



Study on the adaptation strategies of the sugar supply chain after the end of the sugar quotas

AGRI/2020/OP/0001

Open Procedure

Executive Summary

Areté The Agri-food Intelligence Company



November – 2021



EUROPEAN COMMISSION

Directorate-General for Agriculture and Rural Development
Direction C - Strategy, simplification and policy analysis

Unit G4 – Arable crops and olive oil

Contact content: AGRI-G4@ec.europa.eu

Unit C.4 - Monitoring and Evaluation

Contact dissemination: AGRI-EVALUATION@ec.europa.eu

European Commission

B-1049 Brussels

This report has been prepared by



Areté s.r.l. – The Agri-food Intelligence Company

Via del Gomito, 26/4 – 40217 Bologna (IT)

Tel: +39.051.4388500

Fax: +39.051.511186

Email: info@areteonline.net

Web: www.areteagrifood.com

Agra CEAS Consulting Ltd, a company of IHS Markit

20-22 rue du Commerce – 1000 Brussels (BE)

Tel: +32.2.7360088

Fax: +32.2.7321361

Email: info@ceasc.com

Web: <https://ihsmarkit.com/index.html>

The evaluation study was carried out by:

Areté s.r.l. (IT)

Enrica Gentile (Project Manager)

Alberico Loi

Mario Gentile

Mauro Bruni

Serena Berisio

Filippo Roda

Giannina Piccoli

Agra CEAS Consulting Ltd (BE) – a company of IHS Markit

Dylan Bradley

Maria Christodoulou

Edward Oliver

Christoph Berg

Stefan Uhlenbrock

John Bracken

Clifford Biggs

Tom Scott

Subcontractors:

Risk management expert:

Jean-Christophe Debar

AND International (FR)

Séverine Renault

Christian Renault

Clément Lepeule

Arcadia International E.E.I.G. (ES)

Francesco Montanari

Horacio Gonzalez Aleman

Carmen Bàguena Ferratges

Global Networks (DE)

Yelto Zimmer

Thomas de Witte

Johannes Mayer

Federal Institute of Agricultural Economics - Rural and Mountain Research (AT)

Josef Hambrusch

Agro.Ges (PT)

Francisco Avillez

Pedro Serrano

Connecting Agri & Food (NL)

Gé Backus

Janneke Straver

National experts:

Ivan Štefanić (HR)

Piotr Szajner (PL)

Wiesław Łopaciuk (PL)

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Luxembourg: Publications Office of the European Union, 2022

PDF ISBN 978-92-76-41510-7 doi: 10.2762/427109

KF-08-21-279-EN-N

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CONTEXT AND OBJECTIVES OF THE STUDY

Starting from the 2006 reform of the EU sugar regime, and following the termination of the production quota system after the 2016/17 marketing year, the EU sugar sector has undergone a deep restructuring process. An exceptionally abundant EU sugar beet crop in the first marketing year after the quotas (2017/18), combined with a situation of oversupply on the international sugar market, translated into a prolonged price depression on the EU sugar market in the following marketing years, which posed serious threats to the economic viability of the actors in the EU sugar supply chain (sugar beet growers, beet sugar producers and raw cane sugar refiners in particular). The difficult situation briefly outlined above is the context that led to the carrying out of this study for the European Commission - Directorate-General for Agriculture and Rural Development.

The overall objective of the study is the provision of a sound and comprehensive analysis on the EU sugar sector's capacity to adapt to its post-quota environment, as well as on its ability to respond to varying market and production conditions. The study investigates in particular the consequences of the end of quotas for the EU sugar sector, and it assesses whether and to what extent the existing adaptation strategies implemented in the sector ensure an appropriate level of resilience against current and future threats, also considering the context of the international sugar market and its developments. The study was conceived as a follow-up to the conclusions of the High Level Group on Sugar (July 2019)¹, which recommended to the European Commission to initiate a comprehensive review of the possible strategies for improving the market resilience of the sector. This objective is further detailed in the Joint statement from the Council of the European Union, the European Parliament and the European Commission on the CMO provisions related to the EU sugar sector (28 June 2021)².

The study is structured into thirteen questions grouped under the following **three themes**:

1. **Theme 1** – The structure and competitiveness of the EU sugar sector and its supply chain organisational arrangements.
2. **Theme 2** – The threats to which the EU sugar sector is confronted; the existing risk management strategies, their use and effectiveness.
3. **Theme 3** – The institutional setting of the market and EU policy instruments available for the sugar sector.

¹ Final report of the High Level Group on Sugar, July 2019: https://ec.europa.eu/info/sites/default/files/food-farming-fisheries/plants_and_plant_products/documents/final-report-high-level-group-meeting-sugar.pdf

² Annex IV to the Results of the super trilogue on 24 – 25 June 2021, Council of the European Union, Brussels, 28 June 2021 (10219/1/21 REV 1): <https://data.consilium.europa.eu/doc/document/ST-10219-2021-REV-1/en/pdf>

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STUDY METHODOLOGY

The study methodology (output of the “structuring” task) was agreed with the European Commission. The **data collection strategy** used a combination of tools (desk research, mining of relevant datasets, interviews with competent authorities, sectoral stakeholders and independent experts, two surveys targeting sugar beet growers’ organisations and individual sugar producers, and an expert focus group) to gather from both primary and secondary sources (“observing”) the evidence and insights needed to:

1. Develop the **descriptive part** of the study, covering the relevant policy framework for the sector, the world and EU sugar market, and the structure, organisation and performance of the EU sugar industry.
2. Elaborate **answers to the thirteen study questions** under the **three study themes** by applying the related methodology (“analysing”).
3. Draw the **conclusions stemming from the study**, elaborate **possible strategies** aimed at addressing the most serious threats to short, medium and long-term economic viability as well as presenting the lessons learned (“reporting”).

In combination with the application of **quantitative assessment methods**, an **in-depth qualitative appraisal of the perceptions of stakeholders** was also performed, in order to grasp all the specificities and nuances that were relevant for the purposes of the study.

CONCLUSIONS OF THE STUDY

1 CONCLUSIONS ON THE OVERALL RESILIENCE OF THE EU SUGAR SECTOR

1.1 The overall resilience of the EU sugar sector in the post-quota period

In the 2017/18 marketing year (the first without sugar quotas) the implementation of expansive strategies by the most cost-efficient EU sugar producers, combined with higher-than-average yields, resulted in an exceptionally abundant sugar production. The resulting oversupply on the EU sugar market, in combination with the significant decline of sugar prices on the international market, triggered a four-year period of low sugar prices on the EU market, which has proved to be a severe “stress test” for the overall resilience of the EU sugar sector³. The analysis of the evolution of the EU sugar industry in the transition from the quota to the post-quota environment revealed that all the key actors in the EU sugar supply chain – sugar beet growers, beet sugar producers, and raw cane sugar refiners – experienced a **serious decline of their profitability** especially in the worst period of the crisis, coinciding with the 2018/19 and 2019/20 marketing years. As a result, the **economic viability of the structurally weaker parts** of the sector (sugar beet growers and processors in Member States affected by low productivity and high production costs; full-time refiners, which were forced to cope with an extremely tight refining margin) was **seriously threatened**. However, also **sugar beet growers and beet sugar producers in the most competitive Member States** experienced **serious difficulties**, which in some cases were further aggravated by additional factors (to mention a particularly serious one, viral yellowing of sugar beets, which caused a remarkable decrease in yields in certain Member States).

³ which can be intended as the sector’s capacity to overcome periods characterised by external shocks, and then revert to its usual conditions.

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Nevertheless, in spite of non-satisfactory profitability over most of the post-quota period, beet sugar production has not ceased altogether in any Member State but Portugal (where it was already minimal at the end of the quota period).

Since the 2018/19 marketing year, the yearly downward adjustment of sugar production is an indication that the EU market is in the process of finding a new balance. The average price for white sugar on the EU market has slowly and moderately increased from the minimum reached in January 2019 (312 Euros/tonne), and is reported at 408 Euros/tonne in September 2021⁴. Further to that, recent forecasts see a tight sugar supply balance at global level for the 2021/22 marketing year. Thanks to these positive developments, several leading EU sugar producers have recently reported about improved profitability of sugar production (including from refining of raw cane sugar) and more satisfactory financial results for the 2020/21 marketing year.

The “stress test” described above has not caused, to date at least, massive and widespread casualties in the sector: no medium- or large-sized EU sugar producers went out of business. However, some small-sized producers were forced to cease their activity, a few mid-sized ones were forced to drastically downsize their operations, and most large-sized multinational groups were forced to close some of their processing plants, including a few relatively high-capacity ones. At farm level, the unattractive sugar beet prices that processors had to offer under the pressure of the prolonged sugar price depression, encouraged more and more farmers to switch to more profitable alternative crops. The fact that **the sector as a whole**, mainly thanks to the **positive contribution or influence of several factors** (competitiveness drivers, arrangements in the supply chain, policy measures) analysed in the previous sections, has **somehow “weathered the storm”**, suggests that its **overall level of resilience is satisfactory**, but also **remarkably diversified at national level** and **affected by some non-negligible weaknesses**, which may become serious in certain country- or company-specific situations. In general, the negative effects of the prolonged price depression were felt more intensely in the Member States that are handicapped by low productivity and high production costs, and by non-diversified sugar producers.

1.2 The competitiveness drivers of the EU sugar sector and their influence on the sector’s resilience

The assessment did not identify any competitiveness driver with structurally weakening effects on the EU sugar sector’s resilience. A **clear prevalence of drivers with strengthening effects** on the two dimensions of resilience considered (economic viability of actors in the EU sugar sector; availability of an adequate sugar supply in the EU) emerged from the assessment. In most cases, the effects of competitiveness drivers on the **availability of an adequate sugar supply in the EU** were found to be **mostly indirect**, i.e., to occur as a result of improved/worsened economic viability of actors in the EU sugar sector. Some competitiveness drivers (sugar selling prices, profitability of actors in the sugar sector, logistical aspects) were found to have a **variable effect** (i.e., strengthening in some cases, weakening in other cases) on resilience, according to specific conditions applying at national/local level and/or in a certain period. **Cost competitiveness in the farming and processing stages** – which varies remarkably across the EU – has **critical importance in determining the overall resilience of the EU beet sugar sector**. **Vertical and horizontal price transmission** was found to have an **undetermined effect** on the availability of an adequate sugar supply in the EU, due to the complex interplay of supply and demand dynamics that are caused by price signals.

⁴ Above the reference threshold of EUR 404.4 per tonne, fixed under Article 1a of Regulation (EU) No 1370/2013.

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Besides assessing the influence on resilience of each driver “in isolation”, the study also assessed the overall effects of two meaningful combinations of drivers: i) effect of technical parameters determining productivity levels in the farming and processing stages on the profitability of beet sugar production in the EU; and, ii) effect of size and diversification on the profitability of EU sugar producers. The key technical factors determining productivity⁵ were found to explain only part of the profitability of beet sugar production in the EU; their combined effect on resilience is therefore variable. This implies that the profitability of beet sugar production in the EU is the result of a complex combination of technical, economic and organisational factors: indeed, the **combined influence of size and diversification of sugar producers** was found to be **effective in smoothening variations in profitability**, thus strengthening their resilience.

In general, the structural features of the EU sugar sector that emerged as having the **most negative influence on resilience** were identified in **extremely heterogeneous productivity levels in sugar beet farming** across Member States (some of them have very low sugar beet yields), combined with some **specific handicaps affecting the processing stage** (e.g., short duration of processing campaigns due to climatic factors, or constraints to pursuing scale economies at plant level).

1.3 Organisational arrangements and contractual relations along the sugar supply chain: influence on the sector’s resilience

The study assessed a wide array of organisational arrangements and contractual relations in the EU sugar sector⁶ in terms of: i) effects on resilience (strengthening / weakening); ii) influence of the relative bargaining power of the different actors along the sugar supply chain on arrangements/contracts.

Sugar beet supply contracts between growers and processors were found to allow for **effective planning of production**, thus contributing to ensure the stability and predictability needed by the beet sugar business model, and through that, to strengthened economic viability of beet sugar producers. The increasing diffusion of multi-annual inter-branch agreements and contracts in the EU beet sugar sector was found to have both pros and cons; it basically offers improved stability at the cost of reduced flexibility in adapting to changing conditions on the market. **Vertical integration between the sugar beet farming and processing stages** (i.e., control of sugar beet processing capacity by growers, in different forms) was found to contribute to more effective planning, smoother operation of processing plants, and reduced transaction costs vis-à-vis non-integrated production. Through that, it contributed to improve the economic viability of the concerned actors. However, the study revealed significant difficulties also for integrated beet sugar producers in offering attractive enough sugar beet prices during the worst phase of the price depression on the EU sugar market in the post-quota period. **Contractual arrangements for raw cane sugar procurement** were found to contribute to smooth and profitable operation of EU refineries, and hence to the economic viability of refiners, which was however seriously threatened in the post-quota period due to a very tight white sugar premium (i.e., the economic incentive to refining raw cane sugar into white sugar).

⁵ sugar beet yield per hectare; sucrose content of sugar beets; sugar yield per hectare; daily beet slicing capacity per plant; length of the beet processing campaign.

⁶ The results of the assessment are presented here following a logical order moving from the upstream part of the sugar supply chain (sugar beet farming/processing) to the downstream one (sugar production/distribution).

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As for **vertical integration between sugar production and sugar-consuming downstream activities**, it was found to contribute to improved economic viability of the concerned sugar producers where it allowed to achieve higher margins from internalised production and marketing of sugar-containing products than from sale to industrial sugar users. **Business alliances among sugar producers** were found to be especially focused on white sugar marketing and raw cane sugar refining: their main benefits were identified in lower investment to implement diversification strategies and in improved efficiency and wider geographical reach of marketing activities. In that way, business alliances contributed to improved economic viability of the concerned sugar producers. Finally, **sugar supply contracts between sugar producers and their customers** (industrial users of sugar, wholesalers/traders of sugar, packers, retailers) were found to contribute to improved stability and predictability, and through that to improved economic viability for the concerned parties. Similar to sugar beet supply contracts, multi-annual sugar supply contracts were found to have both pros and cons (trade-off between improved stability and reduced flexibility).

1.4 Current regulatory framework at EU and national levels: influence on the sector's resilience

The assessment focused on the key elements characterising the regulatory framework of the post-quota period that can have – in theory at least – an influence on the resilience of the EU sugar sector.

The **end of the EU sugar quota system**, combined with the **removal of a legislation-based sugar beet minimum price⁷**, was found to have only indirect effects, in combination with other factors (the oversupply of sugar at global level in particular), on the economic viability of the main actors in the EU sugar supply chain. Albeit **indirectly**, it anyway **contributed to reduced margins and profitability for EU sugar beet growers and sugar producers**. As for their effects on the **availability of an adequate sugar supply in the EU**, the two changes combined were found to have **no remarkable effects at EU level** (stable sugar beet area and increased sugar production), whereas they had **variable effects at Member State level**, depending on the specific situation of the national sugar sector. Overall, they contributed to cause a **redistribution of sugar beet area and sugar production across the EU**.

The elements of **EU trade policy** of relevance for the sugar sector (general import regime, preferential trade regimes) were found to have **no effects** on the economic viability of **EU beet sugar producers and sugar beet growers**, even though **prospective free trade agreements with sugar-exporting third countries** are perceived as a **major threat to economic viability** by most sectoral stakeholders, which also underlined that the import regulation mechanisms provided by EU legislation play a critical role in addressing external shocks caused by the dynamics of the international sugar market. The results of the assessment suggest that the decline of the profitability of EU sugar refiners, mainly due to reduced availability of raw cane sugar for refining and to reduced refining margins, is an effect of the increase of international raw sugar prices vis-à-vis the decline of EU white sugar prices, rather than being related to EU trade policy. EU trade policy was found to have no significant effect on the availability of sugar on the EU market, which remained adequate over the post-quota period (the problem was rather the opposite, i.e., oversupply after the first marketing year without quotas).

⁷ Some consulted sectoral stakeholders observed that the EU is the only significant beet sugar producer to have completely phased out any legislation-based supply management mechanisms, and that other leading beet sugar producers (e.g., the USA) have made completely different decisions in terms of policy for the sugar sector (maintaining supply management mechanisms, providing strong tariff protection and enforcing strict import regulation policies, etc.).

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As for **voluntary coupled support to sugar beet**⁸ (VCS for short), it was found to have a **positive effect** on the **margins, income and overall profitability of sugar beet growers** in the eleven Member States that opted for granting it. Furthermore, by addressing structural weaknesses in sugar beet farming, VCS may indirectly contribute to mitigate their potentially negative implications for sugar beet processors (mainly in terms of reduced areas under sugar beets). As for its effects on the availability of an adequate sugar supply in the EU, VCS can contribute to prevent a decline in sugar beet supply in the Member States where it is granted (to the extent that it succeeds in preventing a reduction in the areas under sugar beets), thus indirectly helping to mitigate its potentially negative implications in terms of reduced domestic sugar supply; this notwithstanding, VCS was found to have a **neutral effect on sugar supply in the EU** as a whole⁹.

Finally, **decoupled direct payments** were found to play an important role in **stabilising sugar beet growers' income**, especially when sugar beet prices are low or volatile, since they usually account for a large share of total farm income. Their extremely wide uptake (basic payments are broadly available to EU farmers under certain conditions, and cover around 86% of the utilised agricultural area in the EU) further reinforces the importance of their contribution to an **improved resilience of the EU sugar beet farming sector**. Being decoupled from production, direct payments have no effect on sugar beet and sugar supply in the EU.

1.5 Prospective policy changes and other external factors influencing the current institutional setting of the EU sugar market: influence on the sector's resilience

The study assessed whether, how and to what extent the **recently agreed CAP reform and other relevant European Commission initiatives** (e.g., the Farm to Fork strategy) may affect the current regulatory framework and the EU sugar sector's resilience, concluding that the **most important negative impacts on the economic viability of sugar beet growers and sugar producers** are expected from: i) the **reduction in pesticide use**, as well as the end of derogations currently provided in ten Member States for the use of banned neonicotinoids (including some major sugar producing Member States)¹⁰; and, ii) the **new decisions regarding coupled income support (CIS)** in the eleven Member States that currently apply voluntary coupled support (VCS) for sugar beet¹¹ (abolition of the coupled support for sugar beet or reduction of the amount per hectare). At the same time, the future CAP will offer new opportunities for the sugar sector, through sectoral interventions, for instance, which should, when implemented, benefit the sector and its resilience. The study also assessed whether, how and to what extent other elements influencing the current institutional setting of the EU sugar market will affect the resilience of the EU sugar sector,

⁸ pursuant to Chapter 1 of Title IV of Regulation (EU) No 1307/2013.

⁹ An updated analysis carried out by the European Commission services revealed that the aggregated area under sugar beet, and even more so the aggregated sugar production in the Member States granting VCS to sugar beet, have declined in the post-quota period. This decline was more than offset by an increase in production in the remaining Member States.

¹⁰ The availability at EU level of significant funds for R&D under Horizon Europe dedicated to finding alternatives to plant protection products is a risk mitigating factor, but the sector has an important role to play in accessing these funds. Overall, in the Commission's view, the effects are difficult to quantify (particularly longer term ones), therefore great precaution should be used when drawing any conclusion in that regard.

¹¹ Those eleven Member States currently account for 30% of the EU-27 sugar beet area and production, including, e.g., Poland, which accounts for 16% of the sugar beet area and 12% of production.

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concluding that **moderately negative impacts** on the sector's resilience could derive from **nutrition policies** (Front of Pack labelling and the introduction of nutrient profiles at the EU level), **Brexit** and **COVID-19**¹², although it should be noted that EUR 10 billion has been made available in recovery funds for agriculture. By contrast, **measures in the bioenergy sectors** should have a **moderately positive impact** on the resilience of the **sugar beet farming sector**, mainly by providing a supplementary income through increased demand for feedstock.

2 CONCLUSIONS ON THE MAIN RISKS AND THREATS AND ON THE POSSIBLE RISK MANAGEMENT TOOLS AND ADAPTATION STRATEGIES TO ADDRESS THEM

2.1 Conclusions on the main risks and threats to the economic viability of the EU sugar sector

Most of the risks identified as relevant for the EU sugar sector - e.g., risks related to planning of sugar production, to sugar beet cultivation, to sugar price volatility - were found to combine **high probability of occurring in the post-quota period** with **high importance**, based on the severity of the related impacts and/or on the perceptions of the affected supply chain actors.

The main **production risks** that affected the EU sugar sector in the post-quota period are related to **planning of sugar production** (due to yield volatility and variations in the extent of areas under sugar beets) and to **sugar beet cultivation** (due to climatic conditions and pests). Risks related to **sugar price volatility** and to the **prolonged period of low sugar prices on the EU market**¹³ emerged as the main **market risks**: partially linked with the end of quotas, they have affected all the actors in the sugar supply chain. Sectoral stakeholders were found to perceive **policy-related risks** from **non-homogeneous implementation of the ban on neonicotinoids** as particularly important, mainly due to the remarkable negative impacts that viral yellowing can have on sugar beet yields and overall sugar output. As for **systemic** (i.e., non-sector-specific) **risks**, those deriving from **variations in the price of the main energy sources** and from **variations in exchange rates** (Brazilian Real to US dollar in particular) emerged as the most serious ones.

Policy-related threats - in particular those related to Free Trade Agreements with sugar-producing third countries/trade blocs, and to the challenging goals in terms of sustainable farming in the EU set out in the Farm To Fork strategy - are **perceived as serious** by an ample majority of the consulted actors in the EU sugar supply chain. However, it should be noted that the potential impacts stemming from those threats were often found to be **variable** - due to the influence of several external factors - or **unclear** (due to the still undetermined implementation details).

2.2 Conclusions on the possible risk management tools and adaptation strategies to address the main risks and threats to the EU sugar sector

The conclusions on the **possible risk management tools and adaptation strategies** to address the main risks for the EU sugar sector in the post-quota period, and

¹² According to the Commission, the medium- and long-term effects of nutrition policies and Brexit are for the moment very difficult to quantify: therefore, great precaution should be used when drawing any conclusion.

¹³ It is anyway worth underlining that over most of the post-quota period the average EU sugar price remained above the international reference price, i.e., London white sugar futures price (contract No. 5).

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prospective threats to its short, medium and long-term economic viability are based on the key findings of the assessment made under Theme 2; they consider also the key findings on the overall resilience of the EU sugar sector presented at § 1, and the outcomes of a focus group involving experts from all the stages of the sugar supply chain and from research institutions.

The conclusions at § 2.2.1 present the **key lessons learned from the study**, and include a systematic screening of the evidence, indicating in particular which study findings:

- reveal that the actions undertaken in the framework of adaptation strategies match expectations in terms of addressing the most serious threats to the EU sugar sector in the post-quota environment - “**what works**” (§ 2.2.1.1);
- are too preliminary to draw a conclusive judgment on the actions undertaken - “**wait and see**” (§ 2.2.1.2);
- reveal clear shortcomings of the actions undertaken in addressing the most serious threats to the EU sugar sector in the post-quota environment - “**what does not work**” (§ 2.2.1.3).

It should be noted that the key findings of the study are not always clear-cut, that a number of nuances need to be considered, and that some adaptation strategies may fall somewhere “in between” the categories defined above; for these reasons, some **general considerations on the possible strategies to address the main risks and threats to the sector** are elaborated at § 2.2.2.

2.2.1 Risk management tools and adaptation strategies: key lessons learned from the study

2.2.1.1 “What works”

The study confirmed that some long-established solutions to address **production risks**, i.e., the use of **specific farming practices and inputs** as well as **crop insurance**, have been effective also in the post-quota period, albeit with some limitations (policy-related constraints like the ban on neonicotinoids; coverage limited to specific risks, like hail, droughts, certain pests). **Temporary derogations for the use of certain production inputs** banned at the EU level (neonicotinoids in particular) partly covered those limitations, even though they were granted in some Member States only, with potential distortions. **Reserve funds** and increased recourse to **hedging techniques based on futures and options** helped sugar producers (especially refiners) and international sugar traders in smoothening out **variations in turnover/profitability** and in addressing **price volatility**. **State aids** (including those falling under the *de minimis* clause) can be broadly considered as risk management tools: they also contributed to improving the resilience of sugar beet growers against **production and market risks**.

Even though they were **not designed as risk management tools**, some policy instruments and private arrangements were found to have **significant implications in this regard**, and to have **contributed effectively to improved resilience** of the EU sugar sector. **Voluntary coupled support to sugar beet** contributed effectively to safeguarding the profitability of sugar beet farming in the 11 Member States where it was granted in the post-quota period. By stabilising the income of EU sugar beet growers, **decoupled direct payments** contributed to an improved economic viability for them. **Sugar beet supply agreements and contracts** ensured effective production planning also in the most difficult phase of the market crisis of the post-quota period, even though they were not always effective in safeguarding the profitability of sugar beet farming (via sugar beet pricing), and were affected by issues concerning specific aspects (e.g., management and pricing of sugar beet pulps). **Price monitoring and reporting systems** (public or proprietary ones) available to the EU

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sugar sector all provided useful indications on the general trends of relevant sugar prices in the post-quota period; however, the views of sectoral stakeholders on their usefulness for elaborating risk management solutions aimed at addressing **price volatility and market risks** in general were rather mixed, and some of these systems were found to be affected by specific shortcomings¹⁴.

As for **overall business strategies with significant risk management implications**, the long-established and widely implemented ones aimed at **strengthening cost competitiveness of sugar production** effectively contributed to safeguarding the economic viability of sugar producers in the EU also during the price depression of the post-quota period. **Geographical diversification** effectively contributed to address production risks in the post-quota period, but was of no use in addressing market and price risks, since the crisis had an EU-wide and global reach. Strategies aimed at **product/sector diversification** confirmed their effectiveness in smoothening the adverse effects on the economic viability of the concerned sugar producers of the prolonged EU sugar price depression of the post-quota period, especially where they concerned activities whose profitability is not influenced by sugar price dynamics. **Technical and product innovation** also contributed to reduce production costs in both the farming and the processing stages, and/or to provide additional revenue streams for sugar producers: in this way, innovation helped to safeguard the economic viability of sugar production, and to address production, market and policy risks. **Direct ethanol production from beets** was found to have a great potential as supply management tool (as the successful Brazilian experience with sugar to ethanol switching clearly shows): however, this solution still sees a rather limited uptake in the EU (mostly in France), mainly due to policy-related constraints to more widespread and flexible recourse, and would not be a concrete option in some sugar-producing Member States.

Rather few risk management solutions and adaptation strategies filed under this cluster were found to be “perfect”. Some of them suffer from (relatively minor) flaws in their design, several others from drawbacks in the implementation and/or constraints to a wider uptake in the EU, others have proved their effectiveness more in third countries than in the EU. Nevertheless, the **overall judgment** that can be drawn on the contribution of those solutions and strategies to improved resilience of the EU sugar sector is **positive**.

2.2.1.2 “Wait and see”

The risk management solutions filed under the “wait and see” cluster were found to have a conceptually sound design, but also to suffer from more or less serious **drawbacks in the related implementation mechanisms**, which have **limited or prevented**, to date at least, their **uptake in the EU sugar sector**.

Mutual funds against pest and diseases allow for a reduction in the cost of protection from these specific **production risks** thanks to the concept of “risk pooling”, which has been successfully implemented to address production and market risks in sugar cane and sugar beet production in third countries (e.g., Australia, USA). The **Income Stabilisation Tool (IST)** emerged as a theoretically well-designed tool to address sharp **variations in farm income**. Similar to mutual funds, it is based on the concept of “risk pooling”, and covers against a decline in sugar beet prices and/or an increase in input prices. However, a number of significant drawbacks in its implementation mechanism prevented practical implementation of this tool in the EU

¹⁴ One of the main identified shortcomings of price monitoring in the EU Sugar Market Observatory, i.e., the fact that it does not capture the dynamics of the spot market, has been addressed by the obligation introduced by Regulation (EU) 2017/1185 for Member States to notify (starting from January 1, 2021) selling prices for short-term contracts, which allows the Commission to publish an average selling price corresponding to this type of contracts.

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sugar sector in the post-quota period. As for **hedging techniques based on futures and options**, this tool was found to be **generally not available to EU sugar beet growers**. Nevertheless, this solution showed proven effectiveness in addressing sugar cane **price volatility** for growers in, e.g., Australia. Since most of the aforementioned solutions and strategies, or at least the key concepts on which they are based, have shown to be effective in sugar-producing third countries, it is reasonable to expect that – once the identified drawbacks are addressed – a **wider uptake in the EU** will allow for a **more robust judgment on their actual contribution to improved resilience** of the EU sugar sector.

A number of **policy instruments foreseen by the CMO Regulation** that are explicitly designed to perform – among others – **risk management functions**, and which could – in theory – contribute to increased resilience of the EU sugar sector in crisis situations, saw **no practical application in the sector in the post-quota period**. All those instruments (aid to for private storage at Art. 17; measures against market disturbance at Art. 219; measures to resolve specific problems at Art. 221; derogation from Article 101(1) TFEU under Art. 222; the safeguard measures under Art. 194 and 195) are cross-sectoral, i.e., they are not tailored to the specificities of the sugar sector. The **main reasons for the non-application of those instruments** were the following:

- In 2019, after a careful and detailed examination, the High Level Group on sugar deemed that regular market instruments in the CMO regulation were mismatched to deal with the specific market situation experienced during the post-quota period, but did not exclude that they could be used in the future. More precisely, most members of the Group agreed that to intervene during the transition period, when market fundamentals are changing, was not straightforward and risked interfering with the ongoing adaptation process in an undesirable way.
- **Aid for private storage** is used to reduce temporarily the impact of short-term oversupply during a difficult market situation. However, apart from the first marketing year without quotas (2017/18), the EU sugar production continued to decline, leading to tighter stock levels. Under these circumstances, the activation of this measure would have either not been picked up by operators, or could have compromised sugar supply.
- The organisational structure for an effective implementation of **Article 222** is currently not in place in the sugar sector, as it would require the participation of the large majority of both beet growers and sugar producers; however, the current number of recognised Producer Organisations (POs) or Inter-branch Organisations (IBOs) is limited in most sugar producing Member States. It should be noted that the exclusion of collective bargaining or price-fixing activities in the context of the supply management measure under Article 222 is needed to ensure the respect of the competition rules in force.
- The safeguard measures under **Article 194** of the CMO Regulation were not activated because – except for the first marketing year without quotas (2017/18) – the sum of sugar consumption and exports was above the domestic production, with the difference to be covered by imports. Also, in the last three marketing years EU sugar imports have been declining.
- As for the lack of application of the suspension of processing and inward processing arrangements under **Article 195** of the CMO Regulation, the analysis of the evolution of sugar imports/exports under these arrangements showed that in the first three years after the end of quotas sugar imports under inward processing have remained at fairly similar levels compared to the last two years of the quota period, while exports have increased quite significantly over the same period.
- Despite criticism from sectoral stakeholders on the lack of a triggering mechanism for their activation, aid for private storage and other market measures were implemented for other agricultural sectors (i.e., milk, livestock and olive oil) over the years, thus demonstrating –wherever the conditions for

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their use are met - their effectiveness in addressing crisis situations faced by EU agri-food sectors.

In general, the instruments foreseen by the CMO Regulation are perceived by several sectoral stakeholders as being characterised by a **discretionary application, following a thorough assessment of the market situation**. The **absence of a predictable triggering mechanism** is perceived by those stakeholders as a **serious obstacle to the practical implementation** of the measures in the EU sugar sector in the post-quota period. In this regard, it is important to consider that stability and predictability are of paramount importance to sectoral stakeholders (due to the peculiarity of the sugar industry business model), whereas the European Commission attaches great importance to the consistency of risk management measures in the CMO Regulation with the market orientation of the CAP.

In conclusion, since the instruments foreseen by the CMO Regulation saw no practical application in the sugar sector in the post-quota period, and there are no concrete elements suggesting that they might suffer from specific weaknesses, they were filed under the “wait and see” cluster. However, diverging views between sectoral stakeholders and the European Commission on the usefulness of those instruments for the sector exist: a possible solution would be to continue the dialogue between the parties, and to identify the most suitable tools and strategies that could ensure the stability of the sugar sector without conflicting with the general principles of the EU legislation¹⁵, including the general and specific objectives of the CAP and its market orientation. Any possible future adjustments to the concerned instruments could not be envisaged without proper consideration of the legal framework for the future CAP, and in particular of the amended CMO Regulation. In the context of the recent negotiations, different amendments were discussed and not retained, such as the introduction of triggering mechanisms for market measures. Such mechanisms may raise expectations and thus influence the behaviour of market actors: this would not be in line with the market orientation of the CAP.

2.2.1.3 “What does not work”

Some risk management solutions – most notably, the instruments foreseen by the CMO Regulation¹⁶ – saw no practical application in the EU sugar sector in the post-quota period. Several consulted sectoral stakeholders identified inherent weaknesses in the design and implementation of those instruments, a position that is not shared by the Commission, which explained that those instruments were not used during the crisis because the conditions for their activation were not met. In the absence of evident conceptual weaknesses in the instruments foreseen by the CMO Regulation, and since their non-application during the crisis implies that no concrete evidence is available to conclude on their actual effectiveness in addressing the risks faced by the EU sugar sector in the post-quota period, those instruments could not be filed under the “what does not work” cluster, and were instead filed under the “wait and see” cluster (§ 2.2.1.2).

¹⁵ The main challenge in this regard is the need to avoid conflicts with EU competition law in a possible review of the derogation from Article 101(1) TFEU - Article 222 of the CMO Regulation: whereas collective bargaining or price-fixing activities may be powerful solutions to address market and price risks, they also have a clear anti-competitive nature.

¹⁶ Aid to for private storage at Art. 17; measures against market disturbance at Art. 219; measures to resolve specific problems at Art. 221; derogation from Article 101(1) TFEU under Art. 222; the safeguard measures under Art. 194 and 195.

2.2.2 General considerations on the possible strategies to address the main risks and threats to the EU sugar sector.

The set of solutions and strategies classified under the “what works” cluster should constitute the core of the “toolbox” to address the most serious threats to short, medium and long-term economic viability of the EU sugar sector. To further improve the capacity of the identified solutions and strategies in that regard, possible adjustments should be aimed at addressing the highlighted drawbacks in their implementation mechanisms, in order to improve their practical effectiveness and/or to promote further widening of their uptake in the EU sugar sector.

As for the solutions and strategies filed under the “wait and see” cluster, adjustments aimed at addressing the highlighted drawbacks in their implementation mechanisms may be needed in order to improve the practical effectiveness of those solutions and strategies in addressing the relevant risks and threats for the EU sugar sector, and to promote a more adequate uptake/implementation for them. For some of those solutions/strategies there is no sufficient concrete evidence, to date, to assess their practical effectiveness in the EU context. This implies that further investigations will have to be made in the future, when those solutions and strategies should (hopefully) see a more significant uptake/implementation, in order to come to a robust assessment of their practical effectiveness for addressing the relevant risks and threats. As for the instruments foreseen by the CMO Regulation, which saw no practical application in the sugar sector in the post-quota period, there are no concrete elements suggesting that they might suffer from specific weaknesses. In any case, possible future adjustments to those instruments could not be envisaged without proper consideration of the legal framework for the future CAP (in particular of the amended CMO Regulation) and of the market orientation of the CAP.

The assessment revealed the important contribution of **diversification strategies** (especially towards sectors/products that are not influenced by sugar price dynamics) and **process/product innovation strategies** to improved resilience of the EU sugar sector. However, the implementation of those strategies by companies that are still focused on the core business of sugar production presents significant challenges, especially because the prolonged crisis on the EU sugar market has left many of them with limited financial resources. Potential solutions to overcome this constraint may be offered by the development of **forms of cooperation** (e.g., joint ventures) among sugar companies, or between them and companies operating in the target sectors, as an alternative to the implementation of those strategies through direct investment and/or acquisitions.

Innovations in contractual relationships along the sugar supply chain could also be explored, due to the important role that they play in the more market-oriented post-quota sugar regime. Efforts should especially be targeted at sugar beet supply contracts, with a view to improving their capacity to cope with increased market and yield volatility. The introduction of contractual innovations could be facilitated by a deepening and a wider use of inter-branch agreements. The end of the EU quota regime has led to diverging interests between sugar beet growers and sugar producers. Finding common ground through new contractual arrangements between all stakeholders, as well as making risk management a top priority, will be increasingly needed for the EU sugar production and marketing system to survive. The challenge is also for providers of risk management tools and solutions, to find new instruments and strategies appropriate to the changing business environment, and for the EU and Member States, to encourage the use of well-designed risk management tools.

The assessment showed that it is of paramount importance to consider that **there is a thin line, but a real difference, between managing risks and addressing structural weaknesses**. While risk management aims at making economic agents able to absorb temporary shocks through appropriate tools and strategies, including with

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public support, it cannot remedy a lack of competitiveness due to low productivity, high production costs, a declining market power in the food value chain or other systemic problems. The prolonged crisis that the EU sugar sector has experienced as a result of a long period of low world sugar prices may induce sectoral stakeholders to ask for far-reaching policy measures that would go beyond risk management *per se*, and provide them with effective means to maintain their financial viability until the crisis ends or recedes. In this regard, it is worth emphasising the positive contribution of voluntary coupled support and other direct payments to addressing structural difficulties faced by the sugar beet farming sector in certain Member States, thus increasing the overall resilience of sugar beet growers in those countries.

It should finally be underlined that sectoral actors could play a more proactive role in strengthening their resilience, especially by:

- obtaining access to the multiple tools available at EU level that could contribute to an increased resilience of the sector: for instance, measures under the second pillar of the CAP that are not, as such, part of the risk management toolkit, or the funds supporting investment in research and innovation (Horizon 2020 and Horizon Europe); in that regard, it is important to consider that the *NextGenerationEU* recovery plan¹⁷ substantially increased funding for supporting – among others – research & development activities;
- participating in different good practice exchange platforms set at national /EU level, such as the European Network for Rural Development (ENRD).

¹⁷ https://ec.europa.eu/info/strategy/recovery-plan-europe_en

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Publications Office
of the European Union

doi: 10.2762/427109

ISBN 978-92-76-41510-7