Biofuel and Feedstock Markets and the EU-US TTIP

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A RECENT CARD analysis looked at the implications of a potential EU-US Transatlantic Trade and Investment Partnership (TTIP) for bioenergy and associated feedstock markets. This article reports on the effects of removing bilateral tariffs and TRQs in the two bio-economies. An extensive report is available on the CARD website.

For biofuel use, raw sugar beets are processed to obtain refined sugar, which is then converted to ethanol. *(Photo by Peggy Greb)*

Notable policy distortions

Policies in US and EU agricultural markets are less distorting than in the past, especially for grain and oilseed markets. Significant distortions remain in US sugar markets, however, as US sugar policy uses trade distortions (TRQ and associated high tariffs) to support prices. Domestic price levels historically have been two-to-three times the level of world prices. The out-of-quota tariff is 15.36c/lb raw sugar and 16.21c/lb for refined sugar. Free imports come from Mexico under NAFTA but are limited by the low competiveness of the Mexican sugar industry and by some rules of origin and side agreements. The US sugar lobby has been effective at limiting the influx of sugar imports under other agreements such as CAFTA, and the bilateral Australia-US agreement. Sugar policy in the European Union is in transition, as sugar production quotas will end in 2017—a major change for that sector. Since 2006, the EU sugar sector has been rationalized and quotas ensure high guaranteed prices. However, despite protections, EU sugar production is more competitive than its US counterpart. Under a TTIP, high prices in the US market would induce EU exports to the US market. Isoglucose (sugar made from grains like HFCS) faces a duty of €507/MT of net weight. The United States faces this high tariff on its potential exports of HFCS. With bilateral liberalization, US HFCS would be competitive for use in EU food processing. Despite high sugar prices, the EU soft drink industry has not shifted to isoglucose to abate high sugar cost, in contrast to the US soft drink industry, which uses HFCS. This is due in part to EU isoglucose being constrained by production quotas to protect the EU sugar industry. These quotas will also be dismantled in 2017.

In biofuel markets, major distortions remain through mandates in both countries and through trade restrictions in the European Union. Border protection of ethanol in the European Union depends on preferential agreements and the statistical classification of ethanol-related products. Numerous fuel blends are imported under different classifications. The MFN tariff on ethanol for fuel is €19.20/hl for undenatured ethanol, and €10.20/hl for denatured ethanol. Currently, the United States faces antidumping duties that will expire by 2018, outside the 2022 horizon of our analysis, hence we do not consider them.

Removing bilateral tariffs and TRQs

Table 1 (available at http://www.card.iastate.edu/ag_policy_review/) shows supply changes (production, aggregate imports), changes in use (feed, food, industrial, aggregate exports), and price changes. For each variable, the percent change is shown along with the 2022 baseline level. The liberalization of trade between the European Union and the United States has a large impact on ethanol markets. In the European Union, ethanol price falls by 15 percent and there is a massive increase in imports (from the United States) and a substantial fall in ethanol output as well for DDGs. In the United States, production

is stimulated and exports more than double (121 percent increase) stimulated by the EU trade opening and higher prices. Exports of DDGs expand by 40 percent and its price falls because of the near fixity between ethanol and DDGs. Feedstock use in each region experiences associated changes.

In the European Union, feedstock use (coarse grains and wheat in industrial use) and associated imports fall along with the price of coarse grains; lower DDG output is compensated by larger DDG imports. In the United States, the reverse occurs, with an expansion of coarse grains used in industrial use (ethanol), a reduction of coarse grain exports, and a small increase in coarse grain production responding to higher corn prices.

Changes in the bio-diesel markets echo the changes in the ethanol markets. EU biodiesel production contracts by three percent and imports expand by 23 percent. In the United States, biodiesel expands by 19 percent and exports more than double to the European Union. The vegetable oil and oilseed use follow these changes in biodiesel markets. In the European Union, industrial use of oils contracts by nearly four percent, oil and meal production contract by two percent and so does the volume of oilseeds crushed. Meal imports from the United States make up for the reduced domestic availability of EU meal. US oil and meal production expands by roughly 13 percent with more oilseeds being crushed (a 15 percent increase in industrial use) and fewer oilseeds being exported (an 18 percent reduction). Given the small changes in relative prices for grains and oilseeds, the changes in production for these commodities are small in both countries.

Changes in sweetener markets are the third important set of results in the simulations. Sugar trade liberalization between the European Union and the United States induces a massive contraction of both raw and refined sugar productions (34 percent and 38 percent, respectively) in the United States and a humongous increase (480 percent) in imports of refined sugar (mostly sugar coming from EU white sugar). Raw sugar imports into the United States contract given the availability of inexpensive white sugar and the contraction of the US cane-refining sector and sugar prices fall by 18 percent (raw) and 15 percent (refined). Beet and cane productions contract by 36 percent and 34 percent, respectively, with falling farm prices. Sugar prices remain above the loan rate levels for sugar. Food use of white sugar increases by 12 percent. Losses to US sugar crop producers and processors are substantial.

Conversely in the European Union, sugar production expands by 21 percent to export to the United States (an increase of 367 percent from a small base to 1,249 MT). EU beet output increases by four percent. Beets are also grown for ethanol, which explains the smaller relative increase in EU beet output relative to the EU white sugar expansion. The EU white sugar price increases by roughly four percent and white sugar consumption falls by a bit more than one percent.

The changes in the isoglucose/HFCS markets are more convoluted. EU protection disappears, inducing a modest decrease in EU prices and a modest HFCS trade flow from the United States to the European Union. In addition, powerful indirect effects occur in food processing. In the United States, cheaper sugar is substituted for HFCS, and in the European Union, cheaper HFCS is substituted for sugar. Consumption of the sweetener composite sugar-HFCS increases in the United States but falls slightly in the European Union, where isoglucose production increases because grain prices have fallen and margins have improved despite the loss of protection at the border. In the United States, production of HFCS falls because of the reduced use of HFCS in food processing, lower output prices, and deteriorating margins from higher corn prices. Production of gluten feed, the byproduct of HFCS/isoglucose follows the directions taken by HFCS/isoglucose in the two regions with a smaller effect in the European Union, given that other grains are used for isoglucose production. ■