Policy brief NTM-impact project: policy implications from case studies

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ASSESMENT OF THE IMPACTS OF NON-TARIFF MEASURES NTM ON THE COMPETITIVINESS OF THE EU AND SELECTED TRADE PARTNERS

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This policy research project's overall objective is to collect and analyze new data on non-tariff measures (NTMs), particularly on governmental standards and regulations that prescribe the conditions for exporting agri-food products to foreign markets. In order to ascertain the NTM impact on EU agri-food exporters the proposed project applies a comparative analytical approach that requires information on the requirements of the EU's main competing players and the EU for comparison.

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The objectives of the case-studies were to

(i) Analyze barriers on imports from the EU compared to other countries' exports of similar products.
(ii) Explicitly address the relative competitiveness (or lack thereof) of the EU compared to other exporting countries.

This policy paper is then an attempt to summarize and synthesize the results obtained by the analyses drawn by the different research teams on products as different as meats, dairies and fruits and vegetables. These aggregates form product trade clusters and have been chosen according to a well defined *cahier des charges*. However, each specific product within the trade clusters has been the sole choice of each research team. The selection of the case studies has been based on the location of the research teams as well as the relative importance for policy makers, agri-businesses and the European Union. The reasons behind the selection of the case-studies have been widely described in [insert reference]. A common feature of all the case studies is that the Non-tariff Measure (NTM) is of significant importance for exporters as well as importers; with importance defined as a function of the cost borne out by exporters because of administrative procedures, of technological compliance, potential trade losses, as well as the uncertainty they generate for producers and exporters.

The common lesson of these case studies is that NTMs issues are deeply heterogeneous and complex. Their impacts on competitiveness are multi-faceted and the response in terms of public policy can not be unique. Indeed most sanitary and technical measures are expected to have negative impacts on trade, but many authors have shown that they could be the vectors of potential positive effects by giving information to the consumers and bringing trust and confidence in the available products. This is true for industrial products (see Moenius 2006), but it is also the case for agrifood products see Disdier et al. 2008). The results of the case studies do not provide a different story. A less expected result is that the trade impacts of import bans are not as straightforward as one could expect. Regarding the competitiveness position of the European Union (EU) compared to other exporting countries, it seems that – in most cases – other factors (such as relatively higher product prices or tariffs) have a more negative impact than non tariff measures imposed by its trade partners.

Sanitary and Phytosanitary (SPS) measures respond to public claims for better food safety but impose a heavy cost on producers and exporters. SPM carry information andf generally bring consumers' trust and confidence. They are also considered by policy makers as an obstacle to trade to be wary of. As a result, the impact on trade can be ambiguous. The stringency of domestic standard tends to foster trade by enhancing consumers' confidence, while stringency of abroad standards tends to weigh on cost and competitiveness. As a consequence one's competitive position will depends on several factors as the relative level of

stringency between exporter and importer‘s regulations which will drive the cost of compliance, the transparency of the rules imposed by trade partners and the equivalence in the conformity assessment procedures. In many of the case studies presented here, the European Union is not (or little) affected by the imposition of a new or stricter sanitary standard as European agrifood production is already governed by very tight rules. As **Drogué and DeMaria** show – focusing on apples and pears – producers already subject to strict rules are in a better position to face foreign requisites because they have already internalised the cost. They report that maximum residue level requirements for pesticides are not harmonized at a global level. While the Codex Alimentarius attempts to introduce a common rule, it is not statutory and there are as many regulations as countries. Then complying with every partner requisite is difficult for exporters and this difficulty is correlated to the level of stringency of your own regulation. Exporters are more prepared to born the cost associated to stringent standards when they are themselves compelled to strict rules. This certainly applies to European exporters

This is the reason why – focusing on dairy and poultry trade in China – **Huang et al.** find that even if Chinese food safety standards on residues got stricter under public pressure, they did not significantly affect European dairy or poultry’s imports. Tariff conditions seem to have more of an impact on Chinese trade partners than non-tariff measures. This could explain the prominent position of New Zealand in dairy trade and the growing trends of Chile poultry exports. These two countries benefit from a recent Free Trade Agreement with China. However, it is important to remember that the EU suffered a ban from 2002 onwards on its poultry exports to China due to bird flue outbreaks which ban as we will see in section 3 has often more impact on trade than SPS measures.

The same is found by **Burnvisq et al.** whose results suggest that NTMs have affected the competitiveness of Brazilian poultry meat exports relatively more than for the EU countries’ poultry meat exports. They also find out that public policies providing information on the quality and conformity through labeling were effective in stimulating exports of poultry meat.

But this “rule of thumb” can sometimes be misleading. First, if producers from “stringent” countries are in better position to face the implementation of a stricter rule, tightening standards can have a positive impact on trade from countries initially suffering from “bad reputation”. This is shown by **Honda et al.** studying the effect of Japan’s various food safety threats and quarantine regulations on poultry meat imports. They pay particular attention to food safety standards on residues of pesticides and residues of veterinary medicine. They find that increasing the stringency of the standard leads to a diversion of trade from countries with prior “good reputation” (France, US or Japan) to countries with prior “bad reputation” (China, Thailand or China). This shift would be explained by a demand-promoting effect of the compliance with more stringent standards for “low-cost” countries.

Second, the lack of transparency and the cumbersomeness of conformity assessment procedures can weigh also on countries with strict rules such as the ones prevailing in the EU. This is the conclusion reached by **Mraz, Pokrivcak and van Berkum** analyzing dairy trade between the EU and Russia. EU exports of dairy products to Russia face a complicated patchwork of government regulations. Inspections and audits under Russian authority are required to get a necessary Russian export license. EU exporters consider conformity assessment procedures as being too detailed, complicated, inconsistent and restrictive. However, the Russian market is still considered attractive. Compared to its major competitors (Belarus, Ukraine, the US, New Zealand, China, Argentina and Brazil) Russian NTMs affect

the relative competitiveness of the EU less than the US but more than New Zealand. Compared to Belarus and Ukraine it is the difference in tariff that has more importance for the EU. The former countries benefit from trade preferences in the Russian market.

But the imposition of a sanitary measure can also be totally neutral. **Lema et al.**, analyze the effect of SPS measures (such as mandatory cold treatment) and conclude that the patterns in lemon's trade are better explained by the exchange rate in the case of Argentina and by transportation costs regarding Spain.

Technical standards are less often studied in the case of agrifood products in that they do not directly refer to food safety. Two cases show that changing technical standards can lead to a new trade equilibrium that affects exporters. As technical standards are more specific, they will be more detailed in what follows compared to the above SPS measures. Consequently, their specificity implies that global trade is less affected by these measures, but induces changing in the composition of trade and gets more onto exporter's strategies than public policies at least for the EU.

In 2008, Canada imposed minimum limits on the percentage of casein coming from fluid milk and maximum limits on the whey protein to casein ratio which cannot exceed that of milk. The new standards were primarily motivated by the increasing use of dairy protein isolate by *domestic* cheese manufacturers. Canadian cheese manufacturing is dominated by three firms which purchase milk from domestic producers whose output is constrained by production quotas which are a key element in Canada's supply management policy. Imports of dairy products are constrained by Tariff-Rate-Quotas (TRQs) featuring prohibitive over-quota tariffs. Cheese manufacturers were using imported milk protein concentrates because it was cheap and because it allowed them to deal with seasonal variations in milk production. Two-thirds of the TRQ's minimum access commitment (MAC) for cheese imports is allocated to the EU. Furthermore, import licenses have "use it or lose it" clauses that insure that the MAC is filled. Thus, the EU does not need to worry about being displaced, but the standards can bring about changes in the types of cheese being imported and in the sources within the EU. Stricter regulations may not bind on any firm and hence will have no effect or they can bind on all of the firms. Alternatively, they can bind on domestic firms and not on foreign ones or vice versa. Given that the compositional standards vary across types of cheeses, some standards may bind while others may not. However, because importers can alter their import mix in filling their import licenses, imports of cheeses for which the standards do not bind will be affected. Ironically, the quantity of domestic milk used in cheese manufacturing need not increase in response to the imposition of the compositional standards.

Felt et al. show that for the EU, what matters is what happens to the unit-value of imports. The latter can increase or decrease depending on whether changes in the import mix favours more or less expensive cheeses and unit values tend to be higher than what they would have been had the compositional standards not been adopted.

Dairy production in the US is governed by the Grade A Pasteurized Milk Ordinance (PMO). The PMO sets minimum standards for the production and transportation of Grade A milk from the farm to the dairy plant. Milk that does not satisfy Grade A standards, but meets less stringent standards, is classified as Grade B (manufacturing grade milk). Grade B milk can be used only in the production of cheese, butter and nonfat dry milk. The US imposes high tariffs on many dairy commodities but low tariffs are applied to some products. Non-tariff measures may have a significant effect on trade in commodities attracting low tariffs. In this respect, US

tariffs on many fresh milk products are around 1% and US tariffs on milk protein concentrate and whey protein concentrate are, respectively, 0.1% and 8.5%. These products must also meet stringent domestic standards. Specifically, US fresh milk products can be made only from Grade A-certified fluid milk and it is costly for foreign producers to gain Grade A certification. US regulations also limit the use of dairy concentrates in fresh milk products.

A proposed rule change would, under certain conditions, allow the optional use of any safe and suitable milk-derived ingredient to contribute to the non-fat solids component of yogurt, and permit reconstituted forms of milk as a basic ingredient in yogurt manufacturing. Essentially, these changes would allow yogurt producers to substitute milk protein concentrate and whey protein concentrate for US fresh milk that meets Grade A standards. The legislation change would affect trade by opening a pathway for foreign dairy products to be used in yogurt manufacturing allowing foreign producers to partially circumvent Grade A standards for fresh milk products.

Winchester et al. argue that proposed changes in fresh milk standards will lead to large proportional changes in US imports of concentrated milk products, but should not lead to large changes in global dairy production. Proposed changes in US regulations will facilitate only a small increase in the use of concentrated milk products in the production of fresh milk products. The regulatory change would bring about a substantial decrease in the production of US fresh milk products which would be displaced by increases in whey product imports of $37 millions and $32 millions from, respectively, the rest of the World and the EU. The combined effect of the US Grade A standard and regulations governing production of fresh milk products have a small influence on dairy trade relative to tariffs and TRQs, which are significant for some products.

Other types of non tariff measures analyzed in the case-studies are **quantitative trade restrictions** which are often used to protect markets from sanitary infestations. Trade bans, regionalisation, or quarantine measures are analyzed within these case studies. The analyses show that the competitive position of an exporting country is always affected by a quantitative restriction. The introduction of import bans is globally welfare decreasing and leads to important cases of trade diversion. Then it is always profitable for any country to call for more trade openness at least using the principle of regionalisation. **Beghin and Melatos** econometrically estimate a tariff equivalent above 113%[1] associated with three large changes in quarantine regimes for Australian pigmeat imports by major trade partner (Canada, Denmark, and USA). The quarantine regimes have had a strong effect on trade and welfare and the removal of the barrier induces an increase in consumption of imported pigmeat of approximately 5.26kg per person or 104.66 thousand metric tons (based on a calibration exercise using 2003 data). The estimated impact on the domestic pigmeat market is limited but with the caveat that the specification of the random utility model they use potentially constrains these effects. Export revenues to Australia expand by AU$245 million, AU$109 million, and AU$125 million for Canadian, Danish, and U.S. pigmeat respectively. From the evidence gathered in this study, early exporters benefited from subsequent trade liberalization intended to free other exporters' trade. The reforms created complementarity effects rather than substitution effects. Canada benefited from the reforms of 1998 and 2004, and Denmark benefited from the 2004 reforms, which also enabled U.S. producers to export to Australia. This is contrary to what one might have expected given the potential trade diversion involved with a sequence of bilateral trade liberalizations.

[1] Expressed as a percent of average real border prices averaged over the period 1998-2009 in 2005 prices.

Wieck et al. analyze country welfare effects of changes in Russia and Japan avian influenza (AI) regulations (import ban and principle of regionalization) on Brazil, China, France, Germany, the Netherlands and United States' imports of cooked and uncooked poultry meat. For uncooked meat, a ban is shown to have a negative trade impact whereas the principle of regionalization is trade enhancing. For cooked meat, the results are inconclusive: the impact estimates are either statistically insignificant, or have unexpected signs. That might be linked to fact that the International Organization of Epizooties (IOE) recommendations do not justify bans for cooked meat so that only a few cases can be found in the sample.

Trade diversion effects among countries depend very much on the infection status of the involved countries. Three out of four high pathogenic AI (HPAI) countries suffer welfare losses due to reduced export opportunities. These countries see shrinking production and increasing domestic sales (e.g. Germany, Russia), or businesses react by selling them to other HPAI countries (e.g. Germany to China, or China to Russia). The increased pressure on HPAI domestic markets diverts trade from other sources (e.g. Brazil). Domestic producers lose and consumers win because of lower prices on domestic markets in all HPAI countries. These welfare gains need to offset welfare losses from reduced imports but for the export oriented AI-free countries, these potential welfare gains cannot be realized. Increased domestic sales in Germany and Russia at lower marginal production costs replace imports from the Netherlands which found new destinations (US, Japan, ROW) but overall, production in the Netherlands decreased.

Similar effects are obtained by **Honda et al.** in the case of Japan. The effect of the bans for the AI infected countries varies across country sources. The bans for China, Thailand and the US see a decrease in their market shares, whereas shares for Brazil and the domestic industry increased. France is overall not affected perhaps because the major producing regions in France are not under the coverage of the ban due to the regional treatment.

Foot-and-Mouth Disease (FMD)-*free* countries banned imports of fresh, chilled or frozen beef from countries where this disease is endemic or sporadic. The US, Canada and Japan have followed the "*zero risk criteria*" while the EU has followed the *commodity-based* approach, allowing imports of boneless beef (chilled and frozen) from countries with a FMD presence. Regarding Bovine Spongiform Encephalopathy (BSE), many countries followed a "*zero risk criteria*", and placed a ban on European beef imports which today have moved to a "*minimal risk criteria*" based on science from countries classified as "BSE controlled risk" by the IOE. **Tapia et al.** show that these differences somehow explain that the two bans impact Argentina and Germany differently. FMD regulations impact negatively Argentina and positively Germany while BSE measures negatively impact trade from both countries.

Because of pest concerns, particularly fruit flies, the U.S. bans imports of fresh lemons from Argentina. However, there are ongoing negotiations between the two countries to develop a systems approach with several NTMs to minimize pest risks and allow imports under specified conditions. If the U.S. removes the ban on Argentine lemons, it will affect the supply of lemons to the EU and the rest of the world. Three options for replacing the U.S. ban on Argentine lemons exist: (1) entry is allowed without geographic or seasonal restrictions; (2) entry is allowed but shipments to citrus-producing states are prohibited; and (3) entry is allowed only to non citrus-producing states during the lemon production off-season.

Orden and al. simulate the three options. When Argentine lemons are allowed entry without restrictions, the US imports 12.5 million kg of Argentine lemons. Imports from Mexico, Chile, the EU, and other lemon suppliers to the U.S. are displaced and domestic US production declines. The movement of some Argentine lemons from the EU and the rest of the world creates market gaps partly supplied by the lemons displaced from the U.S., partly by higher imports from the other excess suppliers, and partly by higher lemon production in the EU and the rest of the world. But these additional supplies will not be enough to offset the outflow of Argentine lemons. Thus, prices of lemons increase and demand declines. Net lemon exports of Argentina increase, net lemon exports of Mexico, Chile, and the other suppliers to the US decline. Net lemon exports of the other suppliers in the EU market and lemon production in the rest of the world slightly increase as they are not directly affected, but are affected only indirectly, by the entry of Argentine lemons into the U.S.
Regional restriction leads to US imports of 9.0 million kg of Argentine lemons. In region 2 where imports from Argentina occur all year, the effects in each season are similar to those in the first scenario. However, in region 1, where imports from Argentina are still prohibited, the prices of US produced and imports from the traditional suppliers falling less than under scenario 1 and consumption in region 1 of lemons from these sources rises rather than falls.
Finally, entry with these regional and season restrictions leads to US imports of 6.1 million kg of Argentine lemons. The regional effect observed in scenario 2 persists in scenario 3 for season 2, but different effects are now induced in season 1 for both US regions, the EU and the rest of the world. In season 1, a decline in the aggregate supply from the U.S. and traditional exporters to the US market dominates the substitution effects of producers and consumers, with the result that prices increase rather than falling and consumption falls rather than increasing in both US regions, the EU and the rest of the world. There is a similar effect of opposite direction from an expanded aggregate supply of lemons from Argentina which increases consumption of lemons from this source in the EU and rest of the world in season 1.

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