
Development Prospects for EU Trade in Agri-food Products with Japan and Vietnam

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Abstract:

Purpose: This study aims to the development prospects for trade in agri-food products of EU countries under regional trade agreements with Japan and Vietnam.

Design/Methodology/Approach: The empirical part of the research uses secondary materials from international, public databases, including UNCTAD, WITS. The ex-ante analysis of foreign trade in agri-food products of EU countries with Japan and Vietnam was performed using the SMART partial equilibrium model.

Findings: Based on the conducted research, it can be concluded that the EU agri-food sector shows a stronger competitive position on the market Japan and Vietnam in case of products with a higher processing degree rather than agricultural raw materials. Implementation of selected preferential trade agreements can cause trade creation and trade diversion effects in bilateral relations between the EU and Japan and Vietnam of the agreements at the expense of limiting intra-EU trade.

Practical Implications: The results can then be used as a basis for formulating conclusions on the possible transformation of the geographical distribution and product mix of the EU agri-food trade in the context of increasing regionalism.

Originality/Value: The potential consequences of the implementation of the EU-Japan and EU-Vietnam trade agreements for agri-food products will be identified, assuming a reduction of tariff and non-tariff barriers.

Keywords: International trade, preferential trade agreements, international competitiveness, partial equilibrium models, agri-food sector.

JEL codes: F10, F15, F17, F53.

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1. Introduction

Foreign trade plays a major role in the national economy. It enables matching the structure of national income with that of production and consumption needs at country level, so as to make the former independent from the national resource and production mix (Guzek, 2006). This is referred to as the transformative function of trade, and is accompanied by the redistributive function which makes it possible to change the proportion in which national income is divided into accumulation and consumption (Bożyk *et al.*, 2002).

International trade has an impact not only on the structure but also on the growth ratio of national income. Due to the multiplier effect, an increase in exports may become an important driver of economic growth in a market economy. This is because it can stimulate effective demand and contribute to improvements in the economic situation, even if consumption and investments grow at a slow rate (Pawlak, 2013). In the market economy, international trade triggers the creation of new jobs and drives economic growth, and therefore plays an active role, unlike in the command-and-quota system where it is mostly a passive process which essentially boils down to the transformative function (Misala, 2005). Also, international trade can have an impact on economic growth through improvements in management efficiency (Guzek, 2006).

Benefits derived from international trade are both macro- and microeconomic. Their simplest definition is the difference in the national income of a country or a group of countries between an open economy and a scenario without foreign trade (Rymarczyk, 2006). Zielińska-Głębocka (1998) provides a more detailed description of benefits from participating to international trade, and gives the following examples: increase in the number and diversity of available goods, and a decline in prices of products offered resulting from the development of international specialization in accordance with the principle of comparative costs.

Embarking on a product specialization path is the basic reason (and condition) for the development of international trade. This is particularly noticeable in the agri-food sector where the availability of specific productive inputs (especially including land), together with natural and climate conditions, is more decisive for what a country specializes in than in other sectors (Pawlak *et al.*, 2021; Jabkowski, 2023). The importance of the problem of export specialization and, consequently, competitiveness in the agri-food trade is evidenced by a number of studies undertaken, including, Pawlak and Jabkowski (2018); Szczepaniak (2018); Jankowska (2021); Moral-Pajares *et al.* (2024); Ambroziak *et al.* (2024); Jabkowski and Kupsik (2024); Kupsik and Pawlak (2024); Nowak and Zakrzewska (2024).

Changes affecting international trade are driven by a number of factors which can be either internal or external to the participant countries. Due to progress in economic integration, the latter have become increasingly important. They depend on the

institutional framework and mostly consist in the establishment of new trade agreements or in deepening the collaboration in existing preferential trading areas. This, however, is hampered by problems in reaching a consensus between WTO members as to the liberalization of international trade. There have been clear difficulties in conducting multilateral negotiations since the 2001 Doha Development Round. The 153 participant countries failed to reach a compromise acceptable by all stakeholders.

As a consequence, the agreement resulting from the Round was not reached by 2005, as initially planned, nor even within the next 15 years. Thus, regional trade agreements have become an alternative to multilateralism. Their role in the development of regional and global trade is especially valued in the context of the agricultural sector which is a particularly difficult negotiating area for the WTO and often leads to economic conflicts at the international level (Pawlak, 2013).

According to a study by Grant and Lambert (2008), the establishment of preferential trade areas such as the European Union (EU), the North American Free Trade Agreement (NAFTA), the Southern Common Market (MERCOSUR), the Association of Southeast Asian Nations (ASEAN), the Australia-New Zealand Closer Economic Relations (CER), and the Andean Community resulted in a ca. 72% increase in agricultural trade and a 27% increase in industrial trade between their member states.

According to 2023 WTO data, there are ca. 350 regional trade agreements (RTA) around the globe, with many more pending negotiation or ratification. For comparison, there were 310 of them in 2020, which testifies to a rapid, more than 10-percent growth in the number of active RTAs (WTO, 2021). As an active participant, the European Union enters into RTAs to strengthen cooperation not only with highly developed countries (the US, Japan, Canada) but also with those believed to be the “driving force of the global economy” (Vietnam, India, MERCOSUR) (Bułkowska, 2016).

Currently, the European Union is among the biggest players of the global agricultural market. By generating ca. one third of global exports and imports, the EU is the world's leading trader, and its gross domestic product accounts for nearly 25% of the global GDP (Jabkowski *et al.*, 2018). Its trade and other relationships with trading partners shape both the current and the future balance of global trade in agri-food products. Improving, or at least maintaining a stable competitive position of EU countries in the global agricultural market is a challenge to the Union's economic policy, especially in view of the growing international importance of some developing countries, primarily including BRICS (Brazil, Russia, India, China, South Africa). It seems that the regional and interregional trade agreements which are pending negotiation or ratification (such as TTIP, CETA or the EU-MERCOSUR, EU-Japan and EU-Vietnam free trade areas) might become a way for EU countries to increase their market shares and reinforce their competitive edge in

the global market for agri-food products.

Also, the “Europe 2020” strategy considers the EU trade policy as a fundamental part of the European Union’s economic policy which is designed to create new jobs in the Single European Market (SEM) and stimulate economic growth (Pera, 2013; Bułkowska, 2016). In this context, ex-ante simulation becomes increasingly important as it enables extending the existing knowledge of international trade and estimating the consequences (on a per-sector basis) of implementing agreements pending negotiation. This approach is consistent with the theory of international trade, economic integration and international competitiveness, and adds to the discussion on interdependencies between multilateralism and regionalism (Bhagwati, 1992; Ethier 1998, Lawrence, 2000; De Lombaerde, 2007; Benini and Plummer, 2008; Telò, 2016; Takarada *et al.*, 2020).

Trade liberalization is often discussed both in international institutions and in academic centers. However, the literature on the subject still lacks a comprehensive analysis of potential effects of preferential agri-food trade agreements (whether ratified or pending negotiation)—one which would take account of key trade partners at country or regional group level, and assume a reduction not only in tariff barriers but also in non-tariff trade measures. In view of the above, the following fundamental research question may be asked with respect to the EU:

- What are the development outlooks for EU countries’ agri-food trade in the light of liberalization of customs tariffs and a reduction in non-tariff trade measures under a preferential trade agreement with Japan and Vietnam?

The article which endeavors to answer that question is of a cognitive, methodological and utilitarian nature. The cognitive aspect boils down to specifying the potential consequences of implementing selected preferential agri-food trade agreements (EU-Japan, EU-Vietnam). These findings can be then used as a basis for formulating conclusions on the possible transformation of the geographic distribution and product mix of the EU’s agri-food trade in a context of progressing regionalism.

The cognitive goal is strictly related to the applicative objective which consists in enabling the formulation of recommendations on how to reallocate the resources and how to refocus the production and export specialization of the EU’s agri-food sector. The methodological value of this research is related to employing the SMART partial equilibrium model with a database aligned to meet the needs of analyses involved in it. Such a methodological approach will enable comparing the potential changes in the EU’s total trade and bilateral trade volumes under the assumption of partial equilibrium, i.e., in a simulation where the agri-food market is isolated from other sectors of the economy. General equilibrium models view the economy as a whole and take account of input and output flows, but are less detailed than partial equilibrium studies (Orłowski, 2000), therefore, the SMART partial equilibrium

model is used in measuring the effects of removing international trade barriers.

2. Literature Review

EU–Japan:

A number of studies on the effects of implementing a free trade zone between the EU and Japan have been contracted by the European Commission. They have appointed dedicated international research teams to estimate the impacts of a free trade agreement using different approaches and models. The most common models are the GTAP (Ecorys, (2009); Francois *et al.*, (2011); Pelkmans, (2014); Felbermayr *et al.*, (2017); Kawasaki, (2017); Przeździecka *et al.*, (2019), followed by the Copenhagen Economic and Trade Model (CETM, Sunesen *et al.*, 2009), the Eaton–Kortum model (Alvstam *et al.*, 2019; Felbermayr *et al.*, 2019), and the ifo Trade Model (Felbermayr *et al.*, 2017).

Most scenarios assume a 100% elimination of customs barriers, whereas non-tariff barriers are reduced to an extent varying in the range of 2.5% to 20% or 50%. Francois *et al.* (2011) assumed several scenarios for reducing non-tariff barriers, and used a ratio of 10/20/50% for Japan and 3.3/6.6/16.5% for the EU. The simulation does not provide clear findings as to the impact on GDP. Some authors forecast a decline while others an increase in the European Union's gross domestic product. In turn, they agree that Japan would witness growth in GDP at a rate of 0.2% to 1%. As demonstrated by the simulations in the agri-food sector, the value of processed food exports from the EU to Japan could double whereas that of EU meat imported to Japan could drop (Ecorys, 2009; Francois *et al.*, 2011; European Commission, 2012).

EU–Vietnam:

Only a few researchers attempted to estimate the potential effects of implementing a free trade zone between the EU and Vietnam. Some analysts estimated its effects for national-level economies, e.g., for the UK (Baker and Vanzetti, 2019) and Bulgaria (Hadjinikolov and Zhelev, 2018) or for specific sectors, such as pharmaceuticals (Huong Thanh Vu, 2016) or the apparel industry (Sheng Lu, 2018). As shown by the review of research carried out so far, GTAP seems to be the most popular model. The authors also rely on GEMPACK (ECORYS, 2008), LINKAGE, GIDD-related approaches (Maliszewska *et al.*, 2019), ÖFSE Global Trade Model (Grumiller *et al.*, 2018) and SMART (Hadjinikolov and Zhelev, 2018).

Nearly all researchers viewed the elimination of tariff barriers as a natural scenario. Only Maliszewska *et al.* (2019) opted for a more comprehensive variant, and enhanced their research assumptions with a reduction in non-tariff barriers. According to findings from these analyses, the EU's and Vietnamese GDP could increase by 0.02–0.20% and 2–15%, respectively. Also, Vietnamese exports to the EU are expected to grow by 10–30%. In the agricultural sector, the greatest growth rates are most likely to be recorded for wheat and tobacco exports from Bulgaria to

Vietnam (the results are shown for Bulgaria whose third-country duty rates are the same as those applied by other EU countries because the Common Customs Tariff is in force).

3. Methodology

The main source of materials for empirical analyses was statistical data from public databases kept by institutions and organizations such as the World Integrated Trade Solution (WITS), the United Nations Conference on Trade and Development (UNCTAD), the Food and Agriculture Organization (FAO) of the United Nations, the International Trade Center (ITC), and the World Trade Organization (WTO).

The ex-ante analysis of EU international trade in agri-food products with Japan and Vietnam was carried out using the SMART partial equilibrium model based on the Global Simulation Model (GSIM). Partial equilibrium models describe a problem or market in isolation from the rest of the economy. While this enables a detailed study, it also gives rise to concern as to the generalization of results (Orłowski, 2000). The advantages of these models include the ability to take account of links between agricultural and trade policy instruments, on the one side, and particular markets, on the other.

Also, they make it easy to interpret the detailed outcomes. On the other hand, the literature often criticizes them for their inability to clearly assess whether the development of the agri-food sector has an impact on the remaining part of the economy (Hamulczuk, 2008). The assumption behind research based on partial equilibrium models is that all variables not related to the market concerned are invariant (examples include the prices of substitute and complementary goods). For comparison, a general equilibrium is a condition of the economy where all markets find themselves in equilibrium with one another while also being in internal equilibrium (Dąbrowski, 2009). The difference between Computable General Equilibrium (CGE) and Partial Equilibrium Models (PEM) models is that the former take account of equilibrium at the global market while the latter at the sector level.

The SMART partial equilibrium model is designed to assess the consequences of changes in the trade policy. In this study, it was used in estimating the impacts of changes in duty rates and in non-tariff barriers in markets for selected products. The SMART model is underpinned by the Armington assumption, which means that each product exists in several varieties depending on its production place (country). Therefore, product varieties are similar goods rather than identical, perfect substitutes. As a consequence, there is constant elasticity of substitution between the varieties of a specific product in trade relationships between countries (Poczta-Wajda and Sapa, 2017).

The assumptions regarding reduction of duty rates and tariff equivalents of non-tariff barriers under each trade agreement were based on the existing results of

negotiations or—in the absence of such arrangements—on the most likely scenario. The identified liberalization scenario for the preferential trade agreement between the EU and Japan assumes a 100% elimination of duty tariffs and a 20% reduction in non-tariff equivalents. The respective ratios for the EU–Vietnam agreement are 100% and 50%. The SMART model was used to estimate the trade creation and shift effects caused by the assumed changes in the trade policy. Trade volumes were retrieved from the UN Comtrade Database and WITS/UNCTAD. Elasticity ratios were used as exogenous parameters required for the simulation.

As suggested by SMART, the price elasticity of import demand and the price elasticity of export supply were set at the level of 0.5 and 99, respectively. Initially in the model, the elasticity of import substitution was set at 1.5, but was then increased to 2 because the EU has a far greater capacity to influence global agri-food prices than a “small” country. Tariff equivalents of non-tariff barriers were retrieved from the WITS-TRAINS database.

4. Research Results and Discussion

4.1 Trade Agreements EU–Japan:

According to the simulation based on the SMART model, the greatest positive changes can be experienced in imports of beef products, wheat and milk product from Japan to the SEM. Indeed, these imports may double, but only beef products—which account for more than 4% in the import mix—can have a true impact on total imports from Japan. The following play an important role in Japanese imports to the EU: food products not elsewhere classified; and beverages and tobacco products, with a 49% and 21% share in agri-food imports, respectively (Table 1).

Changes in their volumes are estimated at the level of 10% to 17%. Attention should also be paid to vegetable oils and fats which account for 15% of total imports from Japan, and face high non-tariff barriers. The estimated increase in imports of that product group from Japan to the EU is barely 20%, because in accordance with what is assumed in the simulation there is only a 20% reduction in non-tariff measures used in bilateral trade covered by that agreement.

In EU exports to Japan, a key role is played by beverages and tobacco products (37%), food products not elsewhere classified (24%), and meat products not elsewhere classified (21%, including pork, meat and edible offal, animal oils and fats, see Table 94). Following the implementation of the agreement, these exports to the Japanese market could increase by 13% (in the case of the first product group) and by 6% (for the other two product groups). The greatest growth in bilateral exports would probably be experienced in the case of products facing the highest customs tariffs, such as milk products (148%) and cereal grains not elsewhere classified (maize, barley, rye, oat: 78%) (Table 2).

The assumption behind the EU–Japan trade liberalization scenario consists in a total elimination of tariff barriers and a 20% reduction in non-tariff barriers in agri-food trade. This can lead to a ca. 20% increase in both imports and exports, which means that both parties would derive similar benefits from implementing a free trade area between the EU and Japan.

Table 1. Value and structure of imports, trade barriers and simulated growth in Japanese imports to the EU following the elimination of customs tariffs and a 20% reduction in non-tariff equivalents.

Specification	Value of Japanese imports to the EU		Trade barriers		100% reduction of customs barriers and 20% reduction in non-tariff measures			
	(USD thousand)	share in agri-food imports (%)	tariff measures	non-tariff measures	total trade effect	creation effect	diversion effects	change (%)
					(USD thousand)			
Rice	4.6	0.00	3.66	3.66	0.3	0.1	0.2	6.06
Wheat	7.2	0.00	47.29	0.00	7.7	1.1	6.5	106.89
Cereal grains not elsewhere classified	107.2	0.02	22.92	0.00	45.7	0.0	45.7	42.63
Vegetables, fruit, nuts	9822.6	2.03	2.15	5.25	437.1	137.7	299.4	4.45
Oilseeds	2757.4	0.57	5.16	0.00	217.1	0.0	217.1	7.87
Sugar raw materials	0.2	0.00	0.00	0.00	0.0	0.0	0.0	0.00
Vegetable fibers	268.6	0.06	9.72	0.00	44.3	12.2	32.1	16.49
Crops not elsewhere classified	26108.4	5.39	2.99	27.46	2730.4	803.3	1927.1	10.46
Cattle, ovine, caprine and equine animals	4611.3	0.95	3.08	0.00	207.6	67.2	140.5	4.50
Animal products not elsewhere classified	3094.9	0.64	3.79	0.62	192.6	59.5	133.1	6.22
Beef products	20502.3	4.23	60.31	13.26	27613.5	3711.6	23901.9	134.68
Meat products not elsewhere classified	786.9	0.16	36.96	12.00	574.8	103.0	471.9	73.05
Vegetable oils and fats	71321.8	14.72	5.54	69.26	15505.8	4075.5	11430.3	21.74
Milk products	662.2	0.14	47.52	12.44	674.1	103.5	570.6	101.80
Processed rice	3364.0	0.69	22.14	0.00	1354.4	303.3	1051.1	40.26
Sugar	4524.1	0.93	23.69	4.08	2048.5	441.8	1606.7	45.28
Food products not elsewhere classified	235340.2	48.58	9.16	6.69	40574.8	11158.4	29416.5	17.24
Beverages and tobacco products	101197.5	20.89	3.71	12.83	10116.1	3027.3	7088.8	10.00
Total	484481.3	100.0	x	x	102344.8	24005.5	78339.3	21.12

Source: Own compilation based on WITS data and own SMART-based simulations.

Table 2. Value and structure of exports, trade barriers and simulated growth in EU exports to Japan following the elimination of customs tariffs and a 20% reduction in non-tariff equivalents.

Specification	Value of EU exports to Japan		Trade barriers		100% reduction of customs barriers and 20% reduction in non-tariff measures			
	(USD thousand)	share in agri-food exports (%)	tariff measures*	non-tariff measures	total trade effect	creation effect	diversion effects	change (%)
					(USD thousand)			

Rice	x	x	x	x	x	x	x	x
Wheat	9434.6	0.11	0.00	0.00	0.0	0.0	0.0	0.00
Cereal grains not elsewhere classified	40531.8	0.48	37.50	0.00	31712.2	5580.5	26131.7	78.24
Vegetables, fruit, nuts	95119.1	1.13	10.50	5.74	15961.8	4510.0	11451.9	16.78
Oilseeds	3579.0	0.04	7.80	0.00	455.5	132.6	323.0	12.73
Sugar raw materials	2957.8	0.00	26.00	0.00	x	x	x	x
Vegetable fibers	14788.4	0.18	10.50	0.00	2293.4	732.8	1560.6	15.51
Crops not elsewhere classified	147184.8	1.75	0.00	17.29	5632.0	1887.0	3745.1	3.83
Cattle, ovine, caprine and equine animals	35917.3	0.43	13.20	0.00	5942.8	2066.0	3876.7	16.55
Animal products not elsewhere classified	96895.1	1.15	3.80	0.00	3553.8	1411.1	2142.7	3.67
Beef products	52770.3	0.63	13.20	0.60	11314.3	3008.8	8305.4	21.44
Meat products not elsewhere classified	1756143.2	20.84	4.30	0.25	102418.2	41812.9	60605.2	5.83
Vegetable oils and fats	373453.6	4.43	0.80	0.06	4428.0	1848.8	2579.2	1.19
Milk products	636512.8	7.55	95.10	7.89	941670.6	152073.3	789597.3	147.94
Processed rice	414.7	0.00	0.00	112.52	84.4	22.4	62.0	20.34
Sugar	45437.1	0.54	26.00	3.30	18977.0	4578.9	14398.1	41.77
Food products not elsewhere classified	1997390.3	23.70	3.90	1.38	109893.3	38045.5	71847.8	5.50
Beverages and tobacco products	3119821.9	37.02	15.00	5.00	393117.1	207988.1	185128.9	12.60
Total	8428351.8	100.0	x	x	1647454.2	465698.6	1181755.6	19.55

Note: *Data retrieved from WTO Tariff Profiles. Source: own compilation based on WITS data and own SMART-based simulations.

Source: Own study.

4.2 Trade Agreements EU–Vietnam

Trade liberalization between the European Union and Vietnam could be most beneficial to Vietnamese producers of beef, rice, milk products and sugar raw materials. Indeed, the increase in imports could be 156% for beef and over 92% for other products (Table 3). However, these commodities have a negligible (near-zero) share in total agri-food imports from Vietnam to the EU, and therefore will not significantly contribute to total trade volume between the EU and Vietnam.

Conversely, an important role in imports from Vietnam is played by food products not elsewhere classified (i.e., vegetable, fruit and nut preparations, cocoa preparations and meat preparations, 42%), crops not elsewhere classified (i.e. live plants, flowers, seedlings and seeds, plants used in the production of beverages, 33%) and vegetables, fruit and nuts (22%). A 25% increase in imports is only possible for the product group which represents the greatest value. In other groups, due to small customs barriers being applied, imports will grow by barely 0 to 4%. The most significant changes are those affecting trade in beverages and tobacco products which account for 14% of total EU exports to Vietnam. In their case, the

growth rate can reach as much as 282%, and thus may have a strong impact on total exports.

Vietnam has a protectionist trade policy in place and imposes duties on all products imported from abroad. Due to such extensive customs protection measures, EU agri-food exports to Vietnam could grow at a faster rate (61%) than imports (13%) after trade liberalization (Table 3 and 4). It follows from the simulation that bilateral trade in agri-food products between the EU and Vietnam would be affected by the trade creation effect while also experiencing some trade diversion effects. The latter may prove to be much more powerful than the former.

Table 3. Value and structure of imports. Trade barriers and simulated growth in Vietnamese imports to the EU following the elimination of customs tariffs and a 50% reduction in non-tariff equivalents.

Specification	Value of Vietnamese imports to the EU		Trade barriers		100% reduction of customs barriers and 50% reduction in non-tariff measures			
	(USD thousand)	share in agri-food imports (%)	tariff measures	non-tariff measures	total trade effect (USD thousand)	creation effect	diversion effects	change (%)
Rice	13.2	0.00	47.29	0.00	14.1	2.1	12.0	106.69
Wheat	x	x	x	x	x	x	x	x
Cereal grains not elsewhere classified	121.4	0.00	3.10	0.00	5.6	0.0	5.6	4.63
Vegetables, fruit, nuts	894355.4	22.41	0.54	3.45	2670.3	860.1	1810.1	0.30
Oilseeds	488.0	0.01	0.00	0.00	0.0	0.0	0.0	0.00
Sugar raw materials	36.2	0.00	85.76	0.00	33.4	8.4	25.1	92.23
Vegetable fibers	453.1	0.01	0.00	3.65	13.6	4.4	9.2	3.00
Crops not elsewhere classified	1319868.7	33.07	0.03	5.47	52744.9	18677.4	34067.5	4.00
Cattle, ovine, caprine and equine animals	x	x	x	x	x	x	x	x
Animal products not elsewhere classified	28354.2	0.71	2.48	32.94	7350.2	1890.3	5460.0	25.92
Beef products	166.7	0.00	60.24	10.49	259.3	32.2	227.1	155.52
Meat products not elsewhere classified	10278.8	0.26	6.54	10.03	1953.1	527.1	1426.0	19.00
Vegetable oils and fats	17924.9	0.45	6.30	38.41	7174.0	1607.1	5566.9	40.02
Milk products	2.7	0.00	40.32	8.22	2.6	0.4	2.2	95.31
Processed rice	31933.5	0.80	17.25	14.13	12715.8	2925.2	9790.6	39.82
Sugar	1870.7	0.05	6.89	3.21	237.0	68.0	169.0	12.67
Food products not elsewhere classified	1669925.4	41.85	13.73	5.02	425151.4	112263.9	312887.6	25.46
Beverages and tobacco products	14935.5	0.37	5.59	37.12	5431.5	1253.3	4178.2	36.37
Total	3990728.4	100.00	x	x	515756.9	140119.8	375637.0	12.92

Source: Own compilation based on WITS data and own SMART-based simulations.

5. Conclusions, Proposals, Recommendations

The simulated liberalization of bilateral trade between the EU and selected trade partners, which consisted in reducing both tariff and non-tariff barriers, proved that

the agri-food trade shift effect may have a stronger impact on mutual trade relationships between the signatories of preferential trade agreements than the trade creation effect. In the EU–Japan agreement under consideration, the shift effect and the creation effect contribute ca. 72-76% and 24-28%, respectively, to the total trade effect.

Table 4. Value and structure of exports. Trade barriers and simulated growth in EU exports to Vietnam following the elimination of customs tariffs and a 50% reduction in non-tariff equivalents.

Specification	Value of EU exports to Vietnam		Trade barriers		100% reduction of customs barriers and 50% reduction in non-tariff measures			
	(USD thousand)	share in agri-food exports (%)	tariff measures	non-tariff measures	total trade effect	creation effect	diversion effects	change (%)
					(USD thousand)			
Rice	x	x	20.00	x	x	x	x	x
Wheat	25526.6	1.81	5.00	0.00	1908.4	607.8	1300.6	7.48
Cereal grains not elsewhere classified.	5199.3	0.37	3.47	0.47	240.3	75.7	164.5	4.62
Vegetables, fruit, nuts	28891.5	2.05	18.14	4.19	8795.1	2368.2	6426.9	30.44
Oilseeds	280.5	0.02	6.58	0.00	31.5	9.2	22.3	11.23
Sugar raw materials	x	x	6.25	x	x	x	x	x
Vegetable fibers	37044.0	2.63	2.47	0.00	1109.7	363.2	746.6	3.00
Crops not elsewhere classified	58473.3	4.15	11.81	11.72	13774.2	4244.0	9530.2	23.56
Cattle, ovine, caprine and equine animals	1946.8	0.14	2.69	0.00	89.8	28.4	61.5	4.61
Animal products not elsewhere classified	110579.3	7.85	7.31	1.34	9750.3	4058.0	5692.3	8.82
Beef products	41658.2	2.96	10.46	1.34	6266.9	2045.7	4221.2	15.04
Meat products not elsewhere classified	179189.1	12.73	22.31	4.57	29253.6	17636.7	11616.8	16.33
Vegetable oils and fats	14933.4	1.06	9.20	0.84	2444.9	678.8	1766.1	16.37
Milk products	126707.2	9.00	10.70	11.39	23300.8	8308.7	14992.1	18.39
Processed rice	34.1	0.00	40.00	106.52	51.8	6.5	45.3	151.70
Sugar	5339.0	0.38	33.13	3.34	3467.3	667.0	2800.4	64.94
Food products not elsewhere classified	580093.6	41.21	20.14	8.40	212113.2	56210.6	155902.6	36.57
Beverages and tobacco products	191902.0	13.63	50.56	9.14	540525.9	32983.2	507542.7	281.67
Total	1407797.7	100.00	x	x	853123.7	130291.5	722832.2	60.60

Source: Own compilation based on WITS data and own SMART-based simulations.

This is especially pronounced in the EU–Vietnam relationship (to be more precise, in the EU’s exports to Vietnam) where the trade shift effect accounts for more than 84% of the total trade effect. In its relationships with third countries, the EU uses customs tariffs and non-tariff measures which adversely affect the price competitiveness of products originating from these countries in the Single European Market. The removal of bilateral trade restrictions will enable a preferential approach to products originating from Japan and Vietnam, making them more competitive in EU markets. As a consequence, they will crowd out products imported from third countries (other than parties to the trade agreement) and from

other European Union members. This will result in a strong trade shift effect to the benefit of the signatories of agreements under consideration and to the detriment of intra-Community trade and of trade with countries not covered by the agreement.

The greatest advantage of the shift effect over the trade creation effect is likely to be experienced in the case of products subject to high trade barriers. In this scenario, the estimated shift effect and creation effect rates are over 80% and below 20%, respectively, of the total trade effect. It can be noted that in many cases these are products which currently represent a marginal share in bilateral trade, primarily including beef products, milk products and processed rice, as well as oilseeds and wheat imported from Japan and beverages and tobacco products imported from Vietnam.

As regards bilateral trade between the EU and Japan, the liberalization scenario assumed a total removal of tariff barriers and a 20% reduction in non-tariff barriers. Non-tariff measures (such as different kinds of quantitative or tariff quotas) which will remain in force following the establishment of a preferential trade area may prevent the trade shift effect from fully manifesting itself.

As shown by the simulations carried out under general equilibrium assumptions, trade agreements considered in this paper may lead to a situation where imports to the EU grow more than exports from the EU to its trade partner markets. This is consistent with the integration theory which states that greater benefits from the liberalization of bilateral trade are derived by the country who needed to overcome a higher level of trade barriers to access the target market concerned prior to entering into the liberalization agreement.

Japan and Vietnam can experience a stronger stimulus to develop their exports because access barriers the European Union applies to the Single European Market are stronger than those used by its trade partners with respect to their own markets. However, according to the results of simulations carried out in the context of partial equilibrium, exports from the EU will increase more than imports from trade partner markets. This is particularly evident in the EU–Vietnam bilateral relationships where the estimated increase in exports from the EU and in imports to the Single European Market are 60% and 10%, respectively.

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