

# 5. Sugar

---

This chapter describes the market situation and highlights the medium-term projections for world sugar markets for the period 2020-29. Price, production, consumption and trade developments for sugar beet, sugar cane, sugar, molasses, and high-fructose corn syrup are discussed. The chapter concludes with a discussion of important risks and uncertainties affecting world sugar markets during the coming ten years.

---

## 5.1. Market situation

In the current sugar marketing season (October 2019-September 2020), production is expected to decrease significantly, compared to the last two surplus seasons, which saw India surpassing Brazil as the world's leading sugar producer.<sup>1</sup> However, Brazil should recover its leading position as India's production is affected by unfavourable weather conditions. Dry weather has also affected production in the European Union and Thailand, both important sugar markets. The only marked increase in sugar output occurs in the Russian Federation, where a bumper crop is expected to lead to an oversupplied market. Globally, the production level of the current season will be close to the average level of the last decade.

Global per capita consumption for caloric sweeteners continues to rise, albeit with noticeable regional differences. It has reached high levels in developed countries, South America and some Asian sugar producing countries, where growth is low or even negative. In Africa and most of Asia (Figure 5.1), consumption levels are low and expected growth is strong. The COVID-19 pandemic is having a strong impact on demand. Out-of-home consumption has decreased significantly as a result of the physical distancing measures and other restrictions imposed to reduce the spread of the virus. It is now widely recognised that high levels of sugar consumption can contribute to illnesses and health problems including diabetes, overweight and obesity. In response, countries with high sugar consumption are taking action to reduce sugar intake.

Previous to the outbreak of the coronavirus, sugar inventories were shrinking, with nearly half of the destocking taking place in India. Currently, with uncertain consumption and trade, the final state of global stocks for the season is also uncertain.

## 5.2. Projections highlights

In real terms, raw and white sugar prices are expected to remain flat over the projection period, while in nominal terms, prices are projected to trend slightly upward (+2% p.a.). This is a result of a projected tighter world market balance (supply closer to demand) than in the past decade. The relatively small white sugar premium (the difference between white and raw sugar prices), USD 70/t during the base period (2017-2019), is projected to increase slightly in absolute terms to USD 83/t by 2029.

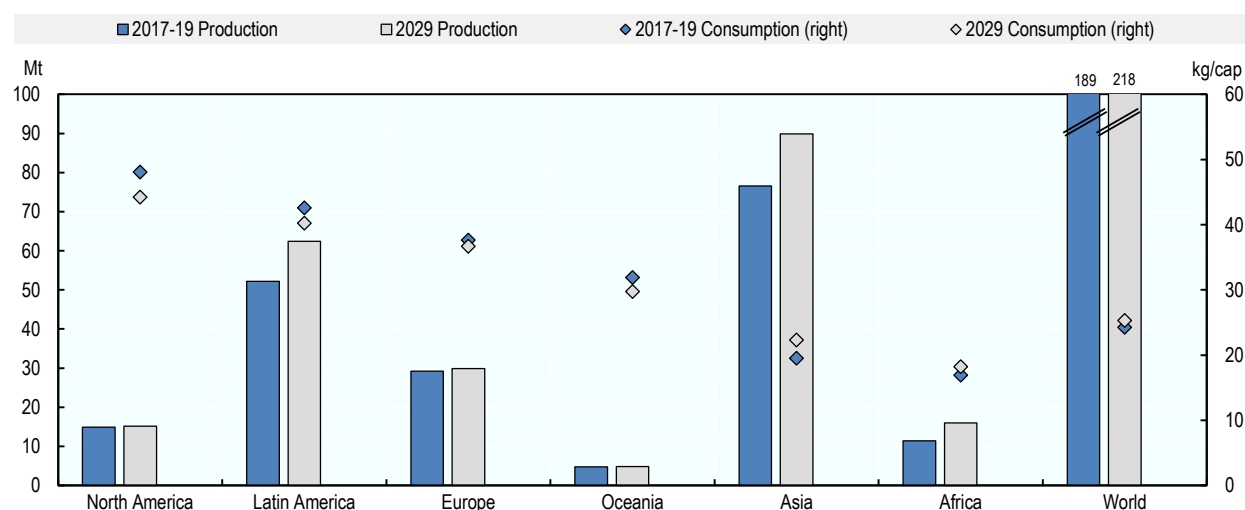
Sugarcane and sugar beet production are both projected to grow, driven by both area expansion and yield improvements. Growth is expected to be greater for sugarcane due mainly to faster area expansion. Sugar beet production and processing is more mechanised and will continue to benefit from productivity gains. Sugarcane, cultivated predominantly in tropical and sub-tropical countries of Asia, Latin America, and Africa, will continue to be the main crop used to produce sugar.

Global sugar production is projected to recover from the current dip and expand by 15%, from 176 Mt in the base period to 203 Mt by 2029, with 96% of the projected increase originating from developing countries. The economic assumptions underlying the projections, notably the depreciation of the Brazilian real *vis-à-vis* the US dollar, will help towards a resumption of investment in the sector, with Brazil's sugar export prices attractive enough to boost its production for the international markets. Starting on 1 January 2020, Renovabio, Brazil's federal program to curb carbon emissions will increase the consumption of ethanol thereby benefit the sugarcane industry. Brazil is projected to maintain its position as the world's largest sugar producer and to account for about 18% of the world's sugar output by 2029. India and Thailand are expected to progressively recover from their current low production season, with India reaching levels close to those of Brazil by 2029. In absolute terms, and when compared to the base period, the major changes in global production are projected for Brazil (+7.0 Mt), India (+4.6 Mt), Thailand (+2.8 Mt), and the People's Republic of China (hereafter "China") (+1.4 Mt). In response to the higher nominal prices and the increasing global consumption, the average annual growth rate of sugar production is expected to be slightly higher than that of the last decade.

Driven by sustained economic expansion and moderate population growth, sugar demand in Asia is expected to represent more than half of global consumption by 2029. In absolute terms, Africa will experience a similar population increase to that of Asia, although the increase in its consumption of sugar should be significantly lower. Sugar consumption growth in Africa (in absolute terms) is projected to be less than half that projected for Asia. In terms of per capita consumption, a slight slowdown in the growth rate is expected in both regions.

In other parts of the world, especially in high-income countries, per capita consumption will continue to decline as a result of changing consumer habits regarding sugar intake. Consumption of the main alternative caloric sweetener, high fructose corn syrup (HFCS), is projected to increase by 1.9 Mt to reach 15 Mt in 2029, driven mainly by an increase in demand from China, where per capita consumption levels are very low. Increasing awareness of the health effects of high levels of consumption of caloric sweeteners reinforced by policy actions will impact consumption trends. Sugar and HFCS will continue to represent about 90% of the sweetener market.

**Figure 5.1. Global caloric sweeteners: Production and per capita consumption in 2017-19 and in 2029**



Note: Sweeteners include sugar and high fructose corn syrup

Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database),

<http://dx.doi.org/10.1787/agr-outl-data-en>

StatLink  <https://doi.org/10.1787/888934141665>

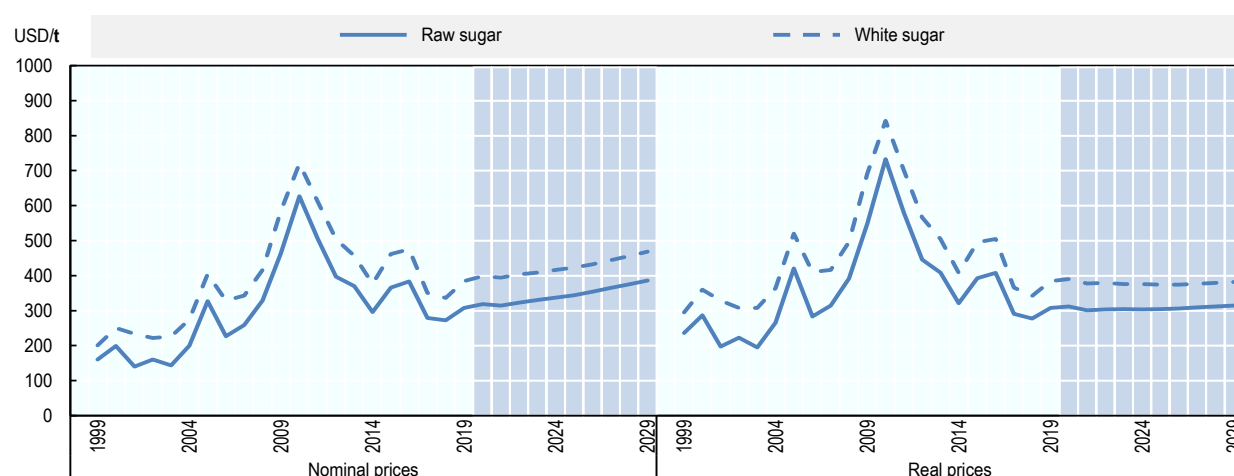
The projections are based on several assumptions, which include productivity trends, macro-economic conditions, and national domestic policies for the sugar subsector. In the short term, the COVID-19 pandemic is the greatest source of uncertainty, affecting macroeconomic conditions, consumption and trade. However, it could affect 2020/2021 production in the labour-intensive production systems of India and Thailand. In addition to the pandemic, a main source of uncertainty for the *Outlook* relates to the allocation of the sugarcane between ethanol and sugar in Brazil. Crude oil price fluctuations and the Renovabio ethanol program could have significant effects on the international market for sugar by altering the export levels from Brazil. Production in India is characterised by frequent production swings and these could impact the international market, given that India is also the world's largest consumer. India and Thailand also have bioethanol projects that, if realised, could decrease the availability of cane for sugar production, strongly impacting markets as well. Heightened concerns over health issues associated with excessive caloric sweetener consumption are also a source of uncertainty, as they can curtail growth in demand to levels lower than in this *Outlook*. Finally, the fact the sugar sector remain highly regulated constitutes a source of uncertainty for the projections.

### 5.3. Prices

Sugar prices decreased in recent years to levels not seen since the middle of the last decade. In nominal terms, they are projected to increase over the outlook period. With a return to higher profitability, the main exporters (mainly Brazil) will resume their sugar exports. Assuming normal weather conditions, sugar crop yields, notably in India and Thailand, are expected to progressively come back to levels more in line with the trend of previous years. Growth in world demand is foreseen to remain within the range of the growth observed in the previous decade. This results in flat real sugar prices over the course of the outlook period. In absolute terms, global stocks are expected to replenish slowly. In relative terms, from 2022 on, they stabilise at a stock-to-use ratio of close to 44.7%.

Over the medium term, real sugar prices are expected to remain at the levels of 2019 (Figure 5.2), i.e. lower than the average of the last 20 years, where prices experienced upward pressure through the competition from biofuels (ethanol). By 2029, the nominal world price is projected to be USD 386/t (USD 17.5cts/lb) for raw sugar and USD 469/t (USD 21.3cts/lb) for white sugar. The white sugar premium is projected to grow slightly to USD 83/t by the end of the outlook period, as a result of a slightly increasing demand.

Figure 5.2. Evolution of world sugar prices



Note: Raw sugar world price, Intercontinental Exchange contract No.11 nearby futures price; Refined sugar price, Euronext Liffe, Futures Contract No. 407, London. Real prices are nominal world prices deflated by the US GDP deflator (2019=1).

Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database),

<http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink  <https://doi.org/10.1787/888934142330>

### 5.4. Production

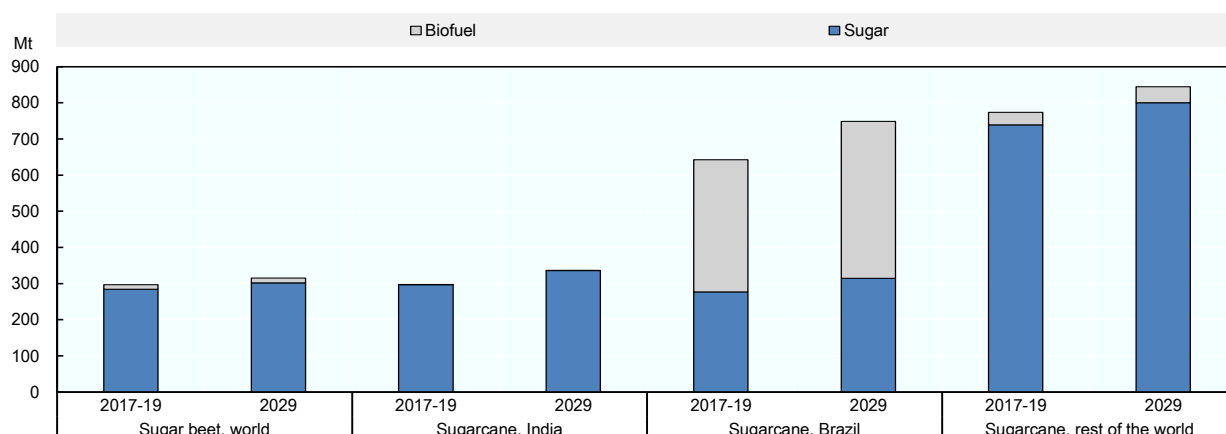
Sugar markets are expected to undergo a slow recovery as the sector is capital-intensive and some investments were postponed due to low prices. Sugar production is foreseen to expand due to, among other things, the flexibility of sugar mills to shift between sugar and ethanol production, which reduces the investment risks. Sugarcane accounts for around 86% of the sugar crops and sugar beet makes up for the remainder. Sugarcane is a perennial crop that grows mainly in the tropical and sub-tropical regions. The same plants can be harvested for several years, although yields decline over time. In addition to sugar and ethanol, sugarcane can also be used to produce derivatives such as electricity (through bagasse surplus) and bioplastics. However, it remains a water-intensive crop. Conversely, sugar beet is an annual crop, cultivated mostly in temperate zones. This crop is used to produce a wide range of products, including food

(sugar), feed, bio-based products for the industry (pharmaceuticals, plastics, textiles, and chemicals), and ethanol.

Over the outlook period, the increase in the production of sugarcane is foreseen to come from higher yields and area expansion. In the case of sugar beet, increases are expected to be due mainly from yields. Sugarcane production is projected to grow by 1.1% p.a., slightly higher than during the last decade, with Brazil, India, and Thailand anticipated to contribute to 74% of the change in global output volume (49%, 18%, and 6% respectively). Prospects are less robust for sugar beet with an anticipated production growth of 0.7% p.a., compared to 2.1% p.a. over the last decade (Figure 5.3). Expansions are expected in Egypt (+6.9 Mt), Ukraine (+3.3 Mt), Turkey (+2.9 Mt) and China (2.9 Mt), while contractions are projected in the European Union and the Russian Federation (-3.7 Mt and -1.1 Mt respectively), these two accounted for more than half of the global increase in sugar beet during the last decade.

Production growth in the European Union (with respect to 2017-2019, the post-quota period that began with a record sugar crop year) is projected to be one of the lowest. In the Russian Federation, despite a strong national strategy for auto-sufficiency from the past few years, which led to a massive production surplus in 2019, production costs should remain high and the sugar output is not expected to surpass the levels reached during the base period. In the US sugar sector, where both sugar crops are cultivated, higher yields are foreseen but increasing input costs (i.e. from improved harvesting technologies) will dampen production growth of sugar beet after a few years, while some growth in sugarcane production is expected as this crop is more stable given its perennial nature.

**Figure 5.3. World sugar crops production**



Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink  <https://doi.org/10.1787/888934142349>

Over the outlook period, the shares of sugar crops used for sugar and ethanol are projected to be about 78% for the production of sugar (75% in the case of sugarcane and 96% in the case of sugar beet) and 22% for ethanol. Brazil will continue to be the main producer of sugar and sugarcane-based ethanol, producing 39% of the world's sugarcane by 2029. This sugarcane will be used for 18% of global sugar production and 90% of global sugarcane-based ethanol production (compared to 17% and 91% during the base period).

As of 2020, world production is projected to increase again at a stronger average growth rate than in the previous decade (1.4% vs 0.8% p.a.), responding to attractive sugar prices driven by steady growth in global demand. Most of the production increases are expected to occur in developing countries, which are anticipated to represent 78% of global sugar production in 2029 (compared to 75% in the base period).

The leading regions are Asia and Latin America. Asia is projected to expand its share in global production from 41.2% during the base period to 41.6% in 2029, and Latin America from 29.2% to 30.2%.

Brazil, the world's biggest supplier, has been persistently in debt over the last ten years. The current world deficit, which is driving up prices, as well as the depreciation of the Real increase the profitability of this sector, thereby attracting investments. However, the sugar sector in Brazil will continue to be challenged by biofuels, with more than half of its sugarcane being used to produce ethanol. Brazil's dominance as the world's top producer and exporter will be maintained over the outlook period, however, with production projected to reach 37 Mt (+7 Mt compared to the base period) by 2029.

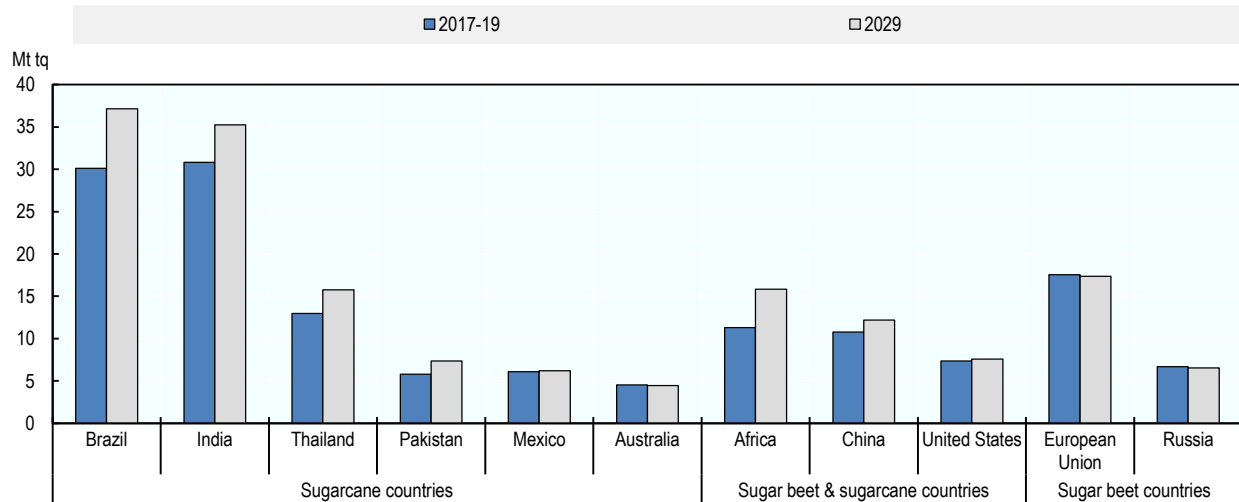
The world's second largest sugar producer is India, where production is expected to recuperate from the current lows and progressively expand, partly driven by renewed public support to this sector. On the back of remunerative returns, production is projected to increase by 4.4 Mt over the next decade, reaching 35 Mt in 2029. Thailand will maintain its market position as the world's fourth largest producer (the European Union is in the third place), and is projected to see a similar average annual growth to the one of the last decade, progressively recuperating from the slight decrease of the current season and stimulated by world sugar market prices. Thailand is projected to produce as much as 15.8 Mt by 2029. China is expected to experience accelerated growth in sugarcane and sugar beet production during the first years of the projection period, supported by the 2015-2020 National Plan. Production costs are expected, however, to remain high when compared to neighbouring countries. Some safeguard duties also limit competitive imports. These factors are expected to continue to protect the sector. By 2029, Chinese sugar production is projected to reach 12.2 Mt. In Pakistan, the government strongly support the sugar sector through guaranteed prices to farmers. Production is foreseen to increase, but at a lower growth rate per annum: 2.7% compared to 3.6% during the last decade, to reach 7.4 Mt by 2029.

In Africa (South Africa not included), growth in output will be driven by higher real sugar prices. Sugar output is projected to increase by 40% to reach 15.8 Mt by the end of 2029 compared to the base period, due to production expansion in Sub-Saharan countries that is supported by investments at the farm and the mill level. Despite this production growth, the continent will continue to represent a small share of the world output (8% in 2029).

During the last decade, developed countries accounted for more than one quarter of the increase of global sugar output, with significant growths in the European Union, the Russian Federation, Australia, and the United States. This share, however, is projected to decrease to 4% over the forecast period (Figure 5.4), with a projected growth of only 0.8% p.a. (being 1.7% p.a. in developing countries). In this group of countries and relative to the base period, only South Africa is foreseen to significantly extend its production (+0.5 Mt). In the European Union and the Russian Federation, production levels should not change much over the next ten years. Still, the European Union will maintain its position as the world's third largest producer. As for the Russian Federation, the efforts of recent years towards self-sufficiency have been successful, but the country remains a high cost producer with exports not competitive enough for production to continue to increase over the next decade. Not much change is expected in the United States as the sugar sector remains heavily influenced by government policies that support domestic production. These policies include: the Sugar Loan Program that support prices paid to farmers; the Sugar Marketing Allotments that either force or encourage producers to fulfil 85% of domestic consumption; the Feedstock Flexibility Program to divert any sugar surplus to ethanol production rather than sugar loan forfeitures to the USDA's Commodity Credit Corporation; and trade barriers that limit imports (through tariff rate quotas, regional agreements, and the Suspension Agreements on Sugar with Mexico).

After a period over the short term during which India will continue to undertake half of the world's sugar destocking, the market will return to surplus and global sugar stocks will increase moderately over the next decade. The global stock-to-use ratio is projected to return to a level close to its long-term average of 45% (from 49% in the base period).

Figure 5.4. Sugar production by crop



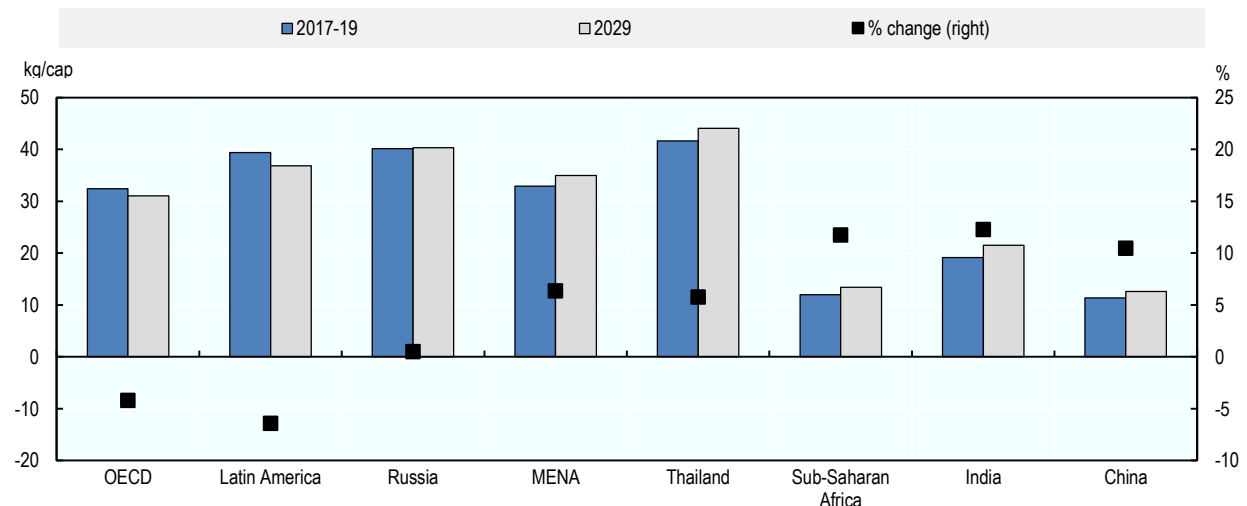
Note: Data are expressed on a tel quel basis (tq)  
 Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink <https://doi.org/10.1787/888934142368>

### 5.5. Consumption

Global sugar consumption is projected to continue growing at around 1.4% p.a., reaching 199 Mt by 2029, underpinned by population and income growth. Over the outlook period, the average world level of per capita consumption is expected to increase from 22.5 kg/cap to 23.5 kg/cap, although considerable variations between regions and countries will occur (Figure 5.5).

Figure 5.5. Per capita sugar demand in major countries and regions



Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink <https://doi.org/10.1787/888934142387>

Increases in global sugar consumption over the next ten years are expected to come exclusively from the developing countries; declining trends are foreseen in other more mature markets in general. Asia and Africa will be the largest contributors to additional demand, with respectively 68% and 30% of additional demand. In those two sugar deficit regions, consumption levels are often low compared to other regions, and the prospects for growth are high. The higher growth rate in Asia will stem from a higher demand in sugar-rich confectionery products and soft drinks, generally in urban areas, while that of Africa will come from a higher direct consumption largely driven by population growth. In Latin America, which already has high per capita consumption levels, little growth is foreseen (2% over the entire outlook period).

In Asia, it is expected that India, followed by Indonesia, China, and Pakistan, will experience the largest increases in sugar consumption. Per capita consumption is very low in China and LDC Asia (less than 13 kg per year during the base period), but the annual growth rate in these countries will not change much compared to the last decade as individuals do not favour sweet products and eating habits change slowly. In Africa, the highest increases in total consumption are projected for Egypt and several Sub-Saharan countries, but per capita consumption will remain below 14 kg per year in LDC Sub-Saharan countries, including Ethiopia and Nigeria.

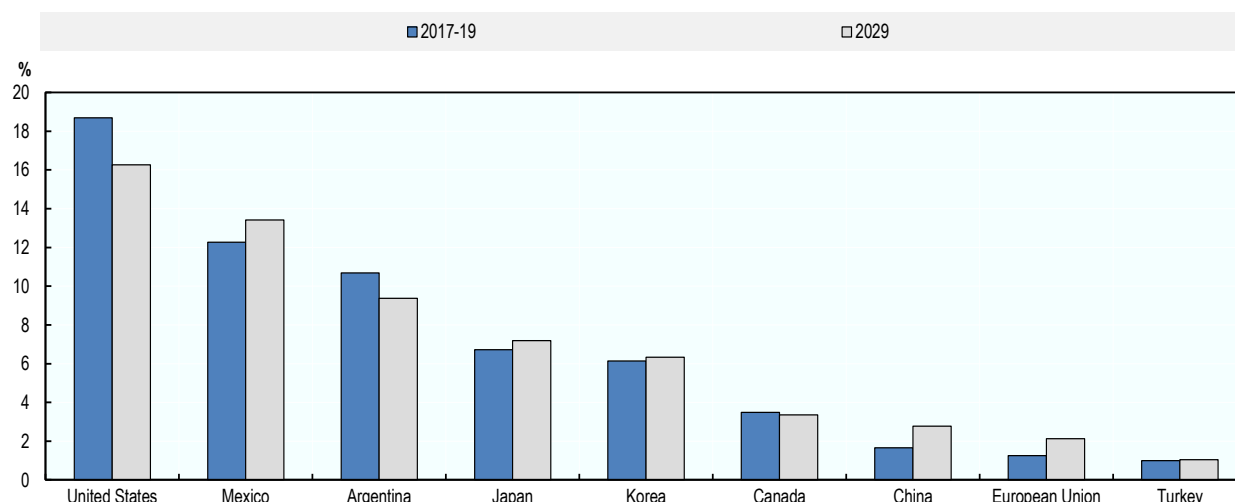
In contrast, the level of sugar consumption per capita in many developed countries is expected to continue to decline due to increased concerns about negative health effects of sugar overconsumption: unhealthy weight gains that raise the risk of diabetes (type 2), heart disease and tooth decay. Several countries have implemented taxes on caloric sugary products in an attempt to reduce sugar consumption. Mexico was the first country to do so at the national level in 2014. In consequence, some multinationals have reduced portion sizes, decreased the amount of caloric sweeteners, or replaced the amount of sugar with an equivalent amount of artificial sweetener, the latter having a sweeter taste but fewer calories.

The decline in sugar consumption of developed countries is foreseen to be strongest in Canada, the European Union, and the United Kingdom. In the United States, consumption of sweeteners is expected to remain stable but the share of sugar in per capita caloric sweetener consumption is projected to increase, from 62% during the last decade to 64.5% by 2029. The idea that HFCS is potentially more harmful to health than sugar continues to be debated. In the Russian Federation, sugar demand is anticipated to grow, based on domestically produced confectionery products and homemade alcohol. The debate on a possible taxation of sugar is still in progress, but sugar is expected to remain a cheap source of calories and consumer habits are not expected to change.

Owing to its competitiveness in caloric sugary soft drinks, HFCS consumption (dry weight) is projected to grow by 14% or 1.9 Mt by 2029. Global consumption will remain limited to a few countries (Figure 5.6). Like sugar, per capita consumption is assumed to decline in countries where total caloric sugar consumption is high. China, one of the countries where sweetener consumption is low, is expected to be the main driver of the increase. Because it is the biggest world producer of starch, it is anticipated that China will increase its HFCS supply to fulfil a growing domestic demand, although a lack of profitability is likely to dampen supply growth. In the European Union, growth in consumption will not be as high as anticipated as a result of a stronger than expected competition with sugar. In Mexico, the share of HFCS in the demand for sweeteners is expected to slightly increase over the outlook period because, in response to the country's sugar tax, companies tend to replace sugar by "less sugar" in their soft drinks, even if both products are subject to a tax. Conversely, in the United States, the leading HFCS producer, demand for HFCS as a share of global consumption is projected to continue its decline from 46% during the base period to 37% in 2029. However, the country is projected to consolidate further its position as leader producer over the next decade, to meet the demand in Canada and Mexico.



Figure 5.6. Share of per capita HFCS in sweetener consumption for major consuming countries



Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink  <https://doi.org/10.1787/888934142406>

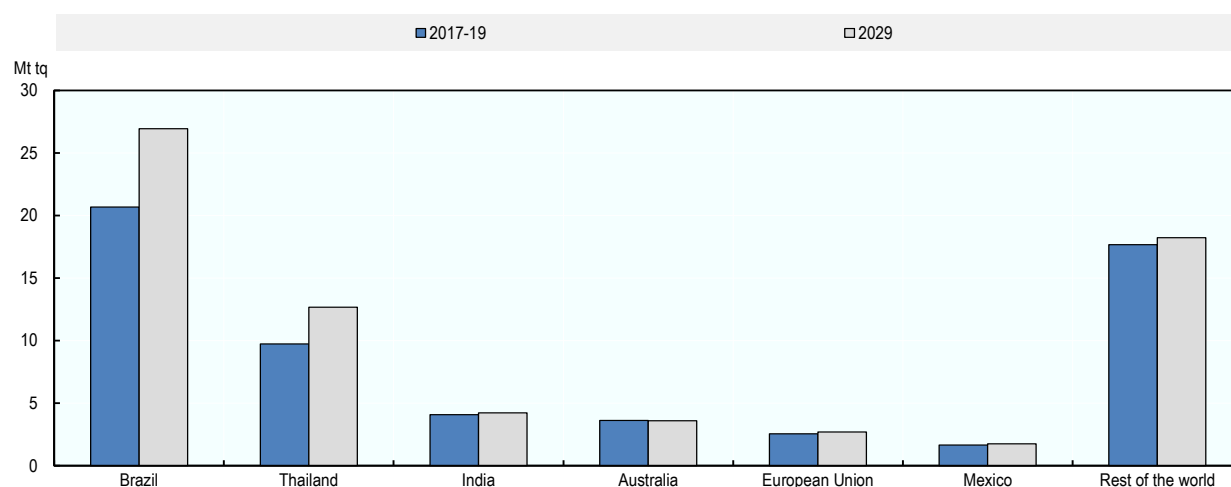
## 5.6. Trade

Over the coming decade, sugar exports (Figure 5.7) are projected to remain highly concentrated, with Brazil consolidating its position as the leading exporter (from 35% of world trade in the base period to 38% by 2029). The weakening of its currency *vis-à-vis* the US dollar over the projection period will attract investments and improve the industry's competitiveness. However, the sugar market in Brazil will continue to compete with strong ethanol production. Its sugar exports are projected to expand by 6.3 Mt compared to the base period.

In Thailand, the world's second largest sugar exporter, very little ethanol is produced directly from sugarcane (less than 2%); molasses or cassava are used instead. This established Asian sugar producer is expected to progressively recuperate from the current dip in its production to gain international market shares towards the end of the projection period, accounting for 18% of world sugar exports by 2029 (versus 16% during the base period) and reaching 12.7 Mt of sugar exports by 2029. India is projected to have enough supplies and policy support to maintain the level of its exports at about 4 Mt per year throughout the next decade. In Australia, sugarcane will be limited by the availability of irrigated land; in view of this constraint, production levels are projected to remain close to the relatively low levels of the current season, which is nevertheless way above domestic demand. Thus, the country will continue to export around 80% of its production.

In 1968, the European Union introduced sugar and isoglucose production quotas to guarantee production and prices. These quotas were abolished in 2017, which led to a decrease in domestic prices and freed exports from their WTO subsidised export limit. Over the next ten years, even though production is not expected to increase, declining demand will help free high quality white sugar for exports that can be sold at a premium price. These exports will mainly reach sugar-deficit countries in the MENA and Far East regions, although they will face competition from the supply of traditional sugarcane refineries, notably in the MENA region.

Figure 5.7. Sugar exports for major countries and regions



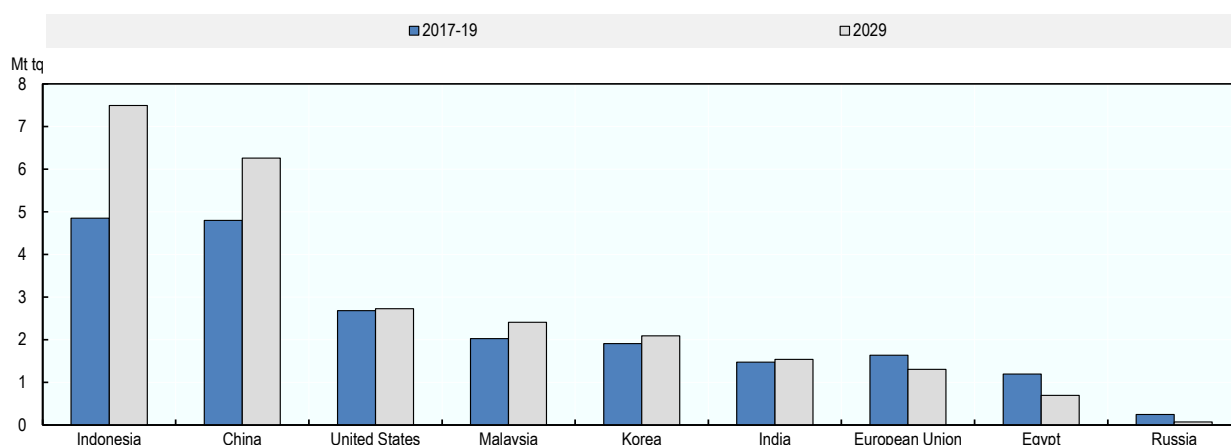
Note: data are expressed on a tel quel basis (tq).

Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink  <https://doi.org/10.1787/888934142425>

World sugar imports are less concentrated than exports (Figure 5.8). Based on the outlook projections, Asia and Africa will see the strongest growth in sugar demand, which in turn will influence the ranking of main importers. During the base period, Indonesia and China were the leading importers (at 4.8 Mt each) followed by the United States (2.7 Mt), Malaysia (2.0 Mt), Korea (1.9 Mt), the European Union (1.6 Mt) and India (1.5 Mt). Over the next decade, Indonesia, with a strong growth in consumption, is projected to consolidate its position as the leading sugar importer (7.5 Mt), followed by China (6.3 Mt), the United States (2.7 Mt), Malaysia (2.4 Mt), Korea (2.1 Mt) and India (1.5 Mt). Due to the abolition of sugar quotas, the European Union has become less an attractive export destination for countries with preferential trade agreements; European Union sugar imports are projected to decrease further to 1.3 Mt by 2029. The EU HFCS trade will not experience significant changes, as production is expected to mostly satisfy internal demand.

Figure 5.8. Sugar imports for major countries and regions



Note: Data are expressed on a tel quel basis (tq).

Source: OECD/FAO (2020), "OECD-FAO Agricultural Outlook", OECD Agriculture statistics (database), <http://dx.doi.org/10.1787/agr-outl-data-en>.

StatLink  <https://doi.org/10.1787/888934142444>

In the United States, traditionally a sugar-deficit country, policies will continue to foster domestic production and keep a lid on imports. Tariff rate quota (TRQ) allocations under WTO or free trade agreements (FTAs), as well as limited imports from Mexico due to the US Export Limit (set by the US Department of Commerce) will govern import flows. Given the relatively higher sugar prices in the United States, Mexico will continue to export its sugar primarily to fulfil the United States needs. Mexico, in turn, is expected to resort to US HFCS (+2% or 250 kt by 2029) to meet national demand for sweeteners.

Imports are expected to decline in Egypt and in the Russian Federation. In Egypt, large investment projects are boosting production and imports are anticipated to decrease. In the Russian Federation, the policy of self-sufficiency has been successful and practically no imports should occur over the next ten years.

## 5.7. Main issues and uncertainties

The projections presented in this *Outlook* assume stable macro-economic and normal weather conditions and make specific assumptions with respect to different variables such as crude oil prices, related policies (i.e. ethanol mandates) or consumption and production trends. A shock to any of these variables can result in significant deviations from the projections, especially since production and trade are concentrated within a small number of countries.

The impact of the COVID-19 pandemic cannot be assessed comprehensively at this stage. However, there are several channels of transmission to the supply and demand sides of the sugar market. For example, confinement measures have curtailed out-of-home demand for sugar. It is too early to assess whether this will have any long-term impact on sugar intake. Aside from specific effects on sugar, the impact of the pandemic on the macro-economic variables, as well as on the crude oil price projections, is likely to alter assumed values used for the preparation of the *Outlook*, particularly in the base year (October 2019-September 2020).

The projections for Brazil carry several uncertainties, particularly with respect to the ongoing financial consolidation. This *Outlook* is also based on assumed levels of the Brazilian real exchange rate, with respect to the US dollar. An appreciation or depreciation of the Real directly affects the competitiveness of the sector and has a significant impact on international and domestic markets. In addition, the implementation of the biofuel program (Renovabio) will also have a significant impact on sugar markets, as Brazil has the flexibility to easily switch between the use of its sugarcane for either sugar or ethanol, depending on relative profitability.

The *Outlook* results for Thailand include substantial uncertainty. The current season has been challenging for the sector with large losses for mills and farmers, so that it is not clear how fast the sector will recuperate. However, the country has benefited from strong investments over the last years, the recent rains will probably improve the yields of the 2020/21 season, and the government is providing policy support to reduce risks in this sector. Furthermore, Thailand is assumed to allocate only a small share of its sugarcane to ethanol production. If the country adopts a different strategy, this could impact the world sugar market significantly given the country's large contribution to the sugar trade.

The outlook for India is susceptible to substantial uncertainties. Small changes in consumption or production trends, or in related policies could have large impacts on world markets as India is the world largest consumer and second largest producer. For example, changes on the assumed fulfilment of the country's ambitious ethanol blending targets would result in substantial impacts on sugar supply to the domestic and international markets. In addition, production and exports have historically presented large swings which can easily affect market predictions in this *Outlook*.

Trade distortions on international sugar markets will persist. Changes in international sugar prices are not fully transferred to domestic sugar producers and consumers, even if some world sugar markets have undertaken reforms and structural changes (e.g. elimination of sugar quotas in European Union and

Thailand). To protect their domestic markets, many countries continue to use trade policy instruments. These include: (i) high out-of-quota tariffs in China; (ii) the South African dollar-based reference price mechanism that ensures a minimum import price; (iii) adjustments to WTO TRQ and export limit for Mexico (United States); (iv) transportation subsidies to stimulate exports of sugar and support domestic sugar prices (Pakistan, India); (v) high import tariffs (European Union, Russian Federation, United States); and (vi) regional trade agreements (NAFTA, European Economic Partnership Agreements and Everything but Arms).

In view of the growing evidence of the negative impact of excessive sugar consumption on human health, prospects for demand are also uncertain. Some governments have already imposed taxes on caloric sweeteners to encourage lower consumption and this could be reinforced over the next decade, although pro-active actions taken by the food industry – such as product reformulation, use of alternative sweeteners, and decreasing portion sizes – could temper the impact of such policies.

## Note

---

<sup>1</sup> The COVID-19 pandemic is having a significant negative impact on the current sugar season and outlook. However, the final impact of this pandemic on sugar markets is uncertain and has not been included in the data presented here.