Executive Summary

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**Agrosynergie**

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This evaluation covers the ex-post analysis of the effects of the 2006 sugar CMO reform (Council regulations n°318/2006, n°320/2006 and n°1782/2003) on the sugar supply chain, including the farm sector and sugar producers, refiners and isoglucose producers.

The period studied is 2006 up to the present day and is compared to a pre-reform period (most often 2001-2005).

The 27 Member States are covered; the analysis focused on the six where field case studies were conducted: Finland, France, Germany, Italy, Poland and the United Kingdom.

1 METHOD, TOOLS AND LIMITS

The analysis is based on the combination of different approaches:

- theoretical analysis for formulating the hypothesis of impact of the measures;
- quantitative empirical assessment based on standard descriptive statistical approaches applied to public (Eurostat, FADN, DG Agri) and private (CEFS, CIBE, etc.) databases;
- qualitative empirical analysis of information collected in the bibliography and from operators and/or managing authorities interviewed during field case studies, allowing sound interpretation of the quantitative results.

The main limitations of the analysis were the following:

- Some data considered very sensitive by operators have not been made available, or only partially so. This includes costs of production, sugar companies’ restructuring plans, refiners’ business plans.
- The national reports on the restructuring fund were difficult to gather and contained limited information.
- The results of the FADN data analysis were limited because:
  - Data are available only up to 2008 (2007 for Italy), which is too short to analyze the final impact of the reform at farm level.
  - As beets normally represent less than one third of the farms’ areas, an approach based on cropping systems was applied. In order to do so, very specific samples were built, and results cannot be extrapolated. Therefore, no quantitative results can be drawn from FADN, only general qualitative conclusions.

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1 later integrated into Council Regulation No 1234/2007
2 later replaced by Council regulation No 73/2009
3 Farm Accounting DataNetwork
4 Comité Européen des Fabricants de Sucre
5 Confederation of European Beet Growers
2 CONTEXT

The sector covered by the Common Market Organisation

The Common Market Organisation (CMO) evaluated covers different types of sweeteners:

- Sugar that is produced either from beets grown all over the EU and processed in dedicated factories, or cane sugar that is mostly imported raw and refined in the EU.
- Isoglucose which is produced from wheat or maize within an industrial complex producing a wide range of starch-based products.
- Inuline syrup, which was no longer produced after the reform.

The EU-27 is the world’s leader in beet sugar production with 17.5 million tonnes produced in 2009/10. This represents 71% of the world’s beet sugar production, but only 10% of the world’s total sugar production. It used to be the second world exporter of white sugar after Brazil, with 6 million tonnes of exports in 2002/03. Since 2006/07, the first marketing year of the sugar reform implementation, EU exports have plummeted (1 million tonnes in 2009/10), and the EU is now a net importer of sugar.

EU sugar production is concentrated in regions considered the most competitive for sugar production. These are located in a zone ranging from the UK, France, Belgium, Netherlands, Germany to Poland, generally referred to as the "beet belt."

Since 2005, world sugar prices have increased, sometimes with very high price peaks, mainly because of increased consumption, including new demand for bio-ethanol and weather related production difficulties, which resulted in low stock levels. Consequently, the sugar CMO reform was implemented at a time of significant price fluctuations and an unprecedented high level of world sugar prices.

Development of the sugar policy framework

Since the first sugar CMO in 1968, the sugar sector has been regulated through the traditional instruments of the CAP, such as guaranteed prices to support the market, production quotas to limit overproduction or the refunds to export surplus production to the world market.

Besides the CMO, the Sugar Protocol with ACP states and India and additional special preferential agreements guaranteed full-time refiners privileged access to imports.

The framework which was established ensured a stable market for operators with high prices and eliminated competition from imports. The aim was to support sugar prices and thereby farmers’ income.

In 2006, the sugar CMO was reform was driven by three main reasons:

- Because of the EU import concessions awarded in 2001 to the Least Developed Countries through the Everything But Arms initiative (EBA), substantial import flows were expected given the high sugar price at the EU level.
- The export subsidy commitments of the EU at the World Trade Organization (WTO) level, as interpreted following the outcome of the legal actions against the EU sugar regime in 2005, as well as the on-going negotiations under the Doha Development Agenda required reduction in subsidized exports down to 1.37 million tonnes.
• Greater coherence between the sugar policy and the new CAP framework set in 2003 was to be ensured.

The CMO was therefore reformed to reduce EU quota production and exports and to attain a new market balance. A significant change in the framework in which producers would operate was carried out:

• revision of the market management tools based on the reduction of the sugar reference price and minimum price to growers (the system of quotas as well as minimum and reference prices are nonetheless being maintained until 2014/15);

• temporary (four-year) restructuring scheme was set up. The scheme was based on a self-financing mechanism\(^6\). It aimed at encouraging least efficient producers to voluntarily renounce their quotas. It included three main measures\(^7\): restructuring aid to producers, growers and machinery contractors for the quotas renounced; transitional aid to refiners; and diversification measure. During the first two years of the scheme, the amount of quota renounced was much lower than expected. Therefore, the scheme was modified in 2007 (hereafter referred to as “reform of the reform”) to make it more attractive and reach the quota reduction target of 6 million tonnes;

• partial compensation of the minimum beet price decrease via the introduction of a decoupled payment for growers.

During the transition period, based on the incentives proposed in the restructuring scheme and business strategies, operators chose diverse options. The impact in terms of production, structure, market balance, and competitiveness are presented below.

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\(^6\) During the first three marketing years of the reform, the sugar manufacturers had to pay a temporary restructuring amount per tonne of quota to finance the restructuring fund. This was possible due to the fact that the sugar reference price did not decrease during the first two marketing years after the reform (2006/07 and 2007/08), while the beet minimum price decreased from the year first year.

\(^7\) A fourth measure was transitional aid to Austria and Sweden, whose impact has not been evaluated.
3 MAIN CONCLUSIONS

3.1 THE SUGAR BEET SECTOR

Quantities, yields, location and structure

As a direct impact of the quota reduction as well as of the new limitation on exports due to the WTO ruling, the average volume of beets produced in the EU-27 in 2008-2010 was 19% lower than that of 2003-2005. Within the restructuring scheme, the renunciation of delivery rights by growers was based, whenever possible, on a voluntary basis. This has encouraged low-yield growers to give up sugar beet production. As a consequence, the EU annual improvement in yields accelerated (from 2.6% to 7.4%), as did the trend of concentration of production in larger farms. This was true, not only in the beet-belt, but elsewhere as well. The average EU pace of decline in the number of farms doubled after the reform.

These changes in beet quantities, which were different among Member States, led to further geographical concentration of production in the beet belt, while significant drop in beet quantities occurred mainly in Italy and Spain.

In Italy, the transitional coupled support has significantly improved the profitability of the crop, and contributed to maintaining levels of production higher than would have been reached otherwise.

Sugar beet prices

As there is no comprehensive statistical information available on beet prices, the data were collected through the case studies, which in the end, were not sufficient to make a complete statistical analysis.

The progressive cut in the minimum price of quota beets was fully applied. However, in order to ensure supply and thanks to good price conditions in the world sugar market, some sugar producers (notably in Italy and the United Kingdom) offered higher prices to growers.

Due to reduced profitability of beet produced within quota and the increase in cereal prices, prices for out-of-quota beets were increased so as to be attractive to growers. Several companies have directly linked prices to the price of alternative crops and/or the price of the outlet (bioethanol, export).

Market orientation

The analysis of market orientation was based on the FADN data analysis and results of the interviews.

As a consequence of the lower minimum price, the distortive effect of CAP support on farm net added value has greatly decreased. However, because delivery rights and the minimum price were maintained, the CAP measures still have a distortive effect.
Several indicators confirmed that agricultural production choices are based more on the price of beet than before the reform; as a consequence, what we observed is that industrial sugar producers’ pricing strategy is more linked to alternative crop prices and beet production costs (as in the United Kingdom, for example).

**Internal competitiveness of the farming sector**

The analysis of competitiveness was focused on the internal competitiveness of the sugar beet farming sector, i.e. on the EU internal market. As part of the aid is included in the price, it was not possible to compute the net added value without aid. Therefore, we analysed key components of competitiveness (sugar beet outputs, yields and production costs) and the characteristics of growers who abandoned their beet production. The results are based on the FADN data analysis and interviews with growers and sugar producers. They should be considered with due caution as they are not statistically representative.

- The impact of the decrease in the minimum beet price has been lessened by changes in sugar producers’ pricing policy, better yields, and/or the development of out-of-quota production. However, it seems that production costs were not reduced.
- Furthermore, at the EU level, the biggest reduction in sugar beet areas between before and after the reform was observed in Member States where average profitability has decreased the most (many factors may have caused this decrease). This should lead to an overall improvement in competitiveness in the sector.
- Finally, at the farm level, there is evidence that those farms which abandoned beet production were the ones with the lowest yields. In the sugar sector, according to interviews, low yields are usually linked to low efficiency, therefore the loss of these low yield farms could have contributed to improving the sector’s competitiveness.

Notwithstanding that the data were not statistically representative, it can be concluded that the internal competitiveness of beet production has improved since the reform, mainly because it has led the least efficient growers to give up their production.

**Income of farmers**

Beet production is always rotated with other crops and rarely represents more than a third of the farm area, even in the most specialized farms. Therefore, the income of beet growers is the result of changes in beet profitability, as well as of other production and decoupled support.

Between the periods of 2003-2005 and 2006-2008 the farm net income (FNI)\(^8\) of farmers growing beet (the most specialized ones identified in the FADN sample) show an increase, with the exception of Italy, and to a lesser extent Germany. This increase is significant and accounts respectively +75%, +23%, +66%, and +20%\(^9\) in France, Poland, the United Kingdom, and in Finland. The growing trend in income was strongly linked to the increase in cereal prices since 2005, which compensated for decrease in beet output.

When removing decoupled support, income indicators remain broadly positive. Nevertheless, in France, Germany, the United Kingdom and Finland, decoupled payments do represent a significant proportion of the growers’ income (110% of the FNI in France on average and around 80% in Germany, the United Kingdom and Finland). The final impact of the reform on income depends on the decoupling model chosen by the Member State: under the historical model, the impact is limited, as decoupled support represents on average 60% of the calculated loss in revenue induced

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\(^8\) FNI represents the remuneration to fixed factors of production of the family (work, land and capital) and the remuneration to the entrepreneur’s risks. It includes all the aids received by the farm.

\(^9\) It should be noted that these figure do not have statistical representativeness because of limited size of samples and their specific characteristics.
by the decrease in the minimum price; in a dynamic hybrid model, after the phasing-in period, the change in revenue will be more significant, as the decoupled payment diminishes progressively to an entitlement level identical for all farmers (the phasing-in period ends in 2012 in the United Kingdom, in 2013 in Germany, and in 2019 in Finland).

### 3.2 THE SUGAR PRODUCERS

**Quota renunciation**

Quota renunciation almost attained the initially established target. The renunciations reached 5.8 million tonnes (down from 17 million tonnes of quotas before the reform). However to be completely effective, the initial restructuring scheme had to be reformed after two years, in 2007. As a result:

- all sugar companies (but one) took part in the restructuring scheme;
- quotas were largely reduced in the EU peripheral areas (Italy, Spain, Greece, and Slovenia), and production stopped in five Member States (Ireland, Latvia, Slovenia, Bulgaria and continental Portugal);
- France, Germany, the United Kingdom, the Netherlands, Poland and Belgium, located in the beet-belt, accounted for more than 40% of the decrease in the EU. All available additional quotas (1.0 million tonnes) were purchased at an early stage, reflecting strategic choices of sugar companies to compensate for export losses and to increase their market shares in an effort to ensure competitiveness.

**Out-of-quota production**

Quantities produced outside quotas decreased on average by 1.8 million tonnes. Out-of-quota exports (replacing C sugar) were significantly reduced and were only partially compensated by an increase of demand from other outlets, mostly bio-ethanol production

**Geographical distribution**

The measures contributed to the concentration of production in the leading Member States: the market share of France and Germany increased from 43% of EU production to 52% on average.

**Structure of the sector**

Reduction of the quotas was accompanied by a decrease in the number of factories, from 179 in 2005/06 to 106 in 2009/10 at the EU-27 level (down by 41% of the factories operating in 2005/06). Yet, the restructuring of the sector is an ongoing process which was accelerated by the reform: in the EU-15, 5.8 factories closed every year between 2000/01 and 2005/06, whereas 10.5 factories closed every year during the reform period.

In the EU-15, the reform contributed to speeding up the closure of factories with medium-low and medium capacities (5,000-12,000 t/day). In the new Members States, especially Poland, the reform particularly affected the smaller factories, still heavily present at the time of the reform.

At the company level, factory closures were decided on in two steps. Firstly, producers needed to take the decision to renounce the quota: those producers operating in the beet belt took this decision only after the risk of an uncompensated final cut became high (i.e. when the incentives introduced in 2007 by the ‘reform of the reform’ were implemented). Secondly, the decision as to which factory(ies) to dismantle was based on optimising the maximum CAP support available and minimising the risk of uncompensated quota cuts, while at the same time maintaining...
competitiveness. The respective factories were compared on the following main criteria: production costs mainly energy, logistics for beet and sugar, and costs of raw materials.

**Location and characteristics of EU sugar production after the reform**

![Map of EU sugar production](image.png)

Source: Agrosynergie, based on DG Agri (production) and CGB

**Price**

The reform contributed to a decrease in in-quota prices as a result of the fall in the reference price. However, since November 2009, the EU price has remained well above the reference price because of very high world prices. As a consequence, the gap between in-quota sugar price and the world price has greatly decreased. The variability of in-quota sugar price remains lower than that of out-of-quota, just as it used to before the reform. Nevertheless, in-quota sugar price variability has increased as a result of the decrease in the reference price, giving operators more freedom to adjust prices to the market situation.

### 3.3 THE ISOGLUCOSE SECTOR

The reform gave isoglucose producers the opportunity to increase their quotas without fees, as well as to renounce quotas. In the EU-25, 0.3 million tonnes of quotas were distributed for free while 0.2 million tonnes of quotas were renounced. As a result, the isoglucose quota increased from 0.5 to 0.6 million tonnes. Half of the existing isoglucose production units were dismantled within the restructuring scheme because, (1) quotas were considered by the operators as insufficient to maintain cost-effective production in a context of low sugar prices and high cereal prices, and (2) the restructuring fund was a source of immediate cash flow. No investments were made to increase production capacities; existing production lines were used at full capacity to integrate the additional quotas.
As a result:

- The average quantities processed per site have increased by 44% from an average of 41,000 tonnes to 59,000 tonnes of isoglucose in dry matter/year in the EU-25.
- In combination with quota decrease in the sugar sector, the share of isoglucose in EU quotas has increased from 2.9% to 4.5%.

The geographical distribution of production has significantly changed: production is now concentrated in nine Member States, whereas before the reform isoglucose was produced in fifteen Member States.

### 3.4 REFINERS (FULL-TIME REFINERS AND OTHERS)

Under the previous CMO and the Sugar Protocol ACP-India, full-time refiners benefited from a strongly protected system based on their exclusive access to the quotas of preferential sugar that guaranteed supplies (traditional supply needs), at a guaranteed price for raw sugar. The new framework, resulting from the CMO reform and the progressive replacement of the Sugar Protocol by the Economic Partnership Agreements and Everything But Arms agreements (EPA – EBA), has enhanced competition in the European market between EU beet sugar and imports of raw or refined cane sugar. With decreased EU quota production, imported sugar (raw and/or white sugar) was expected to gain market shares. A three-year transition period (2006/07 to 2008/09) and transitional aid to full-time refiners were implemented to prepare refiners for the new context. Furthermore, refiners did not have to contribute to the restructuring fund.

**Structure of the industry and geographical distribution**

The removal of the strong protection, which used to benefit the traditional full-time refiners, has led to an increase in the number of full-time refiners, from seven before the reform to eleven in 2011, of which six are new full-time refiners.

This also modified the geographical distribution, with the appearance of refining structures in Member States where there was no activity before (e.g. Denmark, Italy and Spain).

To adapt to the new framework, in which sugar imports were expected to increase, refineries have increased their production capacity: in the EU-25, full-time refinery production capacity has in fact increased by 58%\(^{10}\).

Moreover, the abolition of the repartition of the traditional supply needs by Member State and the opening up of access to import licenses to operators other than full-time refiners have enabled raw cane sugar refining activities to start up at four beet sugar producing plants, adding additional new capacities.

**EU supplies in terms of quantities and prices**

At the EU-15 level, third countries’ supplies, after a basically stable transition period, reached an all-time low of 1.4 million tonnes in 2010. This drop prevented the Community’s traditional supply needs from being covered. The rate of coverage\(^{11}\) dropped from 82% in the period 2000/01-2008/09 to 67% in 2009/10\(^{12}\).

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\(^{10}\) Estimation based on the declarations of refineries and on the basis of an utilisation standard of the equipment.

\(^{11}\) Ratio between raw sugar imports and the quantities defined in regulation as the ones necessary to EU refineries: \((\text{supply flows of raw sugar} \times 0.92) / \text{TSN}\)

\(^{12}\) excluding transfers from French Overseas Departments
This is the result of combination of factors, in particular:

- a strong hike in the world FOB price of raw sugar since 2009/2010 (exogenous to the reform) has made the Community market appear less attractive for raw sugar imports (in particular from EPA-EBA countries);
- at the same time, the Community-guaranteed minimum price for raw sugar imported from EPA-EBA countries was reduced, amplifying its impact;
- the termination of the Sugar Protocol, exogenous to the reform, and its replacement by the EPA has left ACP exporter countries free to decide to export to any market where profit can be maximized;
- some strategic responses following the reform implemented by European companies in ACP countries (e.g. Mauritius and Swaziland) to increase exports of white sugar instead of raw sugar.

In these new conditions, the attractiveness of the Community market for raw sugar exports depends on the price gap between the EU and other markets. When the price conditions are not in favour of the European market (as happened in 2009/10 and to a lesser extent in 2010/11), producers from EPA-EBA countries might find it more advantageous to export to neighbouring markets rather than the EU. This has led to a decrease in the coverage rate of imports.

**Contribution of the transitional aid to the restructuring of full-time refiners**

Limited information was gathered through the interviews with refiners’ representatives, and no data were provided by authorities.

According to the interviews, the transitional aid contributed both to lessening negative impacts on margins by covering operating costs of the refiners and to the restructuring of the plants (investments to increase production capacities and reduce fixed costs). However, all interviewees stated that, at present, companies are not able to fully benefit from these investments because there is a lack of raw sugar imports for refining.

### 3.5 MARKET BALANCE

#### EU market balance

Ensuring a sustainable market balance was one of the core issues of the reform. Before the reform, the market was highly regulated. In 2005, both the upcoming changes in the trade arrangements with third countries and the new limit on subsidized exports following from the WTO Panel ruling were obvious drivers of risk of oversupply. The new measures implemented in the 2006 CMO aimed at limiting this risk.

However, as from 2009, an unprecedented high level of world sugar prices had significant impacts on the EU market balance. In 2009/10 and 2010/11, import flows needed to meeting demand for sugar did not occur, and the deficit which cumulated was estimated at 1 million tonnes. As a consequence, market price in the EU remained at a much higher level than that of the reference price, and stocks were at their lowest level at the end of 2009/10 (1.18 million tonnes, 7% of the annual consumption compared to 16% immediately after the reform).

Even though the CMO was designed to manage risks of oversupply, it has been possible to put forward temporary solutions to ease the tension of undersupply. And so, in 2011, exceptional measures (500 000 tonnes out-of-quota sugar release on the quota market and import duties reduction) were taken by the Commission to ease the tight situation, and stocks were partly replenished at the end of 2010/11 (11% of annual consumption).
**Intra-EU flows**

With the reform and limits on subsidised exports induced by the WTO Panel ruling, the EU has changed from being a net exporter to a net importer. Some Member States have reduced their production and five of them have even stopped all beet production. As a consequence, intra-EU trade has increased significantly.

### 3.6 COMPETITIVENESS OF SUGAR PRODUCERS AND REFINERS

Improving competitiveness was a core objective of the reform. The sugar industry is capital intensive, and the goods produced were not very differentiated. Therefore, attaining economies of scale is a key issue in achieving competitiveness. The impact of the reform as well as other drivers were analysed at three levels. When possible, the analysis has been based on statistical data (from different sources). However, with regard to production costs, operators did not agree to provide data (absolute values), as the information was considered too sensitive.

**Competitiveness of production activities**

**Sugar producers.** The reform has stimulated improvements in the main factors of achieving competitiveness, although some of these were already improving – but at a lower speed – before the reform. They include: increasing the average campaign length (improvement of the plant utilization rates) and labour productivity (reduction of unit costs). Also, sugar production per hectare has on average improved (due to reduced incoming logistics costs). This confirms that the abandonment of the production chains has mainly taken place in the less suitable, and therefore less competitive, agro-industrial areas.

The reform has accelerated closure of factories with medium-low and medium production capacity. This has led to an increase in average production per factory in the EU-15 from 121 000 in 2004/05-2005/06 to 165 000 tonnes/year in 2008/09-2009/10.

This average improvement has not been equal between Member-States, however. Indeed, the coefficient of variation\(^\text{13}\) of each competitiveness factor has increased since the reform. Thus, the reform has contributed to increasing the competitiveness gap that existed among Member States before the reform. This is also confirmed by the changes in the geographical distribution of out-of-quota production. The following table summarizes the main results regarding the (direct and indirect) impacts of the reform on the variables affecting cost competitiveness (average and coefficient of variation) in the EU-25.

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Coefficient of variation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before reform</td>
<td>After reform</td>
</tr>
<tr>
<td>White sugar yield (t/ha)</td>
<td>8.7</td>
<td>11.0</td>
</tr>
<tr>
<td>Campaign length (days)</td>
<td>91.1</td>
<td>110.8</td>
</tr>
<tr>
<td>Volume per factory (t)</td>
<td>122</td>
<td>170</td>
</tr>
<tr>
<td>Productivity per labour unit (t/employee)</td>
<td>387</td>
<td>553</td>
</tr>
</tbody>
</table>

Source: data from various sources

\(^{13}\) Variability of the indicators values around the mean has grown
**Full-time refineries.** Because of the combined effects of a decrease in supply flows of raw sugar and an increase in production capacity, the utilization rate of capacity has deteriorated to a level where some full-time refiners are less competitive.

**Relative competitiveness between sugar producers and full-time refiners.** Concerning relative competitiveness between sugar producers and full-time refiners, the ratio between the potential industrial margins\(^{14}\) of sugar producers and of full-time refiners showed: a) a loss of competitiveness of sugar producers compared to refiners during the first four years of the reform, mainly because of the contribution to the restructuring fund by producers during the first three post-reform campaigns, and b) a loss of competitiveness of the refineries in 2010/11, which is related to price increase for raw sugar imports due to elevated world market prices.

**Competitiveness of commercial activities**

The analysis has shown the oligopolistic nature of the competitive system of the sugar industry. Furthermore, the analysis revealed that:

- There is a wider differentiation of prices applied in the Community and companies increasingly use them to improve competitiveness (direct effect of the reform).
- In some Member States that have stopped a considerable proportion of their sugar production (such as in Greece and Italy), the shorter distance from the production centre to the place of consumption gives less efficient industries an advantage in their own market, compared to more efficient but more distant competitors.

**Companies’ profitability and global competitive position**

The analysis showed that the reform contributed to accelerating factory closures. The level of concentration could be taken as an indicator of the effectiveness of measures fostering competitiveness which have been put in place by the companies.

- At a country-system level, quite a relevant growth in concentration can be measured, in particular by the further strengthening of the power of France and Germany.
- At the company level, the structure was and has remained in a situation of relative unbalanced oligopoly\(^{15}\), but the profit margins of the sector’s leading companies are likely to have grown slightly after the reform.

Under this framework, some companies that have totally or partially abandoned their quota have maintained their market shares (and client portfolio) by maintaining packing/distribution activity of sugar bought from other companies. Other operators, among those who have continued sugar production, have developed diversification and/or valorisation of by-products strategies, thereby increasing their overall efficiency and thus profitability.

\(^{14}\) The potential unit margin represents the level that the actual production costs must stay under in order for a factory to make a profit, therefore rendering the company competitive. For sugar producers, it is calculated as the difference between the average EU price of white sugar net of the temporary restructuring amount and the average EU purchase cost beets. For refiners, it is the result of the difference between the average EU price of white sugar and the CIF implicit price of raw sugar for refining (NC 1701 11 10) imported from ACP countries.

\(^{15}\) Oligopoly in which market power of the biggest three companies is unbalanced.
3.7 PREVENTING NEGATIVE SOCIAL AND ENVIRONMENTAL IMPACTS

To assess the impacts of the restructuring scheme on avoiding negative social and environmental impacts, we analysed to what extent the scheme made operators go beyond the minimum requirements, considering first the EU regulation, then the national regulation and finally the implementation at the company level. The analysis has been limited by the lack of data due to insufficient monitoring and issues of companies’ privacy. It was limited to the case study Member States\(^\text{16}\) and only ten restructuring plans. Detailed reports about the actions carried out were available only for six of the latter. Furthermore, these plans could not be compared to plans implemented in the case of closures outside the scheme. Therefore, results should be treated with great caution.

Social impacts

The closure of 41% of sugar factories inevitably led to considerable job losses: according to the European Committee of Sugar Producers (CEFS) data, employment in the sector decreased by 44%, from 50,000 employees in 2005/06 to 28,000 in 2009/10. At least half of these jobs would have been lost during or after the same period even without the reform, as the restructuring process is an ongoing one in the sugar industry. Nonetheless, the reform accelerated the job reductions.

The cases for which data are available show a significant effort to maintain employment, as on average only 22% of the employees working in the factories that closed down were laid off, 32% benefitted from early-retirement measures, and 46% were redeployed in the companies.

Although the Council regulation laying down the sugar restructuring scheme addressed the issue of limiting negative social impacts, very limited requirements beyond national legal frameworks (and companies’ corporate social responsibility commitment) were imposed on manufacturers.

The Council regulation did not set any requirements going beyond the national labour laws. The labour market legislation is largely in the remit of the Member States and the conditions on national labour markets differ significantly, making it difficult to find a one-size-fits-all approach.

Among the six case study Member States, only Italy used the possibility, included in the Council regulation, to impose further requirements on the companies. Therefore, at the company level, except in Italy, companies received the restructuring aid subject only to the obligation of presenting a social plan\(^\text{17}\) to the authorities and to complying with their respective national labour market legislations. Yet, according to the interviews, the existence of restructuring aid received by the companies weighed in the negotiations between the company and the employees. But it is difficult to assess to what extent the restructuring aid contributed to compensating the employees affected beyond national labour legislation.

Concerning the machinery contractors, they benefited for the first time from CAP support to compensate for the impact of the reform on their activity. The lack of fixed aid to be granted gave rise to conflictual negotiations in several countries. The reduction in sugar quantities must have had an impact on the activity of machinery contractors, as they are an important operator in the sector. The extent of the impact naturally depends on the extent of the changes in the region where the machinery contractors are located. For example, 240 companies in France received CAP support, at least 140 in Germany, 44 in the United Kingdom, and around 500 in Italy.

The impact of the diversification aid and transitional aid to refiners could not be assessed, due to lack of monitoring data.

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\(^{16}\) Italy, France, Finland, Germany, the United Kingdom and Poland.

\(^{17}\) Granting the restructuring aid to the sugar companies was conditioned by presentation to the authorities of a restructuring plan, including social plan detailing the actions planned, in particular with respect to retraining, redeployment and early retirement of the workforce concerned.
Environmental aspects

Concerning the industrial level, the Council regulation went beyond existing minimum obligations (basically the IPPC Directive and the national legislation) by requiring a full dismantling of all the production facilities in order to benefit from the highest amount of restructuring aid. Full dismantling most likely had a positive impact on landscape quality. The regulation required all factories to restore good environmental conditions to the factory site. This applied to all factories and not just to IPPC factories, as had previously occurred.

Among the six case studies, no Member State used the possibility to impose further requirements. But, on the whole, the authorities did not consider the closure of sugar factories as a source of significant negative environmental impacts.

3.8 EFFICIENCY AND SIMPLIFICATION OF THE CAP

Efficiency

Efficiency is the “best relationship between resources employed and results achieved in pursuing a given objective through an intervention” Judging whether costs are reasonable requires benchmarks, which do not exist in the case of the sugar CMO reform (comparing pre- to post-reform period is difficult as the objectives of the CMO have changed, and there are no other sectors where the same type of reform has been applied). Therefore, to provide a judgement on the efficiency of measures applied, we can only draw qualitative reflections on the changes in costs induced (direct, indirect, administrative, etc.) and changes in who actually bears the costs (mainly growers, manufacturers, consumers, taxpayers).

Under the previous CMO, most of the costs were born by consumers through the high market prices.

Under the new CMO:

- The costs of the market measures were eliminated, as export refunds for sugar were suspended as from 2008 and intervention was abolished.
- The loss of farmers’ income caused by decrease in minimum beet prices was partially compensated by introduction of decoupled support.
- The cost of the transition (restructuring fund) was 6.2 billion Euros. The fund was provisioned by sugar and isoglucose manufacturers, but the cost of it was in fact borne by consumers, since the sugar reference price was maintained at a high level during the first two years of the reform, while the minimum beet price decreased from the first year.

The efficiency of the reform with respect to the objective of achieving a stabilised market and a guaranteeing the availability of sugar supplies seems good:

- sugar prices have been reduced, nevertheless, in-quota sugar price variability has increased as a result of the decrease in the reference price, giving operators more freedom to adjust prices to the market situation;
- supply is ensured, even in a context of high world prices and low imports, practical measures were implemented to ensure that demand was adequately met.

Nevertheless, because of the quota system and the increased complexity of managing the market measures, the current CMO requires significant monitoring, controls and intervention by the authorities. Furthermore, according to the operators interviewed, the administration’s decision-making process may not always be quick enough to react to the rapid changes in the sugar market.
Regarding improved competitiveness, on the whole the reform was quite efficient at both the agricultural and industrial levels. It relied on a carrot-and-stick approach for restructuring the sector. The reactivity of the Commission in modifying the scheme after two years (by increasing the risk of uncompensated linear quota cut and reallocation of the compensation in favour of the agricultural sector) is one of the keys to the reform’s success.

Farm income was negatively impacted by the reform. The costs of partial compensation to growers’ income loss was covered by a shift from the price support to the single payment scheme (partial shift from consumers to taxpayers), without additional costs.

**Simplifying the CAP**

In part, the reform contributed to simplifying the CAP, as it eliminated some market measures (intervention, production refunds and export refunds, production levies). Nevertheless, the price management instruments and the quota system were maintained. Thus, managing the market which is now more open to imports is complex and requires additional monitoring and decision-making from the authorities.

The possibility for the Member States to choose rural development measures for their diversification programmes, which widely occurred, was a successful and efficient way to implement the diversification measures without generating much extra administrative work.

### 3.9 RELEVANCE AND COHERENCE

**Relevance of the objectives of the measures with regard to the needs of the sector**

We analysed the relevance of the reform objectives with respect to the needs of the sector at the time the reform was applied. At that time, the main issues were the upcoming risks of an unbalanced market and the fact that the CMO did not make the sector very market-oriented.

The analysis of each one of the objectives of the reform showed that they were relevant or highly relevant with regard to the needs of the sector.

**Coherence of the diversification aid with the rural development policy**

The coherence of the diversification aid with the rural development policy was good, even when the measures for the diversification support were not directly chosen in the rural development programmes (in Ireland and Italy for example). Both share the same objective of supporting the development of economic activities in rural areas and the same intervention logic (offering measures chosen by beneficiaries on a voluntary basis).

The additional aid for diversification was granted in most eligible Member States (Italy, Ireland, Greece, Portugal, Hungary and Slovenia) as a direct payment to sugar beet growers that had, partially or completely, given up sugar beet production. This is not in line with the intervention logic of the rural development policy, but it does not create undesired effects.

**Coherence with the 2003 CAP reform**

The 2003 CAP reform introduced the full decoupling of support to farmers. The sugar CMO with production quotas and relatively high minimum price was not in line with this principle, and market signals were highly distorted by the market measures. The reform provided for a transition towards a more market-oriented sector. For that reason, the coherence with the 2003 CAP principle improved. Nevertheless, some coupled elements in the sugar sector remained, as quotas and reference price are still implemented.
Coherence with the principles of the Lisbon Strategy in favour of “growth and jobs”

The Lisbon Strategy as re-launched in 2005 is focused on growth and jobs. Because of the ruling by the WTO Panel and the Everything But Arms Initiative, the EU had to reform its sugar regime, which entailed reduction of its production capacities and accelerated job losses. At the same time, the restructuring scheme contributed to improving the competitiveness of the sector, which in the long run is coherent with the Lisbon Strategy. Yet, in an EU market open to external competition, the crucial issue for remaining competitive and thereby ensuring growth and jobs is whether EU operators are able to compete with cane sugar imports. To answer this question, the competitiveness of the European production with regard to cane sugar is the central issue.