

## Horizontal price transmission in the European sugar sector

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### Objective

Price transmission (PT) in the agro-food sector has received increasing attention during the last decades, with a relevant impulse dating since Peltzman study on vertical price transmission which provided evidence of diffused PT anomalies in many agro-food sectors (Peltzman, 2000). Horizontal price transmission (HPT) received less attention and few studies have been conducted till now about this issue (Listorti 2009, Barassi and Ghoshray 2002, Thompson and Bohl 1999.). Price transmission has gained momentum also in relation to the implementation of the World Trade Organization (WTO) rules. European trade policies and, in particular, trade regulation of agricultural commodities within the Common Agricultural Policy (CAP) are a specific issue in this context. This paper reports about the results of a European study conducted in 2011 about price transmission in the sugar sector as effect of the sugar sector reform of 2006.<sup>1</sup>

### The EU sugar reform of 2006

The EU sugar regime features particular characteristics. As for other EU agro-food sectors, domestic market and trade rules were closely linked in the original sugar sector Common Market Organisation (CMO) scheme to finally grant the domestic market equilibrium. In that context sugar industry was assigned a pivotal role: backward, in relation to the agricultural sector, the targeted beneficiary of sugar regime; downstream, towards sugar industrial

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<sup>1</sup> Areté Research & Consulting in Economics (2012), *Study on price transmission in the sugar sector. Final report October 2012*. The European Commission, DG Agriculture and Rural Development, Brussels ([http://ec.europa.eu/agriculture/external-studies/sugar-price-transmission\\_en.htm](http://ec.europa.eu/agriculture/external-studies/sugar-price-transmission_en.htm)). EU tender reference: European Commission-DG Agriculture and Rural Development. TENDER N° AGRI-2011-EVAL-03

users, by virtue of EU preference principle sustained by CAP trade rules (in particular the variable import tariff regime, and differentiated export refunds for in-quota sugar).

The 2006 reform of the EU sugar regime<sup>2</sup> established a firm point after a series of more or less marginal modifications of the original sugar CMO scheme. The reform modified several aspects of the former regime and the long term strategy for the sector. The guaranteed price system, production quotas, market withdrawals, restructuring aids and trade rules were revised to re-establish supply/demand equilibrium and enhance production and market efficiency.

## Methodology

The evaluation of the sugar regime reform covers both the EU/world market integration and integration within the EU single market. A theoretical analysis of the reform allowed for the identification of the most relevant modifications that could influence HPT in the targeted geographical context, allowing for the subsequent formulation of operational hypotheses to be empirically tested. The import tariff system and preferential import regime were found to theoretically have the most direct effect on HPT.

The reform did not change the structure of the *tariff system* applied to sugar imports within the Generalised System of Preferences (fixed tariff plus additional variable duty, if applicable); on the other side, greater space compared to the pre-reform regime was devoted to preferential imports (duty-free or at reduced duty) especially under the “Everything But Arms” (EBA) EU initiative and in the framework of the transition from the Africa, Caribbean, Pacific (ACP) Sugar Protocol to the Economic Partnership Agreements (EPAs). *Preferential imports in regime of tariff exemption/reduction* indirectly influence world/EU market price transmission and the domestic price trend. According to the classical market equilibrium an increase of preferential sugar imports would push down domestic prices; seen along the EU and world price trends, when the EU domestic price is higher than world price, sugar from third countries covered by preferential import agreements should be attracted towards the EU resulting in a time-lagged decrease of EU sugar price; world price might also be affected depending on the importance of preferential imports to the EU in the overall sugar international trade. Opposite outcomes would occur when the domestic sugar price is lower than the world price.<sup>3</sup>

The theoretical effects were tested<sup>4</sup> statistically assuming two relevant policy-related breaks: the creation of WTO (1995) and three breaks related to the reform of the EU regime

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<sup>2</sup> Council Regulation (EC) 318/2006; Council Regulation (EC) 320/2006; Council Regulation (EC) 1234/2007; Council Regulation (EC) 1261/2007.

<sup>3</sup> As for the other measures, the reduction of price support was expected to facilitate price transmission because of the reduction of the price variation limits in the single market. The revision of quota system might affect HPT because it theoretically leaves more room to import flows and to greater integration of the EU and world market. In both cases, effects would be indirect.

<sup>4</sup> Sample data cover the period 1985 to 2011. The analysis adopted Vector Error Correction model. Sugar ex works prices at Member State level and LIFFE with sugar price were tested.

(achievement of the political compromise: 11/2005; publication of the implementing regulation on the Official Journal: 03/2006; entry into force of the regulation: 07/2006).

## Results

The empirical assessment allowed for the verification of HPT (a) between world and EU domestic sugar markets, and (b) between pairs of relevant sugar producing EU Member States.

(a) A convergence process between individual EU domestic markets and world market was already at work before the 2006 reform in France, Germany and the UK. The reform accelerated and made it more diffused at the EU level especially after 2009 (coinciding with the full implementation of the EBA sugar regime and transition from the ACP sugar protocol to EPAs) and sometime went together with proper price transmission, which remains however of secondary importance compared to convergence. On the opposite, price transmission between EU domestic markets and world markets is almost absent.

(b) Price transmission between pairs of producing countries seems not altered by the 2006 reform. Statistical analysis confirms only two relevant cases of (unidirectional) price transmission after the Reform: France (leader) vs. Germany (follower) and Belgium (leader) vs. The Netherlands (follower).

In conclusion the EU sugar reform of 2006 had no significant effects on horizontal price transmission. It accompanied a trend of price convergence between EU domestic markets and world markets already at work in the pre-reform period since the WTO implementation. The preferential import regime seems to be a relevant policy shock in determining the convergence process, which is however rarely associated with proper price transmission.

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