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**Article**

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Johannes Paha, Timon Sautter and Reinhard Schumacher

## Some Effects of EU Sugar Reforms on Development in Africa

The sugar industry is a major provider of jobs and income for sugar-exporting countries in Africa. The lower sugar prices that were caused by the recent liberalisation of the EU sugar market may not only jeopardise economic development in those countries, but the reforms also create difficulties for sugar-importing countries in Africa that seek to develop their sugar industries. The article analyses the effects of EU sugar market reforms on three African countries – Nigeria, South Africa and Mozambique – and provides insights into the balancing of the EU sugar policy's intended effects against their adverse effects on European trade and development policy.

The sugar industry plays an essential role for generating jobs and income in many African economies. For example, an estimated 250,000 of the 29.5 million inhabitants of Mozambique depend on the sugar industry, which accounts for 5.6% of total industrial output and 45% of the country's industrial employment (Dal Belo Leite et al., 2020, 2). In 2019, cane sugar ranked second in the EU's agri-food imports from Mozambique with a share of 23% (European Commission, 2020a, 2020c). In general, many African countries rely heavily on sugar trade with the EU, mostly as exporters of raw sugar and as importers of white sugar. In 2018/19, South Africa and Eswatini were the second and third largest sugar exporting countries to the EU, and Mozambique was the seventh (Haß, 2020, 60). Aggregated, African countries sell on average more than 20% of their sugar production to trading partners in the EU.

EU sugar policies therefore affect the sugar industries in African countries considerably, and a major shift in the EU's sugar policy is likely to have repercussions for African economies. In 1968, the EU had introduced a quota system with the objective of improving food self-sufficiency. This system

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was reformed over time and led to a situation in which limited EU production regulated by the quota system resulted in sugar prices in the EU being significantly above the world market prices. The EU quota system was protected by high tariffs on sugar. At the same time, the EU's export of sugar was restricted by a quota under the WTO system. While the EU was not able to satisfy its sugar demand through domestic production, tariff-free imports from some of the least developed countries, which obtained preferential market access, mostly bridged the gap between EU production and EU demand. A major shift in the EU's sugar policy took place on 30 September 2017, when the EU abolished the quota system – and with it the export quota – while keeping import tariffs. The regular tariff for white sugar is €419 per tonne and for raw sugar €339 per tonne.

From an economic point of view, abolishing production and export quotas is expected to lead to both higher production and lower sugar prices in Europe. As a result, sugar-producing African countries face possible disadvantages from the change of sugar policy within the EU. First, African exporters face decreasing revenues because the price of sugar exported to the EU falls. Second, the increased production within the EU leads to lower demand for sugar from African producers because the EU can satisfy a greater share of its sugar demand by domestic production. Third, an increased production may be expected to cause an increase in exports from the EU so that African producers face greater competition both at home and in third countries. Fourth, with increasing sugar production inside the EU, efforts to establish sugar industries in some African countries might be under threat. The fourth point is especially relevant because many African countries engage in industrial and growth policies with the objective of promoting productive efficiency, employment and output in their national sugar industries. As a result, European industrial policy may jeopardise the success of industrial policy in some African countries.

These developments raise questions about the extent to which the EU sugar policy is contradicting a fundamental principle of EU development policy prescribed by Article 208 of the Treaty on the Functioning of the EU, which specifies that “[t]he Union shall take account of the objectives of development cooperation in the policies that it implements which are likely to affect developing countries.” Furthermore, in 2017, the EU adopted its Consensus on Development (European Commission, 2017), in which it commits to creating decent jobs and promoting inclusive, sustainable growth (see para. 47). Through its trade policy, it seeks to ensure “that developing countries... reap the benefits of inclusive growth and sustainable development from enhanced participation in regional integration and in the multilateral trading system” (para. 48). The EU had coupled an earlier reform effort of the sugar industry with an assistance scheme for countries in Africa, the Caribbean and the Pacific (ACP; Busse and Jerosch, 2006), but such a scheme was not part of the latest reform. Studying the linkages between the EU’s industrial, trade and development policies is particularly topical considering the Partnership Agreement that the European Union has been negotiating with ACP countries throughout 2020 and into 2021 in succession of the Cotonou Agreement.

It would be surprising if – in the light of their different objectives – European trade, industrial and development policies were always fully coherent. If they all worked towards the same end, there would be no need for *different* policies. We provide insights relevant for the assessment of costs and benefits of the EU sugar market policy. Although the economic balancing test is not identical to the legal proportionality test (Engle, 2012), our assessment is guided by the components of the latter when we ask whether the policy pursues a legitimate objective in the public interest, whether the measures taken are suitable for this objective and whether they do not go beyond what is necessary to attain it. Especially the last point requires an assessment of the European sugar policy’s repercussions on other areas such as the EU’s development policy.

### Economic consequences of the reform of the EU sugar policy

The EU sugar reform was only one of many developments around the world that have influenced the sugar market since 2017, albeit a major one. Yet, to entangle cause and effect is not always straightforward. The global sugar market is dominated by cane sugar (nearly 80% of global production; mostly in India, Brazil and Thailand), while companies in the EU are the world’s largest producers of beet sugar (European Commission, 2020b). Sugar beet is mainly grown in France, Germany and Poland, which form, together with the Netherlands and Belgium, the so-

called beet belt. Only seven companies produce almost 85% of the refined sugar in the EU (European Commission, 2016b; Agriculture Strategies, 2019).

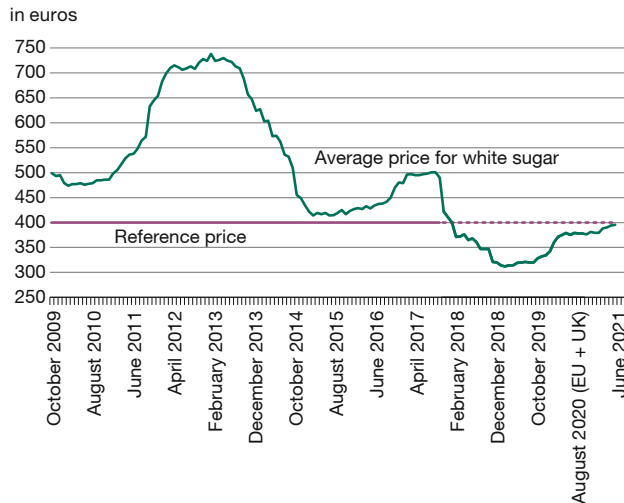
After abolishing both the production and export quotas, producers within the EU may now decide about sugar quantities freely. Unsurprisingly, this led to an increase in the production capacity of beet sugar within the EU28. The area used for sugar beet farming increased significantly following the EU sugar reform. This increase has not been uniform across the EU. Sugar production decreased in less competitive countries, while countries in the beet belt expanded their area considerably between 2017 and 2019, with Poland, Germany and France seeing an increase of 22%, 21% and 19% respectively (European Commission, 2019, 28). As a result, the sugar production jumped from 18.5 million tonnes in the crop year 2016/2017 – the year before the EU reform – to 21.4 million tonnes in 2017/18 (Haß, 2018, 41). Dry weather conditions in the following year led to below-average sugar beet yields (European Commission, 2019, 27), with production falling to 17.6 million tonnes in 2018/19 (Haß, 2020, 51).<sup>1</sup>

As a result of the increased production, and thus of the reform of the EU sugar policy, prices of granulated white sugar in the EU28 have fallen perceptibly. The EU had set a reference price of €404.40 per tonne by EU Regulation 318/2006 that could trigger interventions in case the sugar price fell below it. This reference price has become a reference threshold after the implementation of the sugar policy reform (Haß, 2019, 43). However, so far, the EU Commission refrained from any action, such as granting private storage aid, to shore up the sugar price when the price of white sugar fell below this reference threshold. By January 2019, the price had dropped by 38% to €312 from €501 per tonne in August 2017, with a recovery to €397 in June 2021 (see Figure 1). This recent rebound in the sugar price can mostly be attributed to comparatively low yields worldwide due to unfavourable weather conditions.

As a result of the increased EU production and the abolishment of export quotas for EU sugar, one would hypothesise that EU imports of white sugar decreased while exports increased. This hypothesis is supported by the developments of imports and exports of white sugar as can be seen from Figure 2. The figure also shows the imports of raw sugar from countries outside the EU28 and the exports of raw sugar from within the EU28. Companies in the EU28

<sup>1</sup> Data is typically provided for the period from October 2009 onwards. This is because the agricultural year starts in October and because European sugar policy rules had been relatively unaltered from October 2009 until the last reforms came into effect in October 2017. Limitations to data availability may make it necessary to provide shorter time series in some instances.

**Figure 1**  
Average and reference price for white sugar (per tonne) in the EU



Note: The data cover the EU27 and the UK as of 2020.

Source: Sugar market observatory, Sugar – Prices per month, August 2021.

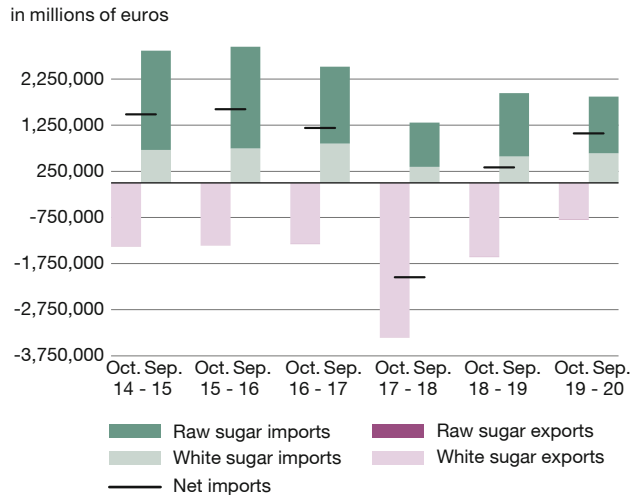
import raw sugar for further refinement, with raw sugar exports being almost negligible. This has traditionally made the EU28 a net importer of raw sugar. Yet, the EU28 is a net exporter of white sugar. Aggregated over white and raw sugar, the EU28 has mostly been a net importer while having turned into a net exporter from October 2017 to February 2019, as can also be seen from Figure 2. Raw sugar imports have also shifted to a lower level during this period.<sup>2</sup>

These patterns are reflected in the EU’s sugar trade with African countries. Figure 3 presents the EU28 import quantities and prices of raw and white sugar from Africa. While prices and sugar trade are influenced by a variety of factors such as changes in tariffs or in the amount of sugar used for ethanol production (Wolf and Haß, 2017) that would have to be considered in an econometric analysis of these variables, it is apparent that prices and import quantities fell after the quotas were abolished in 2017. Moreover, information provided by the European Commission (2020d, 5) shows that the EU market price for white sugar aligned more closely with the lower world market price after October 2017. The aggregate effect of these developments is shown in Figure 4, which demonstrates a downward spike in the value of the EU’s raw sugar imports from African countries in 2017/18.

The figures, however, conceal that these trends affect trade with African countries in quite different ways. Therefore, we

2 This analysis of the export and import values is qualitatively similar to an analysis of the quantities traded.

**Figure 2**  
Imports and exports of raw and white sugar, EU28 to and from the rest of the world



Note: Raw sugar exports are close to zero and thus hardly visible in the graph.

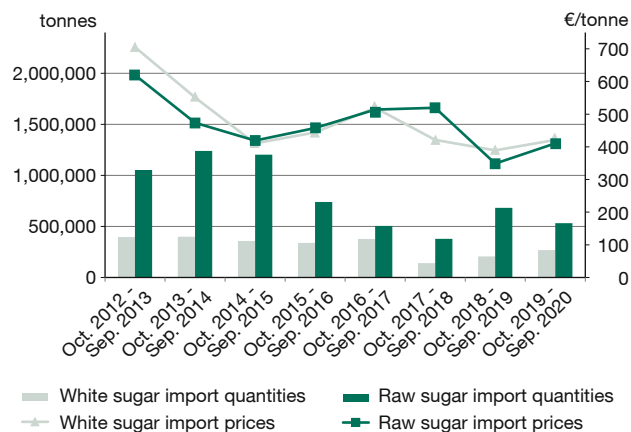
Source: data.europa.eu – EU sugar trade statistics, April 2021.

analyse the effects of EU sugar market reforms on three African countries below and provide insights into the balancing of the sugar policy’s intended effects against their adverse effects on European trade and development policy.

**Some effects of the EU sugar policy on African countries**

The EU sugar market policy demonstrates the complexities of economic policymaking. It impacts the sugar industry in

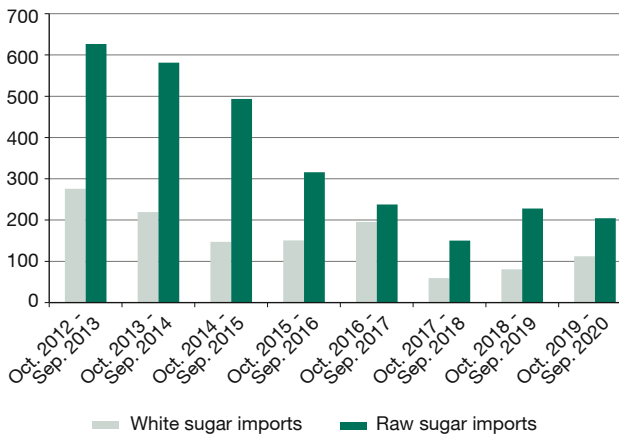
**Figure 3**  
EU28 import quantities and prices of raw and white sugar from African countries



Source: Own calculations based on data.europa.eu – EU sugar trade statistics, January 2021.

Figure 4  
Value of EU28 imports of raw and white sugar from African countries

in millions of euros



Source: Own calculations based on data.europa.eu – EU sugar trade statistics, January 2021.

African countries and therefore affects factors determining the failure or success of the EU's development policy.

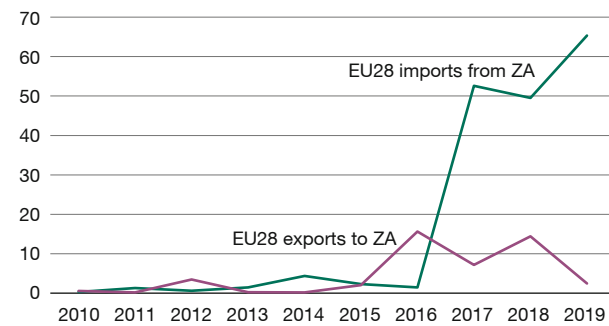
Note that the EU sugar market policy may have diverse impacts on different African sugar markets that possess quite different characteristics regionally. While South Africa and Eswatini are the world's 8th and 9th largest sugar exporting countries, Algeria, Sudan, Nigeria and Morocco are the world's 5th, 10th, 11th and 15th largest sugar importing countries respectively (Workman, 2019). Sugar importing countries are expected to gain from lower world market prices, but sugar producing and exporting countries might be harmed economically.

We concentrate our analysis on Nigeria, South Africa and Mozambique because these countries have prioritised their sugar industry domestically and might be expected to be especially harmed by the EU reform. Nigeria has launched a National Sugar Master Plan in 2012 to generate employment and become self-sufficient in sugar. The Sugarcane Value Chain Master Plan has been implemented in South Africa, while in Mozambique industrial policy for the sugar industry is part of the agricultural programme Sustena.

Both South Africa and Mozambique export much of their sugar production to the EU (Haß, 2020, 33) and thus have potentially much to lose. Yet, Nigeria is a net sugar importer. The country might potentially benefit from lower world market prices that, however, may also prove harmful given the country's efforts in developing the sugar industry. These aspects play a role in the current negotia-

Figure 5  
Sugar trade between the EU28 and South Africa

in millions of euros



Note: Cane or beet sugar and chemically pure sucrose.

Source: European Commission, Access2Markets Trade Market Access Database, November 2020.

tions of the future partnership agreement between the EU and countries in Africa, especially because South Africa and Nigeria are the largest economies on the continent and because Nigeria is afraid of losing from free trade and competition (Isaac and Bellonwu-Okafor, 2016).

### South Africa

South Africa is a net exporter of raw sugar whose export value was US \$381 million in 2018, of which about 30% were sold to Europe. The South African Sugar Association (2020) estimates that about 85,000 people are directly employed in cane production and processing, and that another 350,000 jobs are generated in support industries.

Figure 5 shows the value of the trade flows of sugar in solid form between South Africa and the EU28. The figure presents a pattern that might be surprising given the EU's sugar reform: The sugar exports of South African companies to buyers in Europe increased by a factor of 35 from 2016 to 2017. With only 6%, the decrease from 2017 to 2018, which may at least partly be a consequence of the decrease in sugar prices brought about by the abolishment of EU sugar market quotas, appears to be relatively mild.

This pattern can be explained by the Economic Partnership Agreement (EPA) that the EU concluded with the countries of the Southern African Development Community (SADC) in 2016. The SADC-EPA entails a tariff rate quota (TRQ) agreement according to which the EU removed customs duties on 98.7% of imports coming from South Africa (European Commission, 2016a, 1). Before, South African sugar imports to the EU had faced tariffs of €339 per tonne for raw sugar and €419 per tonne for refined sugar. These tariffs rendered most exports of South



African sugar into the EU non-profitable. The EPA allows South Africa to export 100,000 metric tonnes of raw sugar and 50,000 tonnes of refined sugar per year duty-free to the EU, while tariffs continue to be imposed on sugar volumes that go beyond these quotas.

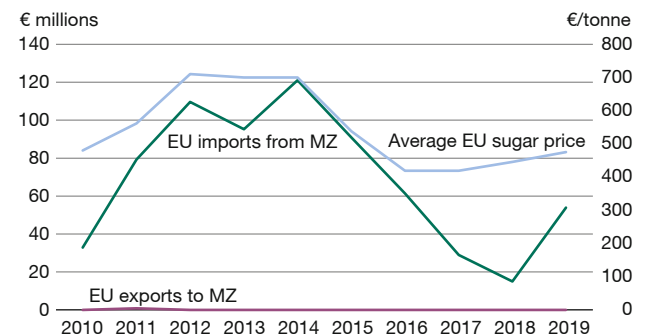
Because South Africa's accession to the EPA and the EU reform of its sugar policy were implemented almost simultaneously, both events affect the South African sugar industry jointly. The removal of EU export quotas and the increase of sugar production in the EU led to an increase in EU exports, which harmed the South African sugar industry. At the same time, the EPA led to an increase in European sugar imports from South Africa, which benefited the South African sugar industry. The negative effects of the change in the EU sugar policy were thus alleviated by the EPA. Though the potentially adverse distributive consequences of free trade are well known, the increase in sugar exports from South Africa to the EU may be taken as one example for demonstrating the benefits of free trade, at least for South African sellers and European buyers.

### Mozambique

The situation in Mozambique is quite different since it is classified as a least developed country. Mozambican sugar producers had already had full duty-free and quota-free access to the EU Single Market under the Everything But Arms scheme even before the country joined the SADC-EPA in 2018 (European Commission, 2018). Mozambican sugar exporters thus merely faced the negative economic effects of the reform of the EU sugar policy because its sugar industry (unlike that of South Africa) did not benefit from improved access to the EU market as result of joining the SADC-EPA. The Mozambican sugar industry rather suffered from a decrease in its export amount and its export value. To illustrate this, Figure 6 shows the import and export values of sugar and the yearly average of the sugar price in the EU.

Mozambican sugar producers are harmed through several channels. Firstly, the industry suffers because the European demand for sugar from abroad decreased due to increased domestic production. Secondly, it suffers under the European sugar policy's depressing effect on sugar prices. To see this, consider that Mozambique's value of sugar exports in Figure 6 follows the evolution of sugar prices in the EU quite closely. Thirdly, having already enjoyed preferential access to the European market before, Mozambique does not receive additional positive impulses from joining the SADC-EPA. Finally, its sugar exporters might even be harmed by the SADC-EPA because they now compete with South African exporters for a smaller European export market.

Figure 6  
Sugar trade between the EU28 and Mozambique



Note: Cane or beet sugar and chemically pure sucrose.

Source: European Commission, Access2Markets Trade Market Access Database, November 2020.

To see this last point more clearly, note that the government-controlled and highly concentrated sugar industry in Mozambique had traditionally been characterised as inefficient (UNCTAD, 2013, 15), surviving only because of the preferential access to the European market under the Everything But Arms agreement. The South African sugar industry is, however, considered quite efficient. The recent EU sugar market reform coupled with policies to promote free trade thus appears to penalise countries such as Mozambique whose sugar industry is less efficient despite the benefits granted to them in the past. The sugar producers in Mozambique are now exposed to greater competition from producers in other African countries.

This may aggravate an inner-African conflict of interest that has repercussions on free trade initiatives such as the African Continental Free Trade Agreement (AfCFTA). While South Africa is projected to be among the countries whose exports will rise the most under the AfCFTA, Mozambique belongs to the group with the lowest export expansion (World Bank Group, 2020, 46). The effect of potential tensions within Africa can also be seen in the context of Nigeria.

### Nigeria

Nigeria is quite different from Mozambique and South Africa given that the nation's sugar industry supplies only about 2% of the nation's requirement (NSDC, 2020), which makes the country reliant on sugar imports. In 2018, raw sugar imports accounted for 18.4% of its imports of foodstuffs (vegetable products and animal products excluded), amounting to 0.79% of its total imports (OEC, 2020).

More than 90% of Nigeria's raw sugar is imported from non-African countries, mainly Brazil, and the country has

imposed considerable tariffs on sugar imports from other African countries in an attempt to develop its own sugar industry (The Economist, 2017). In 1993, the National Sugar Development Council (NSDC) was established by the Nigerian government. In 2012, the NSDC prepared the National Sugar Master Plan with the aim of developing the Nigerian sugar industry and of ensuring at least 70% self-sufficiency in terms of the sugar that is required to meet the domestic demand. The goal is to replace sugar imports (around 1.61 million metric tonnes in 2019) with sugar of Nigerian production. The mandate of the NSDC includes, among other things, the right to articulate programmes to develop the sugar industry, to reduce the level of sugar imports by increasing local production and to eventually earn foreign exchange by exporting sugar (NSDC, 2016; Olaito, Nzeka and Beillard, 2019).

As one element of the National Sugar Master Plan, Nigeria has imposed tariffs on refined sugar imports from the EU. Therefore, European exports to Nigeria have fallen throughout the last decade and reached a value of almost zero by 2015. This, however, does not imply that the European sugar market policy would not have any effect on Nigeria. The country is still affected by the policy's effect on world market prices and the consequential impact on trade patterns.

To see this, one needs to consider the imbalances in Nigeria's production structure. Since the privatisation of sugar mills in 2002, they have mostly been underutilised because of low domestic supply of raw sugar, which makes Nigeria an importer of raw sugar (Gourichon, 2013, 13). This is because family farms in Nigeria use little machinery so that they are not as productively efficient as commercial farms (in Nigeria or elsewhere on the continent). Moreover, they can often earn a higher income by growing crops other than sugar (Gourichon, 2013, 12). The decrease in sugar prices brought about by the European sugar market reforms may be expected to further aggravate this situation, although Nigeria also benefits from lower prices for imported sugar.

By preventing sugar imports from other African countries, Nigeria's import tariffs also make it more difficult for producers in other African countries to exploit economies of scale. The tension between the efficiency benefits of free trade and their distributive consequences, given that at least some of those benefits are realised in countries other than Nigeria, illustrates why the country had originally opposed the AfCFTA and was (together with neighbouring Benin) one of the two last countries to sign the agreement on 7 July 2019 (Balima, 2019). In this context, it is also important to note that Nigeria's share of imports from AfCFTA members is particularly low, and its tariffs as well as the share of tax revenues from imports are par-

ticularly high (World Bank Group, 2020, Figures 4.3, 4.4, J.2). Therefore, the distributive consequences of changes in trade patterns may be considerable in Nigeria, although the country is also believed to benefit greatly from trade liberalisation (World Bank Group, 2020).

The Nigerian example illustrates some of the intricacies of economic policymaking – be it trade, development or industrial policies. The lower sugar prices brought about by the EU sugar market policy benefit Nigeria as an importer, but they also reduce the profitability of investing into the local sugar industry. This has a negative impact on potential growth and multiplier effects. These developments are unlikely to soften Nigeria's reservations about lowering trade barriers, although their reduction might have a positive effect on the African continent as a whole (World Bank Group, 2020). Lagging behind in terms of exploiting returns to scale, African countries (and Nigeria in particular) face obstacles to becoming competitive internationally in the sugar trade.

The existence of unexploited returns to scale may, in principle, justify an infant industry protection as has been attempted in Nigeria. Yet, the Nigerian example also demonstrates that trade barriers alone do not suffice to exploit returns to scale to an extent that sugar farming would be rendered profitable. Productivity in the Nigerian sugar industry is also low because of the lack of complementary inputs such as an adequate transportation infrastructure.<sup>3</sup> Given the positive spillovers of the inputs on each other, there might be too little investment by private firms which raises the question of whether there is a need for a big push initiated by the government that also entails efficiency-enhancing investments in sugar farming as well as measures to overcome additional hurdles such as a poor transportation infrastructure.<sup>4</sup> While the benefits of such additional measures require further quantification, the challenges are certainly great given that, for example, the privatisation of sugar mills did not render the industry competitive.

The Nigerian example demonstrates that industrial policy in Europe may have effects on economic agents in countries that do not even trade those goods with Europeans. By affecting world market prices and trading patterns, the European sugar market reforms have an impact even on countries' decisions on how to shape the AfCFTA.

## Discussion

Are the European sugar market reforms to blame for their adverse consequences in other parts of the world? If one is to use the ideas of Jan Tinbergen (1952), one should not

<sup>3</sup> See Kremer (1993) for a theory on input complementarity.

<sup>4</sup> Murphy et al. (1989) provide a seminal model on the big push.

blame European policy in that regard. Owing to his insight that a certain number of policy targets can only be achieved by a number of policy instruments that is at least as large as the number of targets,<sup>5</sup> the sugar market policy is required to attain the desired targets in the European sugar market, whereas development policy is needed to attain the desired development targets. When it comes to the European sugar market, the reforms appear to have been a suitable instrument for achieving the target of raising productive efficiency in European sugar production.<sup>6</sup> To this aim, the reforms also pass an important element of the legal proportionality test, i.e. they are suitable to achieve the desired target.

However, the European sugar market policy has repercussions on European development policy. And these effects need to be considered when balancing its costs and benefits in the assessment of whether there would have been less onerous ways of reforming the European sugar market. Even if this was the case, the Tinbergen rule suggests that development policy still requires instruments other than the sugar market reforms to achieve its own targets, and optimal policies should be designed in consideration of the interaction effects between different policies.

Observing that one and the same instrument of development policy (for example, the SADC-EPA) can offset the negative effects of European sugar market reforms in a country like South Africa while failing to offer additional stimuli in Mozambique just underlines this idea: If the EU has different development objectives for different countries, a one-size-fits-all approach will be unsuitable for achieving these targets. This is why targeted programmes such as the National Indicative Programme 2014-20 between the EU and the Republic of Mozambique, which included support especially for the agriculture sector, or the recent Team Europe assistance are so important for offsetting the potentially adverse effects of policies like the sugar market reforms (European Commission, 2014, 2020e).

5 See Theil (1956) for an early review.

6 An assessment of the target's effects on public interest, given that it contributes to raising the concentration of the European sugar processing industry, is left to future research.

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