the Australian cane sugar industry which has existed for many years.

Cane support measures Australia does not offer routine direct support for its cane industry. However, because of its exposure to world market volatility, the cane industry regularly gets into serious difficulties, which provokes requests by the industry for government intervention. For example, in 2014 the Queensland cane growers called on the state government to cut their power costs to 'save the industry'³. In April 2015, the Queensland grower's association and other political commentators⁴ stated that cane growers need at least AU\$380/tonne to break-even, and claimed that the world sugar price at that time was not sustainable.

In the previous decade, the Australian government introduced two reform packages in 2002 and 2004 which, in effect, made government support available for most of the decade as a

response to a long period of low world sugar prices. The 2002 package included financial assistance for the industry worth AU\$150m with a further AU\$440m over five years as a result of the 2004 package⁵. Measures in the two reform packages included temporary income support to stabilise the industry, cane replanting interest rate subsidies and help for those wishing to quit the industry.

General agricultural support

In common with many other countries, Australia operates a system of indirect farm support, which is also available for sugar cane growers.

For example, in response to prolonged drought affecting Queensland and New South Wales, in February 2014 the Australian government announced a new AU\$280m Drought and Farm Finance Concessional Loans Scheme, as part of the existing Farm Finance program⁶.

This scheme was subsequently extended and increased. By June 2016 over AU\$438m of concessional loans had been approved, almost half of which were for Queensland farmers including cane growers⁷.

The Australian Agricultural Competitiveness White Paper also made a commitment to further extend the scheme by offering up to AU\$250m/year for the 10-year period 2016/17–2026/27, financed from a Treasury provision of AU\$2.5bn⁸.

Our Analysis

Australia seeks to operate a mainly free market model for its sugar sector, with little routine direct support for cane growers or millers. As a substantial net exporter, it is heavily dependent on the world market for its income and growth.

In the past, this has been possible because of the Australian industry's historic production efficiency, coupled with geographical remoteness plus some state intervention in marketing and sales.

However, more recently this has proved difficult to sustain. Long term falling efficiency levels and depressed world market prices for their exports have made the industry less competitive. As a result, the Australian industry is susceptible to weather shocks and the state regularly has to intervene during adverse conditions.

¹ Queensland Sugar Limited (QSL) was established by Australian government legislation to market and sell domestic sugar production

² QSL website, 2017

³ ABC rural news, 1 April 2015

⁴ Senate submission by MP Bob Katter, 1 October 2014

⁵ LMC, Australia's Sugar Industry Reform Programmes and their Compatibility with the WTO, Oxford, 2008

⁶ Australian Treasury, February 2014

⁷ Deputy Prime Minister announcement, 15 June 2016

⁸ Ibid

case study:

Brazil



All of Brazil's sugar production is in these areas.



As the leading global producer and exporter of sugar and ethanol, Brazil is the marginal supplier and principal price setter for the world market. This pre-eminent position has been created by substantial industry expansion driven partly by the country's abundant natural resources, but also through long-standing government support and market intervention.

The sugar and ethanol industries are particularly closely integrated and commercially interdependent. This means that any support offered to one activity can benefit the other. Both products are manufactured from sugar cane, whose

lengthy crop production cycle spanning several years limits the sector's ability to respond to market signals to inform growing decisions in terms of production scale.

Brazil has supported its ethanol industry over many years in a variety of ways, including incentivising sales to the domestic car fleet, substantial mandatory ethanol blending in gasoline, fuel price setting, supporting the development of flex-fuel vehicles and banning the purchase of diesel-powered cars.

The government also supports the sugar industry, though on a smaller scale. Subsidies are regularly provided to the less

competitive Northeast producers at times of market stress or in response to crop failures, and general financial and Research and Development (R&D) support is also provided for the industry as a whole.

The Brazilian sugar-ethanol industry has expanded dramatically since 1975, the sugar cane 'crush' has increased 8-fold, its sugar production nearly 6-fold and its ethanol production 48-fold¹.

The Ethanol Programme

Sugar cane can be processed to make both sugar and ethanol. Mills which do this use common plant and equipment for the front half of the

manufacturing operation, with considerable savings in fixed costs.

In Brazil, sugar and ethanol are particularly integrated – sugar production is between 41% and 48% of total cane cultivation, and all but sixteen (94%) of Brazil's sugar producing mills produce both products². This means the two activities are closely linked and commercially interdependent. Co-production of sugar and ethanol reduces costs and improves overall profitability by increasing scale production, improving process optimisation and extending the operating season. Any support offered to one activity can therefore cross-subsidise the other. There is a commercial arbitrage between products allowing processors to take advantage of relative changes in market conditions.

The Brazilian government supports its ethanol programme in a variety of ways:

The Proálcool programme
In response to the oil price shocks, Brazil decided in 1975 to introduce a national policy to increase ethanol production to reduce its reliance on imported oil. Components of this policy included: subsidising the auto industry to produce ethanol engines, tax advantages

for vehicles which used ethanol, setting the ethanol price at a level which made it competitive with gasoline, taxing imported oil and subsidising distribution of the new fuel³. As a result of these incentives, ethanol production increased 20-fold over the two phases of the Proálcool programme between 1975 and 1997⁴. Much of this manufacturing plant and infrastructure remains in place today and is being used for current sugar and ethanol production.

Mandatory ethanol blending

The Brazilian government sets mandatory minimum blending rates for 'gasohol' (a mixture of ethanol and gasoline). For the past 25 years these have typically varied between 20% and 25%⁵, so providing a secure market for the equivalent of over 10 million tonnes of sugar each year.

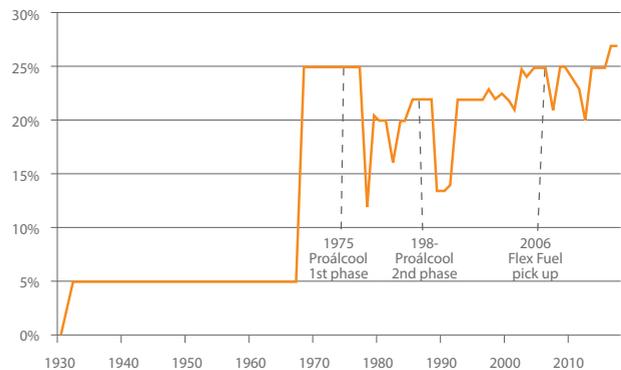
Gasoline price setting

National fuel prices are set by the state-controlled company Petrobras so providing a minimum price for the blended fuel ethanol⁶.

Tax incentives

The tax on industrialised products (IPI) is lower for flex-fuel vehicles than for gasoline powered vehicles. Since 2004 this IPI differential has been set at 18% and 25% respectively⁷. Individual states are also empowered to tax gasoline sales through the tax for circulation of goods and services (ICMS). In recent years ICMS has averaged 18% for ethanol and 26% for gasoline⁸.

Mandated ethanol blend in gasoline



Source: MAPA and updated figures from Czarnikowk

¹ DATAGRO presentation to national ethanol conference Florida, 2012.

² F. O. Licht International Sugar and Sweetener Report, July 2016.

³ Government support and the Brazilian sugar industry, P. H. Chatenay, 2013.

⁴ Brazilian Sugarcane Industry Association, UNICA.

⁵ Brazilian Ministry of Agriculture, MAPA.

⁶ Marcelo Teixeira, Brazil ethanol mills benefit from Petrobras price hike, September 2015.

⁷ USDA, Brazil Biofuels Annual, GAIN report BR 16009, 12 August 2016.

⁸ Ibid.



Flex-fuel vehicles

About 20 years ago the Brazilian government decided to encourage the development of 'flex-fuel' cars with engine systems able to adapt to different blends of ethanol. In 2002, it introduced differential taxation to stimulate sales in which the sales tax on flex-fuel cars was cut below the normal rate. By 2006 over 80% of new cars were flex-fuel, and by the end of 2012 over 18 million flex-fuel vehicles were registered.

Diesel cars

Since the 1970s the Brazilian government has prohibited the private purchase of diesel-powered cars⁹ to help promote ethanol fuel sales.

Ethanol storage

The National Bank for Social and Economic Development (BNDES) has set up a sugar-ethanol support programme to help finance ethanol storage, with an annual budget of R\$2bn (£480m) in 2014 and 2015¹⁰.

RenovaBio

In November 2017 Brazil's President announced a major new policy to reduce dependence on oil and cut

emissions, by expanding biofuels to provide 18% of the country's energy by 2030. The policy is formed of a biofuels-related emissions trading scheme in which 'emissions credits' will be created and assigned to producers in proportion to the amount of ethanol they produce. National emissions reduction targets will be broken down to individual distributors, which will be required to purchase the emissions credits from ethanol and other renewable producers. The Brazilian government will control the market dynamics and will set the targets and value of the emissions credits. It is expected that the new policy will incentivise the construction of at least 25 new ethanol plants, each with an average crushing capacity of 4 million tonnes of cane¹¹.

The Policy Environment

The Brazilian model is one of higher domestic prices and a substantial surplus for ethanol production or export of sugar to the world market.

The government has consistently sought to support and expand ethanol production and reduce

dependency on imported petroleum against a backdrop of strong economic growth. This has involved numerous interventions such as:

Sugar cane price

Brazilian cane supply contracts include revenue sharing conditions in which the cane price paid to the supplying farmers is derived from the market prices of both sugar and ethanol¹². This further strengthens the integration of the sugar and ethanol 'co-production', and ensures that government support and subsidies – for either sector – are shared with the farm suppliers.

Direct financial support for sugar cane

A variety of government controlled financial provisions are available directly for the cane sector.

Northeast cane aid

The government offers short term subsidies at times of distress for cane growers in the Northeast, where conditions are less favourable for cane production. For example, a drought relief initiative was introduced for Northeast cane farmers in 2011 worth US\$250m¹³.

⁹ Brazil is not ready for diesel cars, International Council on Clean Transportation, 28 September 2015.

¹⁰ USDA, Brazil Biofuels Annual BR 14004, July 2014 and BR 15006, August 2015.

¹¹ F. O. Licht International Sugar and Sweetener Report, 23 January 2018.

¹² World Beet and Cane Growers Association, November 2015.

¹³ Brazil Ministry of Finance, 21 May 2013.

¹⁴ Brazilian Sugarcane Industry Association, UNICA, 17 February 2014.

¹⁵ WTO, Committee on Agriculture meeting on export competition, March 2013.

The sugar cane innovation programme

In February 2014, the Brazilian Sugarcane Industry Association (UNICA) announced a new initiative 'PAISS Agricola' funded by the national bank BNDES, to incentivise innovation in the sugar-ethanol sector. A total of R1.5bn (£350m) has been made available from 2014 to 2018 to improve cane seed varieties, machinery technology and ethanol compatibility¹⁴.

Exports

Brazil supports its exports through the use of export

credits, guarantees and insurance as part of the Project for Export Financing (PROEX) programme funded by the Banco do Brasil. Payments for sugar exports (normally less than US\$0.4m/year), are notified to the World Trade Organisation (WTO)¹⁵.

General agricultural support which benefits the cane sector

Various general agricultural support measures are used by the Brazilian government, which can have indirect benefits for the cane industry.

Debt restructuring

Brazil has a history of assisting its agricultural sector at times of crisis by negotiating favourable repayment conditions on debts¹⁶. This facility may be relevant in the future for restructuring debt in the cane sector, given the current high level of indebtedness of Brazilian mills (a record number filed for bankruptcy in 2015)¹⁷.

Agricultural research

The national bank BNDES supports agricultural research including sugar cane. The programme funded a total of R1.9bn (£450m) in 2014¹⁸.

Our Analysis

Brazil is the leading global producer and exporter of sugar and ethanol and its marginal supplier, and is therefore the principal price setter on the world market. The sugar and ethanol industries are closely integrated and commercially interdependent – most cane mills are able to produce both products and decisions are normally taken in concert across both industries depending on relative market conditions and attractiveness. Support offered to one industry therefore benefits the other.

The ethanol industry has received significant and long standing support from the Brazilian government, including mandatory ethanol blending, incentivising ethanol investment and sales, and discouraging the use of diesel cars. The government also controls fuel prices which provides a minimum price for the blended fuel ethanol. These policies have helped drive the substantial expansion in the ethanol industry in recent decades, which has benefitted the overall cane sector and sugar industry.

Brazil also supports its sugar industry. Direct subsidies are offered at times of economic stress to its less efficient producers and general agricultural support is also available for the sugar cane sector to improve machinery, technology and agronomy.

Because it has such a large exportable surplus of both sugar and ethanol, Brazil is the single most important influence on the world sugar market. Its government policies in both sugar and ethanol therefore have a substantial effect on world market levels, and have contributed to its instability and historically low levels.

Unrestricted access for Brazil to EU or UK markets would expose buyers, farming partners and processors to this volatility. Without insulation from extreme price cycles, our inability to respond to price volatility could put investment in the industry and its viability at risk.

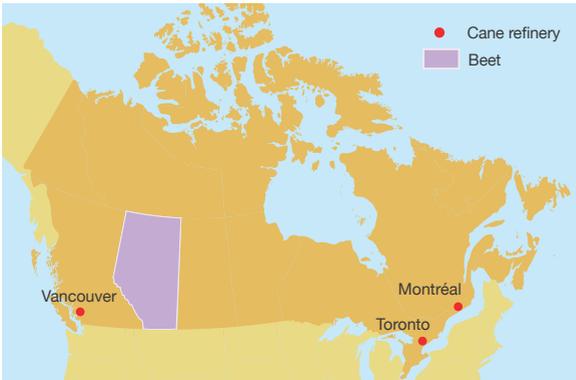
¹⁶ WTO Disciplines on Agricultural Support, David Orden et al, 2011.

¹⁷ F.O. Licht, International Sugar and Sweetener Report, January 2016.

¹⁸ USDA, Brazil Biofuels Annual, Gain report BR 15006, 10 August 2015.

case study:

Canada



Sugar beet production and cane refineries in Canada.

domestic production
0.1
million tonnes

domestic consumption
1.3
million tonnes

imports
1.2
million tonnes

total production
<0.1%
of countries featured

Canada has only a small domestic sugar industry and imports the majority of its domestic requirements in the form of raw sugar. Processed by its portside refineries, located at Montreal, Toronto and Vancouver which supply over 90% of Canadian consumption. A small beet sugar plant is located south of Calgary at Taber in Alberta which produces about 100,000 tonnes/year and supplies local customers.

Although a minor player in global terms, Canada has been included as an example of a country which is almost wholly dependent on imports to satisfy domestic demand.

The Policy Environment

Canada often claims its sugar industry has little government support, and so is a 'free market model' for other global producers¹. However, Canada enforces an unusual system of additional duties on imports of refined sugar from its main competitors which effectively limits imports of refined white sugar² and protects their refining industry.

Canadian sugar industry structure

Canada has no known support arrangements for its domestic beet sugar industry having scrapped its subsidy arrangements as being superfluous as the industry.

Import arrangements

Canada's international trade arrangements also at first sight appear to be minimal. Imports of raw sugar enter the country duty free. A small duty of CAD\$31/tonne³ (equivalent to 5% – 8% depending on world prices) is applied to imports of refined white sugar. But this does not tell the whole story, as other policy restrictions have been put in place.

USA anti-dumping duties

Under normal circumstances the USA would be expected to be a significant sugar supplier to Canada as much of central Canada is within range of the competitive US beet sugar industries

in the Red River Valley and Michigan. But in reality this does not happen.

Imports of refined white sugar to Canada from the USA are subject to 'anti-dumping' duties equal to 78% of the selling price to the importer in Canada⁴. At typical US supply prices this equates to an import duty of at least US\$400/tonne which effectively prevents any significant import trade. Imports of white sugar from the USA are consequently negligible, averaging less than 1% of total imports in recent years⁵.

EU countervailing duties

Canada also applies countervailing duties to all

imports of white sugar originating in or exported from the EU – another potentially competitive supplier. In September 2014 these duties were increased to €244/tonne⁶. As a result, white sugar imports from the EU are close to zero – less than 0.1% of total demand⁷.

This is significant in the context of the recently agreed Canada-EU Comprehensive Economic and Trade Agreement (CETA)⁸. Under CETA, trade in sugar between the EU and Canada theoretically becomes 'liberalised' after seven years⁹. However, the continued enforcement of the countervailing duties means

that the trade agreement is not reciprocal for sugar – free trade will be possible from Canada to the EU, but not the other way round.

European country additional duties

Canada applies both anti-dumping and countervailing duties to white sugar imports from Germany, the UK, Denmark and the Netherlands¹⁰ which similarly prevents any significant quantities of refined white sugar imports from these countries.

canada

Our Analysis

The Canadian sugar model is less 'free market' than it first appears. Canada has introduced general and country-specific import tariffs which protects its refining industry by giving it unrestricted access to low cost raw sugar supplies from the world market at zero duty, while preventing imports of refined white sugar from Canada's main competitors, and placing a small but significant duty on white sugar imports from all other sources. This system therefore also involves a form of government intervention, designed to be advantageous for Canada's refining industry.

It does not, however, offer a sustainable basis for operating a competitive domestic industry. The only reason the small beet sugar operation in Alberta survives under such adverse circumstances is because of its remote location. Being 1,200km and the opposite side of the Rockies from the Vancouver refinery, and about 4,000km from the refineries in Montréal and Toronto, increases transport costs sufficiently to provide a small market niche for local customers for this operation¹¹.

¹ Canada Sugar Institute website, 2016

² Imports of refined white sugar currently account for less than 3% of total imports and Canadian demand, ISO yearbook, 2016

³ Canada Sugar Institute website, 2016

⁴ Canada Border Services Agency (CBSA) Statement of Reasons relating to anti-dumping and countervailing duties in respect of the USA and EU, 30 June 2005 and 30 June 2010

⁵ ISO yearbook, 2016; Canada International Trade Statistics Division, 2016

⁶ CBSA letter to CEFS, 4 September 2014

⁷ ISO yearbook, 2016

⁸ The Canada-EU comprehensive economic and trade agreement (CETA) was agreed in October 2016

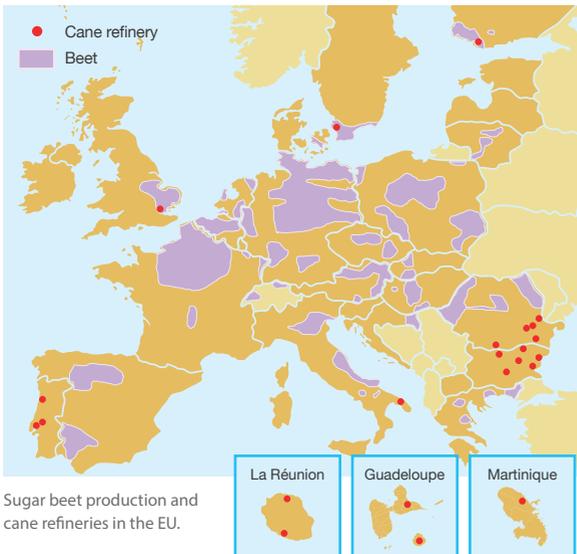
⁹ Under CETA import duties for sugar reduce to zero seven years after entry into force of the agreement

¹⁰ CBSA letter to CEFS, 4 September 2014

¹¹ Statistics Canada, Catalogue 96-325-X, May 2008

case study:

EU



Sugar beet production and cane refineries in the EU.

After 2017

domestic production
19
million tonnes

domestic consumption
16
million tonnes

exports
3
million tonnes

total production
11%
of countries featured

Until 2005, the European Union (EU) operated a protectionist sugar policy as part of the EU's Common Agricultural Policy (CAP). The sugar regime was the last part of the CAP to be reformed.

EU sugar policy has been largely dismantled in two substantive reforms¹ in 2006 and 2013 which resulted in major restructuring of the industry², cuts in support prices, export restrictions, and elimination of production

quotas and most internal controls from 1 October 2017.

At the same time, the EU also adopted a more flexible import policy. Although it still applies high fixed import duties, these have been ameliorated by a series of international agreements including unrestricted duty-free access for African, Caribbean and Pacific (ACP) countries, and Least Developed Countries (LDC) from 2009, semi-preferential 'CXL' Tariff-Rate Quotas (TRQs) at reduced

duty, and an increasing number of Free Trade Agreements (FTAs) most of which are at zero duty. The net effect of this is that by 2017 preferential import availability to the EU will reach 3.5 million tonnes, of which 2.7 million tonnes will be duty free³.

In addition to this, raw sugar can be imported free of duty, provided it is refined in the EU under customs control and then exported.

The Policy Environment

Following the removal of quotas and most support arrangements from 1 October 2017, the EU sugar sector became substantially deregulated. However, some support measures have remained in place as follows.

Direct support for sugar beet

From 2017 most market measures including quotas and minimum beet prices were abolished, and the majority of production will receive no direct payments. However, some 'coupled aid' was agreed for less efficient industries in 11 Member States⁴ paid from national budgets, which provides a beet price top-up averaging about €5/tonne of beet for a designated crop area up to 2019. Although notified to the World Trade Organisation (WTO) as not trade distorting ('blue box'), this nevertheless represents a direct subsidy for one-quarter of EU sugar production worth about €180m/year. Coupled aid is not available for the more efficient European sugar industries, including the UK's.

Import protection

Despite the substantial increase in preferential import access, the EU will still maintain its high fixed import duties for non-preferential imports.

General agricultural support

In the 2013 CAP reform agreement, the majority of farm support was switched to decoupled (i.e. delinked from production) area payments under the 'basic payment scheme'. As an arable crop sugar beet also qualifies for this area payment, worth about €250/hectare up to 2019. Although decoupled aid does not affect crop selection decisions, it is a substantial farm income support subsidy which also benefits beet growers.

Crisis measures

As part of the 2013 CAP reform, 'market disturbance' measures were included in the final regulations allowing the Commission to propose market interventions in the

event of market failures or crises. These measures, which are not sector-specific, include general provisions and private storage aid⁵. Although neither has been used for sugar, they are available and could be used after 2017.

Bioethanol

The EU has agreed Directives⁶ which set a mandatory Member State target level of 10% (of which up to 7% can be derived from crop sources) for the use of renewable energy in transport fuel by 2020. This mandate is proposed to be cut to 3.8% by 2030. Beet-based bioethanol is one of the products which can be used, and was included in the latest CAP legislation for this purpose⁷, although no specific sub-targets have been agreed.

Our Analysis

From 1 October 2017, the EU's sugar sector became substantially deregulated. General measures will be available to respond to market crises, but these have not yet been used in the sugar sector.

Area payments are available for arable crops, including sugar beet, which are delivered for production. Direct 'coupled' support has also been agreed for some less efficient industries, which is capped by area and budget.

Although fixed import tariffs remain in place, substantial preferential imports have been agreed which by 2018 will total 3.5 million tonnes, of which 2.7 million tonnes will be available duty free.

After reform the EU sugar landscape is liberalised and market led. Imports in the future will be determined by market economics.

¹ Council Regulations 318/2006, 319/2006 and 320/2006; Council-Parliament Regulation 1308/2013

² Between 2006 and 2010 the EU sugar industry closed almost half its factories with the loss of 24,000 direct jobs and 160,000 growers, CEFS data base, 2016

³ European Commission, Sugar Management Committee trade data, 2016

⁴ European Commission, voluntary coupled support for sugar beet, notifications by Member States, 15 April 2015

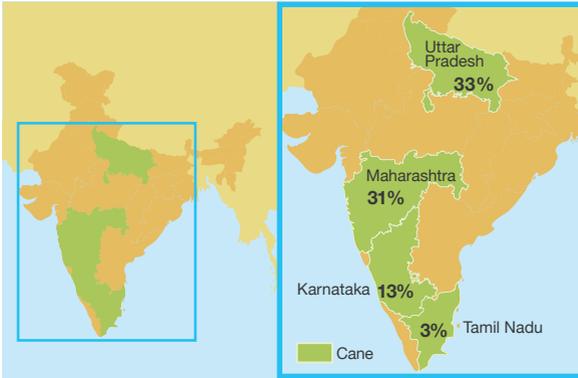
⁵ Council-Parliament Regulation 1308/2006, Articles 17-20 and Articles 219-221

⁶ Renewable Energy Directive 2008; Fuels Quality Directive, 2008

⁷ Council-Parliament Regulation 1308/2013, Article 140

case study:

India



80% of India's sugar production is in these areas, with the remaining 20% spread across wider India.

domestic production
31
million tonnes

domestic consumption
25.5
million tonnes

exports
5
million tonnes

total production
15%
of countries featured

India is the world's largest domestic sugar consumer and looks set to be the largest producer in 2018/19 with a 31 million tonnes crop.

India oscillates between being a net importer and exporter depending on prevailing sugar policy and subsidy arrangements, as well as crop output.

India is the most influential 'swing supplier' to the world market and contributes to its volatility.

The Policy Environment

The sugar industry in India is large and fragmented. In the states in which sugar cane is grown it has major economic

and political significance because of the number of small cane growers and their families it supports. As a result, the sector is heavily regulated at both the federal and state levels¹.

Farmers receive minimum cane prices which are set at the federal level and supplemented by state governments. Because of the political pressures, the combined federal/state mandated cane prices often make cane more remunerative than other crops.

The government aims to support producers when the domestic industry is under pressure and consumers

when domestic market prices are rising. To do this, the government controls both import and export volumes.

When it is protecting the sugar industry the government raises import tariffs (the import tariff was raised to 50% in July 2017)² and it grants export subsidies. Conversely, when domestic market prices are rising, the government lowers tariffs (to zero on occasion) and authorises imports. As a guiding principle, the government only authorises imports to the extent it believes domestic production has fallen short of likely consumption and only allows exports when it is sure the domestic market is adequately supplied. Export

subsidies are regularly used to clear excess stocks and support the domestic market.

Cane price support

A minimum cane price is fixed by the federal government each year by regulation. For the 2016/17 season (October/September) the FRP is set at 2,300 Rupees/tonne (about US\$34.5). For 2017/18 the government has been recommended to set a FRP of 2,750 Rupees/tonne³ (about US\$38). State governments fix regional cane prices to supplement the national FRP typically by 30-35%.

Export subsidies

India has no World Trade Organisation (WTO) export subsidy commitments. Despite this, when there are surpluses that have to be exported to support the domestic market, India provides export subsidies which countries such as Australia regard as not being WTO-consistent⁴. In 2018 to manage an exceptionally large crop the government stimulated exports with 55 billion INR (\$760 million) of subsidies and also reintroduced the minimum selling price for sugar of 29INR/kg (effectively increasing the domestic price of sugar by 6INR/kg on the basis that surplus production would be exported⁵).

The federal government agreed to pay an extra US\$0.7/tonne of cane in 2014/15 conditional on mills meeting their export targets⁶.

The state of Maharashtra waived a 3% tax on cane purchases in 2015/16 for mills which exported at least 12% of their output⁷.

India regularly reimburses transport costs for mill exports⁸.

Soft loans

The Indian government sometimes offers low interest loan schemes to cane millers to help fund payments to cane farmers. Recent examples of this include: in 2013/14 US\$1.1bn at zero interest; and in 2014/15 US\$950m for which the federal government subsidised the interest burden charged by commercial banks up to 10%⁹.

The Union Budget 2017/18 (April-March) allocated about US\$76m under the Sugar Development Fund to provide assistance in the form of interest to sugar mills towards working capital loans of about \$980m¹⁰.

A Sugar Development Fund with preferential interest rates has been set up to encourage modernisation of sugar mills up to 40% of the project cost. Between 2007 and 2015 a total of US\$1.4bn was disbursed in this way¹¹.

Ethanol

In October 2015, the Indian government introduced a compulsory ethanol blending mandate of 10%¹², and subsidised loans were also offered through the Sugar Development Fund to encourage mills to invest in ethanol production¹³.

Our Analysis

India's sugar sector is protected through a combination of domestic price support, variable import tariffs and export subsidies, and soft loans. High mandated cane prices reduce the normal planting response to low world prices, which exacerbates global price volatility.

As it is such a large domestic producer and consumer and because its average supply/demand balance is close to neutral, India oscillates between being a net sugar importer and exporter; depending on prevailing sugar policy, subsidy arrangements and crop output. This makes India one of the most influential 'swing suppliers' to the world sugar market, which contributes to its volatility.

¹ USDA, GAIN report, India Sugar Annual 2017, 13 April 2017

² SugaronLine, INDIA: Sugar import duty raised to 50 percent, 10 July 2017

³ Indian Sugar Mills Association, Fair and Remunerative Price of Sugarcane in the Country

⁴ WTO, Committee on Agriculture, Answers to questions raised by members, G/AG/W/142, 20 May 2015

⁵ Reuters, 29 September 2018

⁶ Antoine Meriot, Indian government role in production expansion, August 2016

⁷ Reuters, 4 March 2016

⁸ WTO, MC10 Ministerial on export competition, December 2015

⁹ Indian Government Press Information Bureau, Financial assistance to the sugar industry for payment of cane price arrears

¹⁰ USDA, GAIN report, India Sugar Annual, 13 April 2017

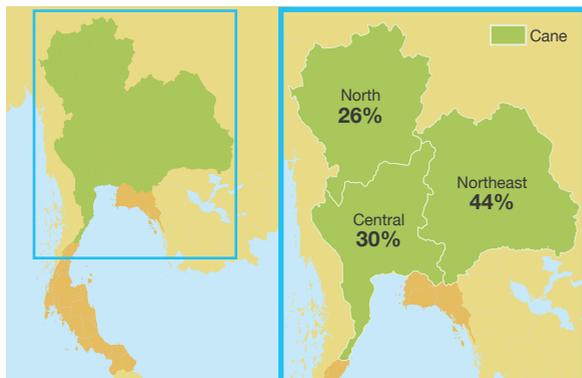
¹¹ Indian government estimate, compiled by Antoine Meriot, August 2016

¹² Economic Times, 11 August 2015

¹³ USDA, India Sugar Annual, GAIN report IN5050, 21 April 2015

case study:

Thailand



domestic
production
14.7
million
tonnes

domestic
consumption
3.3
million
tonnes

exports
11.4
million
tonnes

total
production
6%
of countries
featured

All of Thailand's sugar production is in these areas.

Thai sugar production and exports have greatly expanded in recent years and Thailand is currently the world's second largest sugar exporter¹.

This expansion has been driven by substantial government subsidy and protection for the industry for many years.

The Policy Environment

Until recently, Thailand operated a highly protectionist and subsidised sugar policy, with government intervention in almost all aspects of the sugar sector, which was based on the pre-2006 EU sugar policy. In response to a World

Trade Organisation (WTO) challenge by Brazil, Thailand has reviewed and updated its subsidy arrangements.

Their sugar policy used to work like this:

Domestic sugar sales were controlled and limited by a fixed annual quota (Quota A – set at 2.4 million tonnes in 2014). Sugar produced in excess of this couldn't be sold internally and had to be exported (Quotas B and C). Quota B exports (currently set at 0.8 million tonnes of raw sugar) were controlled by the Thailand Cane and Sugar Corporation which had overall responsibility for pricing and

selling. The average price from the Quota A and B sales determined the final cane price paid to farmers. Quota C represents the residual surplus which had to be exported, but under the direction of individual companies.

Cane farmers also received supplementary payments whenever the world sugar price was low. These were funded by a statutory levy on sugar of THB5/kg, which has since been removed. It is unclear when these funds will run out, however the Government still paid a supplementary payment in 2018 and the provisional cane

price for 2019 is lower still at THB700mt^{2,3}.

Export subsidies

Thailand has no WTO commitments for sugar export subsidies and so is not allowed to subsidise its exports. In its last notification (2014) to the WTO, Thailand stated it had provided zero export subsidies from 2009 to 2013⁴.

Brazil WTO dispute challenge

Brazil challenged this through its WTO settlement dispute in April 2016, claiming that

Thailand cross-subsidised its sugar exports through its system of quotas and fixed domestic prices. Brazil has since accepted the changes Thailand has made to its policies, listed below, and the WTO claim is no longer active^{5,6}.

Post reform

In January 2018 Thailand announced that it would abolish both the domestic sales quotas and the floating of domestic sugar prices⁷. Sugar has since been moved onto the Government's list of

Controlled Goods and Services, meaning its domestic sales price is capped by a limit (currently set at THB23.50/kg), and the THB5/kg statutory levy on domestic sugar sales has been effectively replaced with a THB5/kg domestic sugar premium⁸. However, it is still not clear to what extent these changes will affect sugar production or pricing in Thailand.

Our Analysis

The Thai sugar policy model has been based on a combination of market differentiation using a quota system, domestic price support for cane producers and millers, and export subsidies.

Until recently Thailand operated one of the most protectionist sugar policies in the world. In April 2016, Brazil launched a WTO legal dispute case against Thailand which documents the subsidy and support measures practiced by the Thai government⁹. In the introduction to this, Brazil states: "By means of its sugar regime, Thailand strictly controls virtually every aspect of its sugar sector including the production, storage, transport, sales, import, export and other activities applicable to cane, raw sugar, white sugar, molasses and sugar by-products."

Many observers believe that the expansion of the Thai sugar industry has been directly incentivised by the extensive level of government subsidy and support for the industry¹⁰. The government wants to further increase sugar cane growth in Thailand, decreasing rice production (where huge surpluses were generated by policy), utilise extra production capacity at existing sugar mills and supply a growing biochemical industry¹¹.

In response to a WTO challenge by Brazil, Thailand has implemented changes to its subsidy arrangements but it is not yet clear the full effect of the changes made.

¹ LMC International, Sugar and Sweeteners Market Report, Q3 2018

² LMC International, Starch and Fermentation Analysis, January 2019

³ Czarnikow Article, The Sugar Market: In Transition? 31 January 2019

⁴ WTO, export subsidy notifications, April 2014

⁵ Reuters article, 21 February 2017

⁶ WTO Annual Report 2017

⁷ Reuters article, 1 January 2018

⁸ LMC International, Sugar and Sweeteners Market Report, Q1 2018

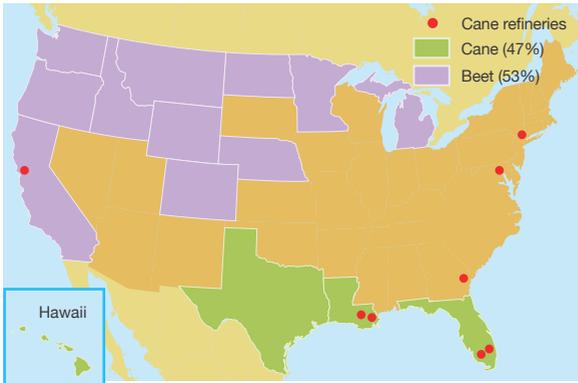
⁹ Brazil notification to the WTO on Thailand subsidies on sugar; 7 April 2016

¹⁰ F.O.Lichts, International Sugar and Sweeteners Market Report, July 2010

¹¹ LMC International, Sugar and Sweeteners Market Report, Q1 2018

case study:

USA



All of the USA's sugar production is in these areas.

The USA is unusual amongst the seven countries highlighted as it is a deficit producer with minimal exports, and because its support policy is differently structured from most other countries. The US sugar industry is shared between beet and cane, with beet typically contributing about 53%.

The Policy Environment

US sugar policy is highly regulated and based on a combination of price support, production limitation, marketing and import controls. It also includes a market clearing mechanism linked to its ethanol industry.

US sugar policy is set out in the

'Sugar Program', authorised by the 2014 Farm Bill¹ for the period 2014-2018.

The Sugar Program has the following key facets:

Price support – the government 'Loan Rate' system

The US government offers loans to US sugar producers by establishing a 'Loan Rate' each year which gives producers an alternative sales option if market prices are disappointing after harvest. Should domestic market prices fall below the 'Loan Rate', producers can forfeit sugar to the Commodity Credit Corporation of the US Department of Agriculture (the USDA), in return for receiving the cash value of the sugar forfeited. It is then the USDA's responsibility to dispose of it.

domestic production

8
million tonnes

domestic consumption

11.1
million tonnes

imports

3.1
million tonnes

total production

5%
of countries featured

This effectively sets a minimum floor price for sugar sold on the domestic market. Also, as Congress has legislated that the Sugar Program should be budget neutral, the USDA is incentivised to keep sugar market prices sufficiently above the 'Loan Rate' to prevent producers forfeiting their sugar.

In 2012/13, due to weaker than expected domestic prices, producers defaulted on 382,000 tonnes of sugar which were purchased by the USDA under this scheme. The USDA then disposed of the forfeited tonnage to non-food markets at reduced prices via the Feedstock Flexibility Program (see overleaf), at a cost to US taxpayers of US\$280m².

To qualify for loans, processors must agree to pass on a minimum proportion of the value of the agreed loan to cane and beet farmers, and the USDA has the authority to set minimum farmer payments. This ensures that the benefits of the 'Loan Rate' support system are passed to farm suppliers, and effectively acts as a minimum beet and cane price regime.

Marketing allotments

Legally binding limits ('marketing allotments') are set by the government which restrict the quantity of sugar each processor and miller can sell on the domestic market, so acting as a de facto quota system. The national aggregate of all the company marketing allotments (the 'overall allotment quantity') is calculated by reference to US sugar demand, so that domestic production is planned to account for about 85% of total US sugar consumption³. The overall allotment quantity is shared between the beet and cane sectors in the ratio 54% and 46% respectively.

The Feedstock Flexibility Program

To enable the 'Loan Rate' system to work effectively, a market clearing mechanism is needed to allow the USDA to dispose of defaulted sugar stocks. This is provided by the Feedstock Flexibility Program⁴. This requires the Commodity Credit Corporation to divert forfeited sugar at reduced prices from food to ethanol use, so shoring up the sugar market price and minimising the risk of further forfeits. As this sugar is

sold to the ethanol industry by auction at reduced prices, it also provides the sector with access to subsidised raw materials financed by US taxpayers. This program has only ever been used in one year since its introduction in the 2008 Farm Bill.

Import controls

The US seals its domestic market from the world market by charging penal import duties. The exceptions are the limited World Trade Organisation (WTO) Tariff-Rate Quota (TRQ) for developing countries at a small import tariff and the zero tariff for imports from Mexico as a result of the North American Free Trade Agreement (NAFTA). Although in principle Mexico has free access to the US sugar market, in practice the US intent to apply anti-dumping and countervailing duties on Mexican exports has forced Mexico to agree to control its export volumes to avoid oversupplying the US market and to observe minimum prices for its exports to the US⁵.

Mexico has priority to supply what the US cannot produce itself once preferential imports under the TRQ are allowed for.

Re-export Program

The result of the import controls is that non-preferential origins can only supply sugar to US refiners under the Re-export Program where the sugar has to be re-exported rather than being sold within America (this is equivalent to toll refining in the EU).

WTO notifications

In common with all WTO members, the USA is required to notify the WTO of its agricultural

support programmes. For its most recent Aggregate Measure of Support (AMS) notification (for 2014/15), it listed support for sugar as some US\$1.5bn, which was nearly half the total US agricultural AMS for all commodities for that year⁶.

Our Analysis

The USA operates a highly regulated and protectionist sugar policy, which is based on domestic price support and production constraint. Prices are maintained through a system of 'Loan Rates' which set a minimum floor in the market and manufacturers are entitled to forfeit sugar to the government, if prices fall below these agreed levels.

One method for clearing forfeited sugar from the market is where the government auctions it to ethanol producers at, in effect, heavily discounted prices.

Production is restricted through a system of 'marketing allotments' which are de facto quotas allocated to sugar beet and cane producers. The aggregate of the allotments is set equal to 85% of estimated demand which is the proportion of the domestic market reserved for US producers.

The restricted share of the US market available for imports means that, in effect, the US market is closed to imports, apart from the preferential origins under the WTO TRQ and Mexico under NAFTA.

¹ Agriculture Act of 2014 (the 'Farm Bill')

² F. O. Licht, Sugar and Sweetener Report, 3 January 2014

³ Food, Conservation and Energy Act of 2008 (the 'Farm Bill')

⁴ USDA Feedstock Flexibility Program guidance notes, 2017

⁵ Department of Commerce, Amendment to agreements suspending the

anti-dumping duty and countervailing duty investigations on sugar from Mexico, signed 30 June 2017

⁶ WTO, US Notification of domestic support commitment for marketing year 2014, G/AG/N/USA/109, Geneva, 19 January 2017

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