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REFORM IN THE EU SUGAR REGIME: IMPACT ON THE GLOBAL SUGAR MARKETS

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Abstract

The ongoing trade negotiations, unilateral trade concessions and obligations under the WTO are pushing the EU sugar regime to undertake reforms. These reforms will alter the positions of developing countries in the global sugar markets. A complete unilateral liberalisation of the EU sugar sector is simulated to depict the winners and losers in the global sugar markets if no preferences are governing the imports of sugar into the EU. The supply responses, which strongly affect the outcomes, are dependent on both the nature of substitution for sugar as well as on the efficiency of sugar production in different countries. The multiregion general equilibrium framework (GTAP) is used for this analysis. The results show that the total liberalisation of sugar imports from the LDCs will be a major threat to the EU sugar regime. The current regime limits sugar imports from all developing countries or some efficient producers, if the production cost data is a right estimate of the potential supply response from developing countries. The LDCs will be the winners under the EBA concession supported by the current regime, but a few efficient sugar producers will be the winners if the current regime is entirely liberalised.

Keywords: EU sugar regime, reform, developing countries, unilateral liberalisation, GTAP

JEL classification: E17, F17, Q18

1. Introduction

The European Union (EU) can exercise considerable influence on global trade as one of the world's major trading powers. The enlargement of the EU to 25 countries in May 2004 has increased its population to almost 455 million and gross domestic product (GDP) to around €9231 billion. The enlarged EU will account for some 19% of world trade. The EU is currently the largest single market in the world. The EU's position as one of the world's top exporters and importers of goods and services is testimony to the significance of the EU as a market for its trading partners, especially for the developing countries. Except for the agriculture and textiles markets, the EU has maintained its markets largely open in pursuing trade liberalisation through multilateral, regional and bilateral initiatives. According to a report by the World Trade Organization (WTO, 2002), the EU's (previous 15 member states) simple average Most Favoured Nation (MFN) tariff on manufactured goods or non-agricultural products was 4.1%. However, the simple average tariff on agricultural products was at 16.1%, which was almost four times higher than the tariff for non-agricultural products. Thus, protection is prevalent and high in the internal markets for EU agricultural products due to the EU Common Agricultural Policy (CAP). Tariff peaks are common in sensitive agricultural commodities like sugar, and these prohibitive tariffs prevent any imports beyond the trade preferences given to developing countries.

Highly protected markets of the developed countries are extremely lucrative markets for developing countries with preferential market access, especially when the domestic market price in the developed countries is significantly higher than the world market price. A good example is the EU sugar sector. The EU is a net exporter of sugar partly due to over production and preferential market access granted to developing countries, thus making the EU a leading exporter and importer in the world sugar market. The EU's leading position in the world sugar market is a result of domestic policy and not because of having a comparative advantage in sugar production. Current policy plans, where trade preferences may be substantially eroded or even removed, may harm current beneficiaries by weakening their export performance and thus causing further difficulties in the process of integration into the world economy.

The issue of preferential market access for developing countries has long been a subject of interest among international trade economists (Panagariya, 2000; Bhagwati et al., 1998). Preferential market access for developing countries is to improve market access for developing countries due to the high tariffs for certain sectors in the developed countries. Still in practice, the greatest access is often granted for primary products with low value added, whereas high value added and processed products are protected by tariff escalation. The most common argument against trade preferences is that preferences to one set of developing countries come at the expense of other developing countries. For the developing world, the multilateral trade liberalisation within the World Trade Organization (WTO) as well as bilateral trade liberalisation within free trade areas, pose a threat in the form of preference erosion. This is partly why, in a world of prevailing distortions, trade liberalisation does not necessarily benefit the poorest but may come at their expense (Panagariya, 2004).

This paper will analyse the EU preferential market access for sugar and how changes in the EU sugar regime will affect the developing countries that are currently under this preferential treatment. The multi-region computable general equilibrium model (GTAP) is used for studying the changes in the global sugar markets. The GTAP model and database have become standard tools for analysis in the changing world of commodity markets. The general equilibrium models take into account the alternative possibilities of using resources within economies. This dampens the effects of policy changes, but considers the adjustment possibilities of other sectors. This can be seen as an extension compared to the partial equilibrium models that give a more accurate picture of production constraints and details of single commodities.

Partial equilibrium models are commonly used in the analysis of sugar policies. These models are applied in studies done by Devadoss and Kropf (1996), Borrell and Pearce (1999), Poonyth et al. (2000), and OECD (2003). These papers study the impacts of multilateral trade liberalisation in the global sugar markets either gradually or fully. The results from these papers have shown the effects of multilateral trade liberalisation on the EU sugar sector. As a complement to these papers, this study is focusing on the unilateral trade liberalisation of the EU sugar sector. The GTAP model is used by Frandsen et al. (2003) to analyse the production quotas under the EU sugar regime and the impact of EU sugar policy reform on the EU-15 member states.

This paper will initially describe the trade preferences granted to developing countries under the EU sugar regime. Sugar imports into the EU from the Least Developed Countries (LDCs) are expected to be totally liberalised from year 2009 onwards because of the “Everything But Arms” (EBA) concession. During the transition period until year 2009, the EBA concession is gradually granting quota preferences and partial duty-free access to sugar imports from the LDCs. Simultaneously, the temporary import quotas (Special Preferential Sugar/SPS sugar) given to the African, Caribbean and Pacific (ACP) countries are assumed to be decreasing during the transition period. Within this background, the extent of current distortions is estimated by simulating a complete unilateral liberalisation of the EU sugar sector. The supply responses, which strongly affect the outcomes, are dependent on both the degree of substitution for sugar as well as on the efficiency of sugar production in different countries. This simulation will depict the winners and losers in the global sugar markets due to the complete liberalisation of the EU sugar regime.

2. The EU Sugar Sector, World Sugar Market and Trade Preferences

The cobweb of trade arrangements in the EU sugar sector in regard to the unilateral, bilateral, regional, and multilateral trade agreements in concurrence with the EU enlargement is illustrated in Figure 1. While the common market organisation (CMO) of sugar exhibits a high degree of protectionism, the EU has granted a whole array of trade preferences for developing countries. The EU is planning to establish free trade areas with the Balkan countries and African, Caribbean, & Pacific (ACP) countries. At the same time, the EU is granting unilateral trade concessions to these countries, in addition to concessions granted to the Overseas Countries & Territories (OCT) and Least Developed Countries (LDCs). The EU is also actively engaging in the enlargement process with the Central and Eastern European Countries (CEEC) by forming a common custom union. Over the years, the EU has established a complex system of trade arrangements, which is reflected in the complex network of discriminatory tariffs through generalised and country-specific or region-specific trade preferences. The EU is applying different policies to different regions and trading blocs. Thus, the EU

sugar trade policy has deviated from the non-discriminatory principle of the WTO. On the other hand, the non-reciprocal trade preferences applied to the ACP countries are sanctioned by a waiver obtained at the WTO during the Ministerial Conference in Doha and discrimination in favour of the LDCs is permitted. Trade preferences are at the heart of the EU sugar regime. Therefore, the EU sugar regime has been distorting the world sugar market for decades through its trade preferences and internal policies.

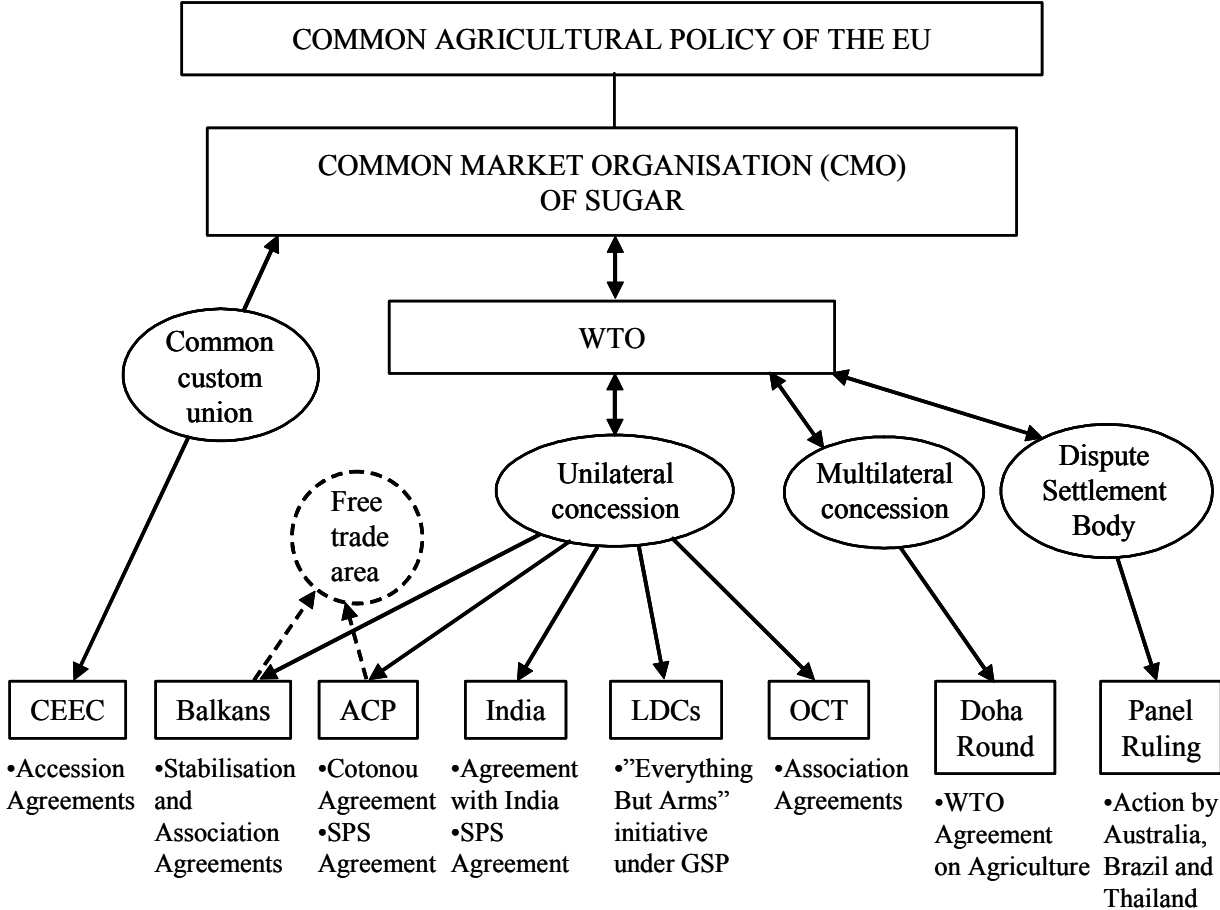


Figure 1. The EU sugar regime and trade agreements.

2.1. The EU sugar regime, world sugar market and pressures for reform

The EU sugar market is insulated from the world sugar market through a system of import duties and export refunds. The CMO of sugar supports producer prices at high levels above world market prices, stimulating production in the EU and resulting in exportable surpluses of sugar. Consequently, the EU has been distorting trade flows by disposing the sugar surpluses to the world market with export subsidies and indirect cross subsidies through a complex system of production quotas.

The CMO of sugar has established minimum support prices for sugar guaranteed by an intervention purchase system. A production quota system was established to limit the total quantity eligible for price support. The EU sugar producers (growers and processors jointly) are responsible for paying the full costs to the EU Budget of surplus quota sugar disposal through the producer levies. There are two types of quota: A and B. The major difference between A and B quota sugar is the level of imposed producer levies. Only quota sugar can be sold in the EU and is eligible for price support through the intervention mechanism and export refunds. Sugar produced in excess of the A and B quotas is called C sugar and cannot be marketed in the EU. C sugar has to be sold on the world market

without the support of export refunds/export subsidies. Thus, the quota system limits the supply of sugar in the internal EU market (CAP MONITOR).

The EU is a major trader in the world sugar market. The EU is in the top three ranking of major producers, exporters and importers in the world (Table 1). The EU, Brazil, Australia, Thailand, and Cuba accounted for about 60% of world exports. The EU and Brazil are the dominators in the world sugar trade being the top producers and exporters in the world. However, the EU is also a major importer of sugar, but sugar imports in Brazil is negligible. The EU is unique in being both a major exporter of white sugar and importer of raw sugar in the world market.

Table 1. Major sugar producers, importers and exporters: 2000-02 average (in raw sugar equivalents).

Main Producers		Main Importers		Main Exporters	
Country/regions	Mil.tonnes	Country/region	Mil.tonnes	Country/region	Mil.tonnes
Brazil	21.6	Russia	5.0	Brazil	11.9
India	20.7	European Union	1.9	European Union	6.2
European Union	17.3	Indonesia	1.8	Thailand	4.3
China	9.2	Japan	1.6	Australia	3.6
United States	7.6	Malaysia	1.5	Cuba	2.6
Thailand	6.5	Korea	1.5	India	1.5
Mexico	5.2	Nigeria	1.5	South Africa	1.3
Australia	5.1	United States	1.4	Columbia	1.3
Pakistan	3.9	Canada	1.2	Guatemala	1.1
Cuba	3.2	Algeria	1.2	Mauritius	0.5
All other	39.5	All other	27.1	All other	13.6
World	139.8	World	45.7	World	47.9

Source: F.O. Lichts International Sugar and Sweetener Report

The EU is under increasing pressure and attack from low cost and efficient sugar producers for distorting world sugar trade. Australia, Brazil, and Thailand launched action in the WTO against the EU sugar regime on July 2003. These countries have claimed that EU exporters of “C sugar” (unsubsidised by export refunds) are able to export “C sugar” at prices below their production cost due to the cross-subsidy from the main “A and B” quota sugar with a high domestic price. Moreover, EU preferential imports of sugar from the ACP countries are re-exported with the help of export subsidies. On September 2004, a ruling was made at the WTO that “C sugar” exports are in contravention of the EU commitments on the amount of subsidised sugar exports allowed under the WTO. The WTO panel suggested that the EU should consider measures to bring its production of sugar more in line with its domestic consumption while fully respecting its international commitments with respect to the existing sugar imports from developing countries. Even though the EU made an appeal on this ruling at the WTO, this ruling was upheld by the Appellate Body of the WTO on April 2005.

There is also pressure coming from the on-going WTO negotiations for further reduction in export subsidies, import tariffs and domestic support. The EU sugar regime has to conform to the new commitments made under the Doha Round in the future. As a result, future reforms made to the EU sugar regime should be able to meet the future commitments agreed under the Doha Round.

The EBA concession that allows quota and duty free imports from the LDCs is considered a threat to the EU’s domestic sugar production. Therefore, the EU Commission made a formal proposal to reform the EU sugar sector in June 2005 (CEC, 2005). In the proposal, the intervention system for sugar will be abolished and replaced by a reference price set at 39 percent lower than the prevailing intervention price. EU farmers will be granted 60 percent of the estimated revenue loss for the price cut. The EU production quotas for sugar will remain and extend until 2014/2015. The existing “A” and “B” quotas will be merged. An additional amount of 1 million tonnes of quota will be made available to the current “C” sugar producing EU member states. Meanwhile, a voluntary and temporary

restructuring scheme for the EU sugar industry will be implemented over a four-year period. The scheme will provide a high, degressive per-tonne restructuring aid, available to EU sugar factories which will be granted for factory closure and renunciation of their production quotas. Preferential imports from developing countries will continue, but the guaranteed price paid for preferential imports will drop significantly. This proposal is an indication that the EU is not willing to liberalise the EU sugar regime because the protection mechanism will remain intact without any proposal to change the prohibitive tariffs imposed on sugar imports.

2.2. EU preferential agreement with the African, Caribbean, and Pacific countries

According to the EU Commission (DG Trade, 2004), the EU trade with the ACP countries in 2002 totalled over EUR 58 billion with EU imports totalling EUR 30.5 billion and EU exports totalling EUR 28 billion. For most of the ACP countries and virtually all African ACP countries - the EU is the main trading partner. In 2001, trade with the EU represented 31% of total ACP exports (35% of total African ACP exports) and 29% of total ACP imports (37% of total African ACP imports). In order to enhance trade's contribution to development, the ACP States and the EU decided to completely overhaul their previous trade relations. Whereas previous trade relations have been primarily based on non-reciprocal trade preferences granted by the EU to ACP exports, both parties have agreed now to enter into economic integration agreements (new WTO compatible trading arrangements), progressively remove barriers to trade between them and enhance co-operation in all areas related to trade. Thus, formal negotiations of the Economic Partnership Agreements (EPAs) started in September 2002 and the EPAs will enter into force by 1 January 2008. The unilateral trade preferences will continue to be applied during the interim period of year 2000 to 2007.

Preferential treatment for the ACP countries has far reaching historical roots. Most of the ACP countries are former colonies of the EU member countries. When the EU was formed, the overseas dependencies of Belgium, France, Italy, and the Netherlands were given associated status. These dependencies gained independence in the 1960s, but continued to maintain close economic links with the EU through the Yaounde Conventions and the Arusha Agreement. When Denmark, Ireland and the United Kingdom joined in 1973, it was agreed that the developing countries of the British Commonwealth, except those in Asia should receive similar associated status. In 1975, the EU entered into a new contractual agreement known as the Lomé Convention with 46 ACP countries, followed by Lomé II in 1979 with 58 ACP countries, Lomé III in 1984 with 65 ACP countries and Lomé IV in 1989 with 68 ACP countries, extended in 1995 to 70 ACP countries.

Presently, 78 ACP countries are signatories to the Cotonou Agreement signed in June 2000: 48 African states, covering all sub-Saharan Africa, 15 states in the Caribbean and 15 states in the Pacific. Yet, only 19 ACP countries are signatories to the ACP/EU Sugar Protocol. These countries are Barbados, Belize, Congo, Cote d'Ivoire, Fiji, Guyana, Jamaica, Kenya, Madagascar, Malawi, Mauritius, St. Kitts & Nevis, Surinam, Swaziland, Tanzania, Trinidad, Uganda, Zambia, and Zimbabwe. In the Sugar Protocol, the EU has pledged to import 1.3 million tons of sugar from the ACP countries based on quotas, at guaranteed prices and on a duty-free basis. In addition, further market access is given by the Agreement on Special Preferential Sugar (SPS), granting temporary import quotas for 17 ACP countries (ACP Sugar Website).

The import quotas given to the ACP countries are clearly above the minimum 5 percent market access level required under the Uruguay Round Agreement on Agriculture. During the Uruguay Round, the standard tariffs and additional import duties under the "Special Safeguard Provisions" have mostly prohibited the imports of non-preferential sugar. Only a very small amount of non-preferential sugar is imported. Even after the enlargement of the EU, the minimum market access under the Uruguay Round commitments will not increase EU sugar imports. Likewise, even if the required market access is increased and doubled to the level of 10 percent in the forthcoming WTO round for agriculture, there is no requirement for the enlarged EU to increase the prevailing level of sugar imports. The reason is that the preferential quotas for the ACP countries and other sugar imports are still more than 10 percent of the total EU-25 consumption in sugar. Hence, the EU is able to prevent further imports of sugar that remain outside its preferential agreement with the ACP countries and other developing countries.

2.3. EU preferential agreement with the Least Developed Countries

The United Nations has denominated “Least Developed Countries” a category of countries (50 countries in December 2003) that are deemed structurally handicapped in their development process since 1971. In response to the socio-economic weaknesses of the LDCs, the United Nations grants these countries a special favourable treatment in the allocation of resources under its relevant co-operation programmes. At the same time, the organisation gives a strong signal to the other development partners of the LDCs by periodically identifying these countries and highlighting their structural problems, thereby pointing to the need for special concessions in their favour, especially in the area of development finance and in the multilateral trade framework.

In year 2002 (WTO, 2003), the EU is the largest merchandise exports destination for Africa (USD 66.4 billion), followed by North America (USD 23.8 billion), and Asia (USD 4.4 billion). The EU is the most important single market for the LDCs. According to the EU Commission (DG Trade, 2003), the LDCs merchandise exports to the EU totalled EUR 13.1 billion in 2002, which amounted to 35% of LDCs exports to the world (EUR 37.9 billion). According to UNCTAD (2004), international trade cannot work for poverty reduction if export performance is weak. The problem for the LDCs is not the level of integration with the world economy, but rather the form of integration. The current form of integration, which includes weak export capacities, is not supporting sustained economic growth and poverty reduction. Therefore, improvement in the trading opportunities for the LDCs may support sustainable economic growth and poverty reduction.

The “Everything But Arms” (EBA) unilateral trade concession from the EU is intended to further improve trading opportunities for the LDCs. All agricultural products are included in the concession, which is in contrast with the original GSP concession to the LDCs that focused on manufactured products. Although market access of the LDCs in the EU had a wide coverage of products before the EBA concession, a further 919 agricultural products (tariff lines at HS 8-digit level) are freed from ad valorem or specific tariffs and import quotas. At present, agricultural products such as fruits and vegetables, meat and dairy products are granted “duty and quota free access” to the EU market.

The EBA concession took effect on March 2001. On the other hand, the full liberalisation of sugar, rice and bananas are phased in with a transition period. The “duty and quota free” market access for sugar will only begin in year 2009. Nonetheless, in order to compensate for the delay in the full liberalisation of sugar, raw sugar can be exported duty-free by the LDCs to the EU market within the limits of a tariff quota, which will be increased each year by 15% from 74,185 tons (white-sugar equivalent) in 2001/2002 to 197,355 tons in 2008/2009. Only countries that have signed the Framework Agreement with the EU are eligible to receive these quotas during the transition period. This is not an indication that there will be additional imports flowing into the EU sugar market. The increase in sugar imports from the LDCs through this tariff quota will simultaneously decrease the imports of Special Preferential Sugar (SPS) from the ACP countries.

The EU Commission initially estimated that 2.7 million tons of sugar exports from the LDCs may enter the EU market by year 2009 (EBA, 2000). From this total, 1.4 million tons would be from the substitution of domestic consumption from world sugar imports, while the domestic production of sugar is exported to the more lucrative EU market. Meanwhile, 1.3 million tons would come from the medium term enhancement of the LDCs production capacity in sugar. Later, the EU Commission gave a second estimation that sugar imports from the LDCs would gradually increase to 900,000 tons in the medium term (EBA, 2001). The lower estimation is due to the infrastructure costs, constraints (in particular for land-locked producers), and unfavourable investment climate (including political stability) facing the LDCs at the moment. Most probably, it would take time before the LDCs would be able to overcome the existing infrastructure, logistic, marketing, quality, and other constraints, not to mention political instability (civil war or unrest) and economic mismanagement.

One very important non-trade barrier is the safeguard measures enacted to protect the EU market from serious disturbances. The EU Commission has stated that, in any given marketing year, imports into the EU from the LDCs for sugar, rice and bananas exceed or are likely to exceed imports in the previous marketing year by more than 25%, the EU Commission will automatically examine whether the conditions for applying safeguard measures in accordance with the GSP Regulation are met. Moreover, the EU is entitled to apply the safeguard measures provided by the “Agreement on Safeguards” under Article XIX of GATT 1994. The safeguard measures are in place to protect the EU

market from massive influx of sugar imports from the LDCs. The emerging question is whether it is politically sensible to impose the safeguard measures after granting unlimited preferential market access to the poorest countries in the world (Huan-Niemi and Niemi, 2003).

Preferential market access is very lucrative due to the current high price for EU domestic sugar, which is the guaranteed price paid to the LDCs sugar exporters. However, the forthcoming reforms on the EU sugar regime may have a major impact on the imports of sugar into the EU coming from the LDCs. A reduction in the price of EU domestic sugar will lead to lower export earnings for the LDCs. In the EU Commission's reform proposal for the EU sugar regime, one of the driving forces to reduce the EU domestic sugar price by one third is to curb the influx of sugar coming from the LDCs. In order to avoid a major decline in the guaranteed price, the LDCs have offered to postpone the quota and duty free concession in the sugar sector in exchange for a significant increase in the sugar preferential quotas granted to the LDCs, thus extending the transition period to year 2019 (LDC Sugar Group Website).

3. Studying the changes in the global sugar markets by using the GTAP model

The multi-region and multi-sector general equilibrium model (GTAP) is used to analyse the changes made to the EU sugar regime. Hertel and Tsigas (1997) describe the model. Dimaranan and McDougall (2002) describe the GTAP Database. The GTAP model and database are standard tools for analysis in the changing world of commodity markets. The standard model assumes competitive environment where consumers and firms take prices of goods and factors as given. Different trade policies as well as domestic policies are implemented to the model and database as price wedges between different prices, e.g. the domestic and world market price. Exogenous changes like trade liberalisation affect the relative prices between regions and commodities and the behaviour of consumers and producers within economies to produce a new equilibrium to the economy. Different regions in the model are combined by bilateral trade flows and the demand structure in foreign trade differentiates between commodities imported from different sources. This enables the equilibrium remain in non-specialized pattern of trade where substitution possibilities play a central role.

The GTAP Data Base 5.4 consists of 78 regions and 57 industries and can be aggregated to larger entities. In the simulations, the regions have been aggregated to 20 new regions by outlining the LDCs and ACP countries as detailed as possible (Table 2). The following are regions defined as ACP countries: Guyana/ Rest of South America (XSM), Central America & Caribbean (XCM), Zimbabwe (ZWE), Mauritius/Other Southern Africa (XSF), and Swaziland/Rest of South African Customs Union (XSC). The regions defined as the LDCs are Mozambique (MOZ), Malawi (MWI), Tanzania (TZA), Uganda (UGA), Zambia (ZMB), Rest of Sub-Saharan Africa (XSS), Bangladesh (BGD) and Nepal/Rest of South Asia (XSA). Many regions are originally aggregates of several countries, but exports of preferential sugar to the EU could come only from a single country. For example, Rest of South African Customs Union (XSC) consists of Swaziland, South Africa, Namibia, and Lesotho, but Swaziland is the only country exporting preferential sugar to the EU from this region. The regions are labelled according to the preferential sugar exporters to the EU market. Thus, the region XSC (Rest of South African Customs Union) as a whole is only representing Swaziland.

The industries are aggregated into four main groups: sugar, agriculture, manufacturing and services. Sugar is seen as a single commodity consisting of raw and white sugar. The base year for the database is 1997. For some trade figures, the values are not compatible with the current situation. Instead of concentrating on the exact absolute levels, the relative changes in export levels are analysed.

The simulations are implemented in steps in order to capture the time span of the changes made to the EU sugar regime. First, the EU sugar regime is liberalised for the LDCs only. Second, the EU sugar regime is liberalised for both the LDCs and ACP countries. Finally, the EU sugar regime is liberalised for all countries in the world.

Table 2. The regions in GTAP Data Base 5.4 have been aggregated to 20 new regions.

No.	Code	Description	Group
1	EU	EU-15 members	Austria; Belgium; Denmark; Finland; France; Germany; United Kingdom; Greece; Ireland; Italy; Luxembourg; Netherlands; Portugal; Spain; Sweden.
2	EUE	EU-12 enlargement	Bulgaria; Czech Republic; Hungary; Malta; Poland; Romania; Slovakia; Slovenia; Estonia; Latvia; Lithuania; Cyprus.
3	XSM	Guyana/Rest of South America	Guyana; Paraguay; Surinam.
4	XCM	Central America, Caribbean	Anguila; Antigua & Barbuda; Aruba, Bahamas; Barbados; Belize; Cayman Islands; Costa Rica; Cuba; Dominica; Dominican Republic; El Salvador; Guatemala; Haiti; Honduras; Jamaica; Netherlands Antilles; Nicaragua; Panama; Saint Kitts & Nevis; Saint Lucia; Saint Vincent & the Grenadines; Trinidad & Tobago; Virgin Islands.
5	ZWE	Zimbabwe	
6	XSF	Mauritius/Other Southern Africa	Angola; Mauritius.
7	XSC	Swaziland/Rest of South African Customs Union	Lesotho; Namibia; South Africa; Swaziland.
8	IND	India	
9	MOZ	Mozambique	
10	MWI	Malawi	
11	TZA	Tanzania	
12	UGA	Uganda	
13	ZMB	Zambia	
14	XSS	Rest of Sub-Saharan Africa	Benin; Burkina Faso; Burundi; Cameroon; Cape Verde; Central African Republic; Cote d'Ivoire; Djibouti; Democratic Republic of Congo; Equatorial Guinea; Eritrea; Ethiopia; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Kenya; Liberia; Madagascar; Mali; Mauritania; Mayotte; Niger; Nigeria; Rwanda; Sao Tome & Principe; Senegal; Seychelles; Sierra Leone; Somalia; Sudan; Togo.
15	BGD	Bangladesh	
16	XSA	Nepal/Rest of South Asia	Bhutan; Maldives; Nepal; Pakistan.
17	BRA	Brazil	
18	THA	Thailand	
19	AUS	Australia	
20	ROW	Rest of the World	Other countries in the world

4. Unilateral liberalisation of the EU sugar regime for a set of countries only or for all countries in the world

The EBA concession includes gradual reduction in tariffs together with gradual increase in quotas before the “duty and quota free” market access for sugar begins from year 2009 onwards for the LDCs. Before tariff liberalisation, the current preferential quota system guarantees both the volume imported as well as the price paid for the imported sugar to be above world market price. The open question is what will be the price paid for sugar imported from the LDCs after tariff liberalisation? Will it be the current high price or world market price? It is assumed in this study that due to the increasing flow of sugar after tariff liberalisation, the EU cannot afford to pay the high price for sugar any more. Subsequently, the EU will be forced to pay the prevailing world market price for sugar imports after tariff liberalisation. The base data resembles the situation in 2009, after all the quota changes has been made and simulated.

Four scenarios are formulated for simulations. In the first scenario (EBA), tariffs for sugar are removed from imports coming from the LDCs to the expanded EU (EU-25). It is assumed that all the LDCs can fully adapt their production to the world market price, whereby the current quota restrictions on imports have prevented the expansion of production and exports to the EU.

In the second scenario (EBA & EPA), tariffs for sugar are removed from imports coming from both the LDCs and ACP countries to the expanded EU. This scenario is to assume that the EU would liberalise sugar imports from the ACP countries after liberalising sugar imports from the LDCs. Tariff liberalisation for sugar imports coming from the ACP countries would be possible under the Economic Partnership Agreements (EPAs) to form free trade areas with the EU. It is assumed that all the LDCs and ACP countries can fully adapt their production to the world market price, whereby the current quota restrictions on imports have prevented the expansion of production and exports to the EU.

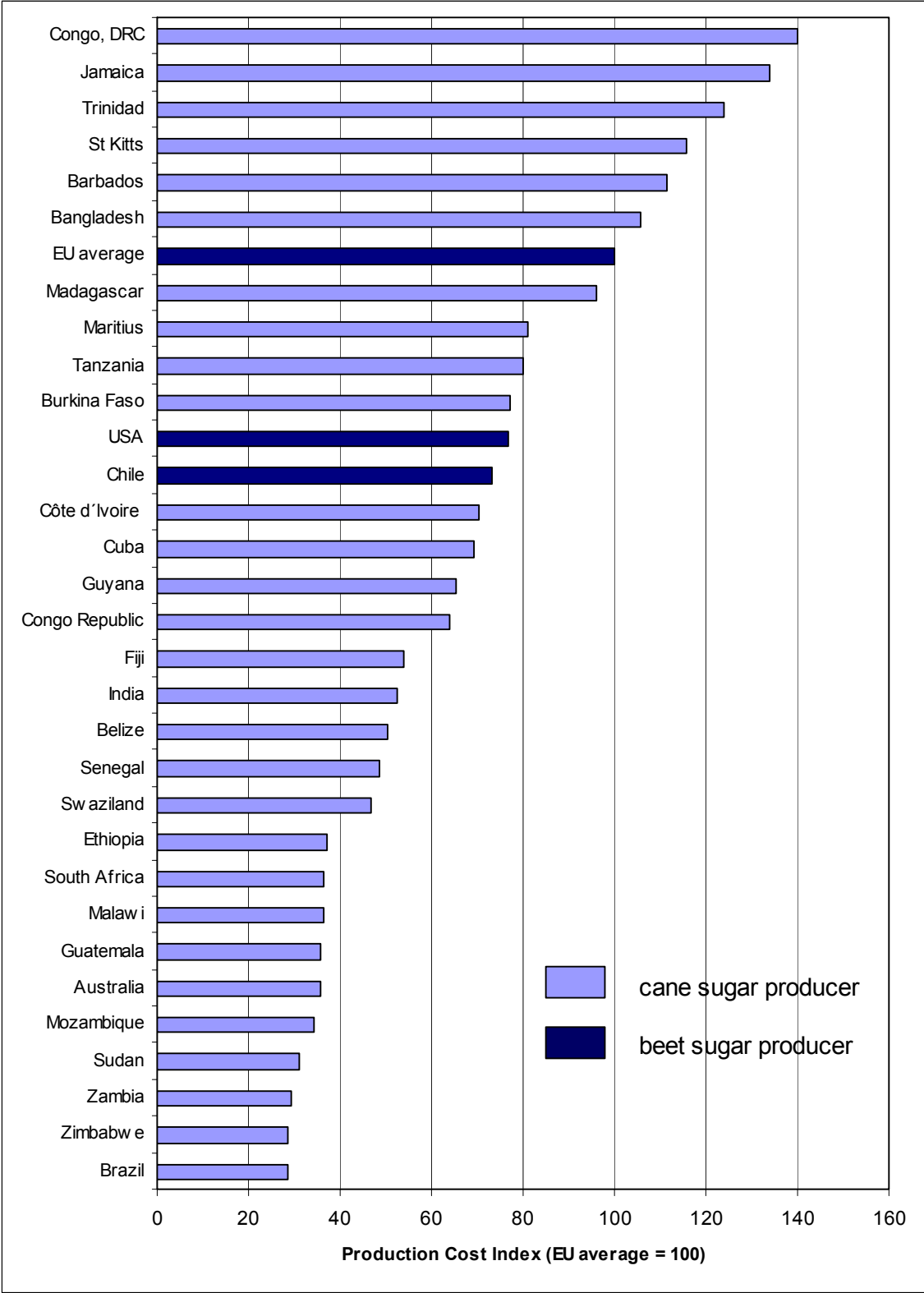
In the third scenario (PERFECT), tariffs for sugar are removed from imports coming from all countries in the world. It is assumed that all countries can fully adapt their production to the world market price. This scenario will show the potential exports of all sugar exporting countries if all countries would have access to the EU sugar market.

In the fourth scenario (REAL), tariffs for sugar are removed from imports coming from all countries in the world, but the potential supply responses are based on the estimations of the countries’ production costs for sugar. The countries’ position on the supply curve is dependent on their production costs for sugar. The higher the production costs, the smaller the supply response. Countries with the lowest productions costs, but also with the highest tariff, are assumed to have the best market access when the EU sugar market is fully liberalised. The ranking of countries is portrayed in Table 3 according to the production costs index, based on the countries’ sugar production cost (field & factory). This production costs index is adapted to the current GTAP model. The actual shocks are implemented in the form of tariffs (the higher the production costs, the higher the entry barrier). This scenario will show the potential exports of sugar exporting countries only if low cost sugar producers could adapt their sugar production and expand their sugar exports to the EU market.

Table 4 shows the sugar trade flows to the expanded EU (EU-15 and EU-12 together) from different countries/regions. If tariff liberalisation in the EU sugar regime is limited to the LDCs only under the EBA scenario, these countries would benefit the most. Duty and quota free market access for the LDCs would be at the expense of the ACP countries that do not belong to the LDCs category and other low cost sugar producing countries. However, it is assumed that all the LDCs can fully adapt their sugar production to the world market price without guaranteed market access or price. Also, necessary investments are available for these countries to expand sugar production in order to increase exports to the EU market. Infrastructure improvement is especially needed in land-locked countries to facilitate the increase of sugar exports to the EU.

The EBA & EPA scenario, which includes tariff liberalisation for both the LDCs and ACP countries, would benefit the ACP countries the most. Countries not included in the tariff liberalisation process are the main losers in this scenario. Though, it is assumed that the ACP countries could fully adapt their sugar production to the world market price and extend their current sugar production significantly. This outcome may be unrealistic because many of the ACP beneficiaries are high cost producers. These high cost sugar producers may not be able to adjust their rigid production structures and dramatically increase their exports to the EU at world market price.

Table 3. The ranking of countries according to the production costs index based on the countries' sugar production cost (field & factory) from numerous sources.



In the PERFECT scenario, where the EU sugar regime is liberalised for all countries, the greatest beneficiaries would be those countries whose current market access to EU have been restricted the most. The EU's protection is at the expense of other large sugar producers or exporters like India, Brazil, Thailand and Australia. In this scenario, the ACP countries are major winners as well because the model assumes that the ACP countries could fully adapt their sugar production to the world market price and extend their current sugar production significantly. The model behaves as if the current tariff quota regime had prevented a large potential of production to realize, thus curtailing the sugar exports of the ACP countries. This is not true because in reality the supply response is not perfectly elastic. Rather, the supply response is actually inelastic. Therefore, the model assumes that the ACP countries' current market share in the EU is the base for further expansion in sugar exports after market liberalisation in the EU sugar regime. In fact, the current market share of the ACP countries is guaranteed by tariff rate quotas and the price paid is much higher than the world market price. It is doubtful that the ACP countries can compete at world market prices without guaranteed market access due to preferential treatment.

In the REAL scenario, the benefits from the liberalisation of the EU sugar regime would accrue to a few countries like Brazil, Zimbabwe, Zambia, etc. Current sugar exporters from the ACP countries like Mauritius may disappear from the EU market even though Mauritius has a strong presence in the EU sugar market due to the current preferential treatment granted by the EU. The simulations do not take into account the loss of quota rents to the ACP countries. Sugar exports can be an important source of income for some of the ACP countries. Also, many of the LDCs are mainly losers under this scenario compared to the EBA scenario whereby the LDCs are the major winners. The ultimate winner in the REAL scenario would be Brazil with almost 95% of the total sugar exports from all countries in the world to the EU.

Table 4. Sugar trade flows to the EU (USD million).

Regions	Partial Liberalisation		Full Liberalisation	
	EBA	EBA & EPA	PERFECT	REAL*
Guyana	-22	937	579	-16
Central America/Caribbean	-50	4715	2043	-46
Zimbabwe	-2	269	142	395
Mauritius	-75	1898	1263	-65
Swaziland	-20	2077	921	64
India	-11	-11	1167	0
Mozambique	54	10	4	2
Malawi	287	106	56	37
Tanzania	562	153	71	-6
Uganda	25	3	1	0
Zambia	256	104	62	217
Sub-Saharan Africa	5027	913	369	-5
Bangladesh	19	2	1	0
Nepal	2912	853	373	-9
Brazil	-1	-2	1939	11034
Thailand	0	0	347	43
Australia	0	0	487	58
Rest of the World	-43	-48	2879	-25
Total exports to the EU	8918	11979	12703	11677

* production cost data is incorporated into the shocks for REAL simulations

Table 5 and Table 6 will also depict the winners and losers of EU's protection and tariff liberalisation for sugar. In all the tariff liberalisation scenarios, EU sugar exports would disappear from the global sugar markets. EU sugar production would decrease the most (83%) under the

PERFECT scenario with a total value of USD 31.5 billion for EU-27. Even under the EBA scenario, EU sugar production would decrease by over USD 22 billion. Production of sugar in the EU would still decrease by 64% even though tariff liberalisation in the EU sugar regime is limited to the LDCs only. As a result, the greatest loser would be the EU sugar sector.

Table 5. Changes in the production of sugar (in percent).

Regions	Partial Liberalisation		Full Liberalisation	
	EBA	EBA & EPA	PERFECT	REAL*
EU-15	-63.84	-81.34	-83.31	-71.79
EU-12	-22.93	-53.35	-66.54	-55.5
Guyana	-10.17	675.6	419.21	-5.31
Central America/Caribbean	5.03	173.17	79.71	8.20
Zimbabwe	3.48	207.2	111.45	305.38
Mauritius	-41.22	1191.84	798.11	-32.44
Swaziland	2.71	282.02	129.04	17.88
India	0.51	0.23	5.85	0.23
Mozambique	236.36	60.14	35.87	28.43
Malawi	2124.61	781.53	416.53	272.27
Tanzania	131.07	36.5	17.56	-0.47
Uganda	21.73	3.80	2.03	1.40
Zambia	890.71	362.66	215.94	753.84
Sub-Saharan Africa	201.07	41.12	20.69	10.02
Bangladesh	2.53	0.51	0.59	0.75
Nepal	74.47	22.47	10.44	0.43
Brazil	3.35	3.74	18.57	90.30
Thailand	6.25	7.68	20.82	8.48
Australia	5.22	8.38	36.85	11.07
Rest of the World	2.11	3.18	8.73	2.93

Table 6. Changes in the production of sugar (in USD million).

Regions	Partial Liberalisation		Full Liberalisation	
	EBA	EBA & EPA	PERFECT	REAL*
EU-15	-20638	-26297	-26933	-23208
EU-12	-1585	-3687	-4598	-3835
Guyana	-15	1027	637	-8
Central America/Caribbean	141	4840	2228	229
Zimbabwe	7	389	209	573
Mauritius	-90	2613	1750	-71
Swaziland	24	2474	1132	157
India	105	47	1217	49
Mozambique	49	13	8	6
Malawi	312	115	61	40
Tanzania	595	166	80	-2
Uganda	35	6	3	2
Zambia	398	162	96	337
Sub-Saharan Africa	6435	1316	662	321
Bangladesh	30	6	7	9
Nepal	2790	842	391	16
Brazil	528	589	2924	14223
Thailand	157	193	524	213
Australia	110	176	775	233
Rest of the World	1316	1983	5446	1829

At the moment, the EBA concession is considered a menace to the EU's domestic sugar production. The main reason to reform the EU sugar regime is to mitigate the influx of sugar coming from the LDCs. Under status quo, the EU Commission has estimated that the LDCs would export up to 3.5 million tons of sugar to the EU market after year 2009 (Council, 2004). But after the implementation of the reform proposal by the EU Commission, sugar imports from the LDCs would be limited to 700 thousand tons only (Council, 2004). The reform proposal will not change the prohibitive protection level for the EU sugar regime. Thus, EU's domestic sugar production (under quota) will continue to remain at the EU-15 sugar production level (14.5 million tons), but the LDCs potential market access to the EU sugar market is reduced substantially by 80 percent.

The EU Commission has proposed to reduce the EU domestic price for white sugar by 33 percent (EUR 632 to 421) and for raw sugar by 37 percent (EUR 523 to 329). A larger decline in the EU domestic price for raw sugar will translate to a sharper decline in the income for the ACP countries and LDCs that export preferential sugar to the EU. The EU sugar market will no longer be a highly attractive market for the ACP countries and LDCs after the proposed reform because of the considerable decline in the domestic prices for EU sugar.

The EU Commission has also proposed to reform the EU sugar regime before year 2006 (CEC, 2004). Since the proposed gradual reduction in sugar production quotas will take place in the context of quota mobility between the EU-25 member states, the EU Commission has projected that sugar beet cultivation will be more concentrated in the most competitive production regions of the EU (Council, 2004). Many EU member states are expected to stop sugar beet production after implementing the reform proposed by the EU Commission.

5. Conclusions

The simulation results show that total liberalisation of sugar imports from the LDCs will be a major threat to the EU sugar regime. The current EU sugar regime limits sugar imports from all developing countries or some efficient producers, if the production cost data is a right estimate of the potential supply response from developing countries. The LDCs will be the winners under the EBA concession supported by the current regime, but a few efficient sugar producers will be the winners if the current regime is entirely liberalised for all countries.

The full liberalisation of the EU sugar regime and the abolition of preferential treatment would change the position of countries as winners or losers. The assumptions on the production costs and export possibilities of the sugar producing countries would create more losers than winners. For some of the losers, the loss of sugar exports could seriously damage their fragile economy. Therefore, the abolition or loss of preferential treatment is an important issue and hotly debated around the world.

Trade preferences have the potential of helping developing countries to promote self-sustained economic development and can substitute transfers in the form of direct financial assistance from developed countries to poor developing countries. The EU has maintained this development perspective by granting preferential access to the highly protected and subsidised EU sugar market with prices significantly above the world market prices. However, the EBA concession is considered a menace to the EU's domestic sugar production. As a consequence, the EU Commission made a formal proposal to reform the EU sugar regime before year 2006.

The EU sugar sector is the greatest loser in all the simulated scenarios. Hence, the EU is eager to reform the EU sugar regime in order to protect its domestic sugar production. On the other hand, the reform proposal by the EU Commission will accelerate the decrease in the number of farms and the increase in the economic size of farms, especially in the less favoured areas of the EU. Furthermore, the full decoupling of direct payments from the EU sugar reform may lead to more agricultural land abandonment and voluntary set-aside development, notably in the intermediate and less favoured areas. The opportunity for off-farm work in rural Europe must increase at the same time with the decrease in the number of farms. The future of rural Europe will continuously face challenges from the reforms made to the EU Common Agricultural Policy due to the changing global agricultural markets and trade policies.

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