

The U.S. Sugar Industry Under the EU and Doha Trade Liberalization

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Abstract

This study evaluates potential reforms of the EU sugar policy and some liberalization policies under the Doha Development Agenda proposal. The EU reforms will increase the Caribbean sugar price from 8.7 to 9.96 cents per pound, but will not affect the U.S. sugar industry. If liberalization on the basis of the WTO-Doha proposal occurs, U.S. sugar imports will increase to 1.9 million tons and wholesale price will decrease from 24.89 to 23.79 cents per pound. It is also expected the Caribbean price to increase from 8.7 to 12.1 cents per pound. Under these circumstances, Brazil will benefit the most as production and export sales increase.

Key Words: Sugar, Liberalization, Production, Price, EU Reform, Doha Reform

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Introduction

Many producing countries in the world provide protection to their sugar industries under direct or indirect support instruments. Regional and multinational free trade agreements are creating pressure for sugar producing countries to reform their sugar policies. For instance, in April 2005, the World Trade Organization (WTO) ruled the appealed dispute brought by Australia, Brazil and Thailand against the European Union (EU) sugar regime. The panel concluded that the EU has been exporting more sugar with export subsidies than it is permitted to do under the WTO agreement. As a result of this decision, the EU will be required to substantially reduce its expenditure in sugar support programs and adopt policies that are in line with the recommendations from the WTO panel.

Independently of the WTO-panel's decision, in July 2004, the EU proposed a reform of its sugar policy that is expected to be published in some form in June 2005. The changes are oriented to make the sugar sector more competitive and will frame the EU position for the WTO-Doha Development Agenda (WTO-DDA) negotiations in Hong Kong in December 2005. Also, under the current WTO-DDA, member countries are negotiating a substantial improvement in market access to be applied to all agricultural commodities

including sugar.

The future of the United States and world sugar industries is uncertain under these potential changes in policies (Kelch and Normile; Roney).

Therefore, it is important to study the impact of trade liberalization policies on U.S. producers and consumers and the implications on the world sugar market.

The objectives of this paper are to evaluate the potential effect of the recently proposed structural changes of the sugar policy regime in the EU and the currently proposed changes under WTO-Doha negotiations. The global sugar policy simulation model developed by Benirschka, Koo, and Lou was used for the analysis of alternative scenarios.

Previous research has evaluated the effect of trade liberalization policies on the sugar industry in the United States and world markets (Koo; Beghin et al.; Haley; U.S. General Accounting Office; Borrell and Pearce; Wohlgenant). These studies have reported an increase in world sugar price when major sugar markets move to freer trade policies. Borrell and Pearce; and Koo found that if the EU and the United States liberalize their sugar industries, it will cause the world price to increase by 20 and 68 percent, respectively. However, Koo concluded that if only the United States liberalizes its sugar industry, world price will increase by 33 percent and the U.S. wholesale sugar price will decrease by 20 percent. Haley found that, under a free trade scenario, U.S. wholesale sugar price would decrease 13 percent. Under partial and complete trade liberalization of developed countries, Wohlgenant found a reduction of the world sugar prices

by 0 and 9.8 percent, respectively.

In terms of social benefits, it has been reported that reduced sugar prices in the United States would create an increase in consumer surplus and a reduction of producer surplus (Koo; U.S. General Accounting Office). Koo also added that U.S. producers are more affected when only the United States liberalizes its industry than when liberalization takes place for the United States and the EU. In the case of a world trade liberalization, Wohlgenant concluded that developing countries would benefit and that their export earnings could increase between 27-31 percent. Milner, Morgan, and Zgovu studied the impact of the 2004 proposal reforms of the EU sugar policy on the welfare of African, Caribbean and Pacific countries (ACP). These researchers concluded that while welfare transfer will fall for some ACP countries, others may benefit as a result of a positive effect on the world sugar price.

The following section presents a description of the EU sugar industry and the current issues debated in the Doha Development Agenda. Following, the sugar model and alternative scenarios are discussed; results of the simulation model are presented; and finally, a summary of results is presented.

The EU Sugar Industry

Until 2003, the EU was formed by Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Iceland, Luxemburg, Netherlands, Portugal, Spain, Sweden and the United Kingdom. In May 2004, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia joined the EU. During 2003, the EU gross domestic product (GDP) was 7 trillion U.S.

dollars, lower than 11.0 trillion from the United States. In the world agricultural market the EU is the largest importer and the second largest exporter of agricultural products (ERS USDA, 2005). Despite the importance of agriculture for the EU, similarly to the United States, there is a declining role of this activity in the general economy (Normile and Price).

The EU has an important paper on the world sugar market. With the recent enlargement, EU-25, production is expected to be between 19-20 million metric tons (MT). In terms of the world trade share the EU accounts for about 14 percent of production, 13 percent consumption, 12 percent exports and 5 percent imports. Sugar is produced from sugar cane (2 percent) and beets (98 percent) and it takes place in almost all member states, except in Luxembourg, Estonia, Cyprus and Malta. Major producing states are France and Germany with about 50 percent of total production, followed by Poland, Italy, and the United Kingdom (European Commission (b)).

Policy Issues

Agricultural production, consumption, and trade in the EU has been highly influenced by government programs through the Common Agricultural Policy (CAP). The CAP was inserted in 1957 when the European Economic Community was created by the Treaty of Rome. Since its creation, the CAP transformed the agricultural trading position of the EU from a net importer into the second largest exporter of agricultural products (ERS USDA, 1999). Major reforms of the CAP occurred in 1992 and 1999, and a third major reform was passed in June 2003.

The E.U. sugar policy started in 1965 as part of the CAP and major

amendments have not been applied since its inclusion. The last version of the sugar policy was completed in 1995 for and extension of its validity until the 2000/2001 marketing year. Under CAP, protection for the sugar industry is provided through guaranteed intervention and minimum prices, production quotas, import controls and export subsidies (ERS USDA, 2003). Other mechanisms are applied for sugar used for production of alcohol and yeast and for isoglucose and inuline syrup. As a result, domestic wholesale price of refined sugar is about 300 percent higher than world price (Roney).

The intervention price is a mechanism in which intervention agencies are committed to purchase eligible sugar at a minimum price, which has been constant since 1993 at c 631.90 (780 U.S. dollars) and c 523.70 (646.5 U.S. dollars) per metric ton of refined and raw sugar, respectively (European Commission (b); Mitchell). Minimum prices have been established at which sugar processors are required to buy from beet growers. The prices, unchanged since 1992, are set at c 46.72 (57.7 U.S. dollars) and c 32.42 (40.0 U.S. dollars) per metric ton for beets used to produce *A*-quota sugar (82 percent) and *B*-quota sugar (18 percent), respectively (Mitchell; ERS USDA, 2004). The difference between the two quotas is mainly the amount of levies applied to each of them. During the period 2003-2004, the total production quota was about 17.4 million MT (EU-25), divided into 14.7 million MT *A*-quota, in which the outlet is guaranteed and the guarantee price may be reduced up to 2 percent for the production levies, and 2.7 million MT *B*-quota, of which the outlet is also

guaranteed but at a price which can be decreased up to 39.5 percent for levies (ERS USDA, 2004). C-quota sugar, which must be exported with no subsidy or stored and used as part of the following year's A and B quotas, varies from year to year at about 3.0 million MT. Production quotas are also established for isoglucose (0.5 million MT) and inulin syrup (0.3 million MT) (ERS USDA, 2004).

Imports are restricted by the implementation of two tariffs, one fixed and the other depending on the volatility of the world market price of sugar. The fixed duty is established at c 419 (517 U.S. dollars) and c 339 (419 U.S. dollars) per MT of refined and raw sugar, respectively. During 2004 sugar imports fared an average total import tariffs of about c 700 (864 U.S. dollars) per MT (ERS USDA, 2004).

Special access to the EU sugar market has been given to 46 countries from Africa, the Caribbean, and the Pacific (ACP), including India. These countries can export sugar to the EU at internal prices. The total import agreement was set at 1.3 million MT in 1975. In 1995, another import allocation (200,000 to 350,000 MT) was made to ACP countries. Additionally, the EU took over import commitments from joining members in 1995 totaling 85,500 MT. Also, 100,000 MT in 2001/02 were temporarily granted to several countries in the Balkans (Mitchell).

In July 2004, the EU proposed a new reform of its sugar policy, which follows the basic principles of reforms implemented in 2003, and is expected to be effective in some form during 2005 (Kelch and Normile; European

Commission (a); ERS USDA, 2004).

Specifically, some of the reforms include the following:

1. A cut in the intervention price (renamed “reference price”) of refined sugar from ¸ 632 to ¸ 421 (780 to 520 U.S. dollars) per MT. Also, the proposal reduces the tariff protection to ¸ 421 per metric ton, which is at the same level as the proposed reference price.
2. Reduction of sugar beet price from ¸ 32.8 to ¸ 27.4 (40.5 to 33.8 U.S. dollars) per MT.
3. Production quota reduction from 17.4 million MT to 14.6 million. The proposal applies to A-sugar only and the other categories are no longer considered. Additionally, the production quota of isoglucose is increased from 0.5 to 0.8 million MT.
4. New member countries are compensated as old members in terms of sugar support programs.
5. Introduction of decoupled payments to sugar farmers in the form of Single Farm Payments (SFP) to compensate 60 percent of lost revenue due to price and quota reductions. SFP will be granted to farmers who grew sugar beets during the reference period (2000-2002) and will not be affected by any subsequently quota transfers.
6. Sugar imports from ACP and India will remain at 1.3 million MT; however, price is reduced from ¸ 421 to ¸ 329 (519.8 to 406.2 U.S. dollars) per MT.

If the EU is able to pass such reforms, production and exports would be reduced substantially, with the potential of increasing world sugar prices (Kelch and Normile; European Commission (a)). According to the EU commission, reduction of export subsidies and decoupling aid from sugar beet producers will increase domestic sugar imports from developing countries. In contrast, reports from the American Sugar Alliance (ASA) have concluded that because of a declined role of the EU in the world sugar market, the proposed sugar policy reform will not be an important factor in world sugar prices and in the U.S. sugar industry. According to the ASA, the proposed sugar policy will not preclude that large volumes of sugar exports from the EU take place, and the proposed price reduction would still leave domestic wholesale sugar prices above U.S. price levels.

For the EU-15 member countries, both production and domestic use have significantly increased over time (ERS USDA, PS&D Tables). Total sugar production and consumption in 1961 was 6.3 and 5.5 million MT, respectively; and in 2004 production and consumption totaled 16.5 and 14.4 million MT. Despite this significant change from the 1960s levels, production has remained relatively stable since 1992 and domestic consumption has been almost constant since the beginning of the 1990s (figure 1). From 1961 to 1981 total exports of refined sugar increased (figure 2). From 1981 to 2003, exports have oscillated between 5 and 7 million MT, and in 2004, total exports were 4.6 million MT. Exports have exceeded imports since 1977. Imports increased substantially from 1961 to 1974, and since 1978, have been relatively stable and significantly below

the volume of sugar exports (figure 2). Total imports, mostly raw sugar, were 2.1 million MT in 2004. In general, the EU is a net exporter; however, because of the difference between the high price paid for imports relative to the low price received for exports, a negative trade balance in terms of value has existed since 2002 (European Commission (b)).

The Doha Development Agenda (DDA)

The DDA was launched in November 2001 with strong leadership by the United States. The DDA covers six broad areas including agriculture, non-agricultural market access, services, the Singapore issues (transparency in government procurement, trade facilitation, investment and competition), rules (trade remedies), and development-related issues (U.S. Office of Trade Representative (USTR, 2004 (b))). The DDA is the largest negotiation of this type in history, covering items such as cars, agricultural products, communication services, and custom rules. In the Doha agenda the United States proposed the following (USTR, 2004 (a); WTO):

1. eliminate agricultural export subsidies;
2. decrease levels of trade-distorting domestic support; and
3. increase real market access opportunities in developed and developing countries through tariff cuts and quota expansion.

Tariffs will be cut using a tiered formula that will lead to greater harmonization in tariff levels across countries. Substantial improvement in market access is to be applied to all agricultural products, including sensitive products. Countries will be able to designate a specific number of sensitive

products that will be handled through a combination of tariff quota expansion and tariff reductions to expand market access (WTO).

The proposal aims for elimination of export subsidies and for the elimination of export credits with repayment periods beyond 180 days and export guarantee programs. Another key objective is the elimination of trade distorting practices in sales of State Trading Enterprises; thereby, eliminating the monopoly power of such entities. The idea is that during the first year of implementation, each Member's total permitted trade-distorting support will be cut by 20 percent from current levels (USTR, 2004 (a); WTO).

Model and Scenarios

The simulation model developed by Benirschka, Koo, and Lou was used to estimate the changes in production, consumption, and price. The model includes 17 countries and regions: Australia, Brazil, Cuba, the EU-25, South Africa, and Thailand as major exporters; and Algeria, Canada, China, Indonesia, Egypt, India, Japan, Mexico, the former Soviet Union, the United States and the Rest of the World region as major importers. The model computes how production, supply, demand, consumption, trade and price react, within the United States and the world, as variables in the system are changed.

Model Structure

Sugar supply or production ($qp_{i,t}$) is estimated as the product of the area harvested and the yield per hectare, where the area harvested ($a_{i,t}$) is expressed as a function of expected prices of sugar (p_{t-1}), alternative crops (p_{t-1}^c), and policy parameters (g_t):

$$a_{i,t} = f(a_{i,t-1}, p_{t-1}, p_{t-1}^c, g_t) \quad (1)$$

Additionally, a lagged dependent variable ($a_{i,t-1}$) is included to provide for dynamics related to producers' cropping decisions, and finally i indexes for cane sugar or beet sugar. For each region, the model calculates total consumption of sugar (qd_t) as the product of per capita consumption and population. Per capita consumption (fd_t) depends on the price of sugar (p_t), per capita disposable income (cy_t), and a time trend variable (t) to provide for changes in tastes and preferences of consumers:

$$fd_t = g(p_t, cy_t, t). \quad (2)$$

Carry-out stocks equations (qs_t) are calculated as function of domestic production (qp_t), price (p_t), and carry-in stocks (qs_{t-1}). These stocks protect against unexpected reductions in production and therefore, depends on the level of domestic production and the opportunity cost of storing sugar (Koo):

$$qs_t = h(qs_{t-1}, qp_t, p_t). \quad (3)$$

The sum of domestic production (qp_{t-1}) and carry-in stocks (qs_{t-1}) represents domestic supply and the sum of domestic consumption (qd_t) and carry-out stocks (qs_t) is total demand. Net exports (qx_t) are then estimated as the difference between domestic supply and total demand, and a market equilibrium condition is expressed as: