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The impact of the EU-Ukraine DCFTA on agricultural trade

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About the Project “German-Ukrainian Agricultural Policy Dialogue” (APD)

The German-Ukrainian Agricultural Policy Dialogue provides policy advice to Ukrainian state authorities and business associations on reforming agricultural policy and legislation in accordance with principles of a market economy. In our advisory work, we take into account relevant German as well as international experience and practice (EU, WTO). The project is funded by the German Federal Ministry of Food, Agriculture and Consumer Protection under its Cooperation Program through GFA Consulting Group GmbH.



Disclaimer

This study is an update and expansion of the paper "The Impact of the EU-Ukraine DCFTA on Agricultural Trade: Preliminary Results" prepared by Svitlana Galko, Veronika Movchan and Jorg Radeke in the framework of the APD project in December 2012. The new – updated – research takes into account information about actual import duties commitments embedded in the Association Agreement between the EU and Ukraine.

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EXECUTIVE SUMMARY

Foreign trade in agricultural and food products constitutes an important part of Ukraine's commodity trade. Moreover, its importance is expected to grow in the future given the high and still untapped sector potential and increasing world demand for agriculture and food products.

The European Union, with its high consumption of agriculture products, is already now one of the largest trade partners of Ukraine for agricultural products. However further development of agro-food trade is hampered by a combination of high tariffs and non-tariff measures. For example, applied import duties on agriculture, food and agriculture-related products are higher in the EU than in Ukraine. At the same time, the NTMs are estimated to be higher in Ukraine.

The deep and comprehensive free trade agreement (DCFTA), expected to be signed in November 2013 in Vilnius as an integral part of the Association Agreement between the EU and Ukraine, has the potential to significantly reduce trade barriers thereby opening new opportunities for trade development and increasing the role of Ukraine as a global trade player on the international agricultural markets.

The DCFTA will see many tariffs disappear, whereas the character of tariff reductions will differ: while the EU will eliminate almost all tariffs immediately, it also applies a wider scope of tariff-rate quotas. Ukraine will reduce tariffs more gradually and even preserve non-zero import tariffs for selected products, but will apply tariff rate quotas to just a few product groups.

For NTM, however, the process will focus almost entirely on Ukraine, which will have to approximate in a wide range of areas to EU legislation. This requires significant resources on Ukraine side, although technical and financial support of the EU is expected. Once legislative harmonization is successfully done this should lower NTM trade barriers to an unprecedented level.

It is estimated that due to the EU import tariffs reduction and despite binding tariff rate quotas, Ukraine will be able to export about 20% more of agro-food products with the main contribution by exports of tobacco, cereals, meat and miscellaneous edible products. Oil seeds exports will benefit from export duties elimination, providing gains comparable with the impact of the EU import duties reduction.

Decline in Ukraine's import duties will result in approximately 7% additional imports, mostly due to increased shipments of beverages, vegetable oils and fats, meat, mineral or chemical fertilizers, animal oils and fats, and sugar. Tariff liberalization could also generate new trade flows of products not previously traded by the EU and Ukraine.

Ukraine, as a major agriculture producer with a number of natural and economic comparative advantages should be able to benefit from signing the EU-Ukraine DCFTA. However, this requires that the government sets immediately an adequate policy framework in place. Specifically, the government should put a strong focus of state support to producers on how to meet the relevant EU standards / regulations. Intense information and know-how exchange as well as training and education will be of key importance. To mitigate pressure on domestic producers, temporary state support in form of access to information, advisory services, trainings etc. might be considered by the Ukrainian government to avoid steep further rise of unemployment in rural areas.

In this context the government should make all efforts and put in place corresponding resources to get immediate access to the specific technical assistance programs and other support tools from the EU, particular EU-countries and other international organizations, supporting EU approximation of Ukraine.

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LIST OF ABBREVIATIONS

AA	Association Agreement
ACAA	Agreement on Conformity Assessment and Acceptance of Industrial Products
CIS	Commonwealth of Independent States
DCFTA	Deep and Comprehensive Free Trade Agreement
EU	European Union
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
HS	Harmonized Commodity Description and Coding System
MFN	Most Favoured Nation
NTM	Non-Tariff Measures
SPS	Sanitary and Phyto-Sanitary Measures
TBT	Technical Barriers To Trade
UKTZED	Ukrainian Commodity Classification for Foreign Economic Activity
UNCTAD	United Nations Conference on Trade and Development
WITS	World Integrated Trade Solution
WTO	World Trade Organization

INTRODUCTION

Foreign trade in agricultural and food products constitutes an important part of Ukraine's commodity trade. Moreover, its importance is expected to grow in the future given the high and still untapped sector potential and increasing world demand for agriculture and food products.

The European Union (EU) is one of the largest trade partners of Ukraine for agricultural products. However, unlike in other areas, agro-food trade is still hampered by a combination of high tariffs and non-tariff barriers. It is in this context, that the deep and comprehensive free trade agreement (DCFTA), which has been finalised in late 2011 and was subsequently initialled in mid-2012 as a part of the Association Agreement between Ukraine and the EU, has the potential to significantly reduce trade barriers thereby opening new opportunities for trade development and increasing the role of Ukraine as a global trade player on the international agricultural markets.

Although initialised already, the final signing of the Association Agreement as well as the speed of its ratification from European side will depend upon how EU will assess adherence of Ukraine to basic democratic principles and European values. It is expected that the Association Agreement could be signed in November 2013. While it then would still have to be ratified by the respective European parliaments, the DCFTA could be ratified by the European Council and the Verkhovna Rada and thus be in force before the entire Association Agreement will be ratified.

As with many other large reforms, the DCFTA will pose some risks and cause adjustment costs for those sectors affected by it. While the overall impact is estimated to be positive, the government needs to understand these risks and costs and take the right measures. To assist with this process this paper:

- Provides an understanding of the current trade flows in agriculture and related products between Ukraine and Europe (section 1 of the report),
- Highlights the barriers which currently hamper trade on both side (section 2),
- Investigates how the DCFTA would affect these trade barriers (section 3),
- Estimates what impact this would have on agro-food trade (section 4) as well as
- Provides policy advice on how the Ukrainian government can maximise the benefits and reduce the risks resulting from the DCFTA (section 5).

Thus, the overall objective of this report is to provide a better understanding of how the DCFTA will affect agriculture and related trade and to provide policy recommendations which aim at maximising the benefits of the agreement for both sides. The report is focused on tariff-related issues leaving the in-depth analysis of the impact of changes in non-tariff measures for future studies.

1. AGRICULTURE AND FOOD TRADE BETWEEN UKRAINE AND THE EU

1.1. Trade flows between EU and Ukraine

Trade in agriculture and related goods between Ukraine and the EU has evolved dynamically over the past decade. However, the product types suggest a strong specialisation with Ukraine exporting almost exclusively raw materials and trading them against machinery and equipment and processed food from the EU.

The European Union (EU)¹ is the second largest trading partner of Ukraine after the CIS countries. The share of exports to the EU over the last five years was 24-28% of Ukraine's total merchandise exports, while the share of imports from the EU was 31-37%². Since 2005, overall trade balance with the EU has been negative.

Trade in agriculture and agro-related products³ between the EU and Ukraine has grown rapidly over last decade in nominal terms with only drop in 2009 due to global crisis (Figure 1). According to Eurostat, trade increased by 563%⁴ in 2001-2012 reaching a value of EUR 7.5 bn in 2012 and constituting 20% of overall merchandise trade between Ukraine and the EU.

Moreover, Ukraine has had positive balance in trade in agriculture and agriculture-related products with the EU since 2008 with only 2010 being an exception. In 2012, positive agro-trade balance reached EUR 1.4 bn.

Geographically, Ukraine's trade in agriculture and agriculture-related products concentrates on several EU member states. Seven countries, namely Spain, Poland, Italy, Germany, the Netherlands, France, and Belgium, accounted for 77.9% of overall agro-trade between Ukraine and the EU. Spain, Italy and Poland are the largest importers of Ukrainian products, while Germany, Poland and the Netherlands are the largest exporters of agriculture and agriculture-related products to Ukraine.

¹ In this study we refer to the EU-27

² Source: http://ukrstat.org/uk/operativ/operativ2005/zd/zd_rik/zd_u/gu_u.html

³ In this study we define agriculture and agriculture-related products as products as the SITC codes 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 11, 12, 22, 27, 29, 41, 42, 56, 721, 722, and 727. Thereby we cover agriculture products, fishery products, food industry products, fertilizers, and selected machinery used in agriculture and food industry production

⁴ According to our estimates in euros

Figure 1: Trade in agriculture and agriculture-related products between the EU and Ukraine, 2002-2012



Source: Eurostat (2000-2012)

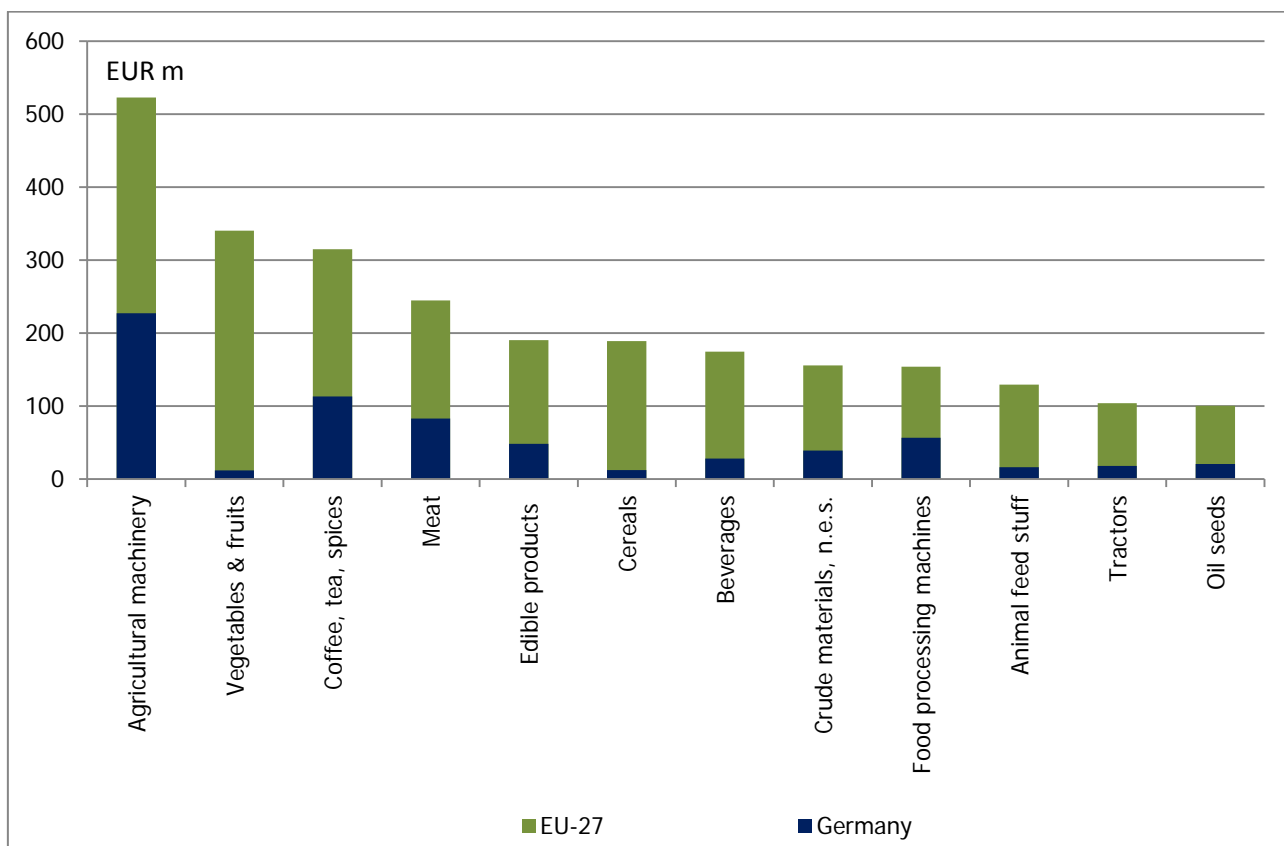
Ukraine's agricultural imports from the European Union

Ukraine's imports of agriculture and agriculture-related products from the EU grew by 415% in 2000-2012 reaching a value of EUR 3.1 bn in 2012. The share of agro-food and related products in total imports from the EU reached 13% in 2012 underlining the importance of agro-food trade.

Figure 2 suggests that the imports from the European Union are relatively diversified over a range of products. Agricultural machinery, with a value of over EUR 520 m, is the largest group of agriculture and agriculture-related products imported from the EU in 2012 followed by vegetables and fruits worth over EUR 340m, and coffee, tea and spices worth EUR 315 m.

Agro-food machinery and equipment including agriculture machinery, food-processing machines, and tractors, account for about a quarter of Ukraine's imports of agriculture and agriculture-related products from the EU, with 43% imported from Germany.

Figure 2: Ukraine's imports of selected agriculture and agriculture-related products from the EU in 2012



Source: Eurostat, own analysis

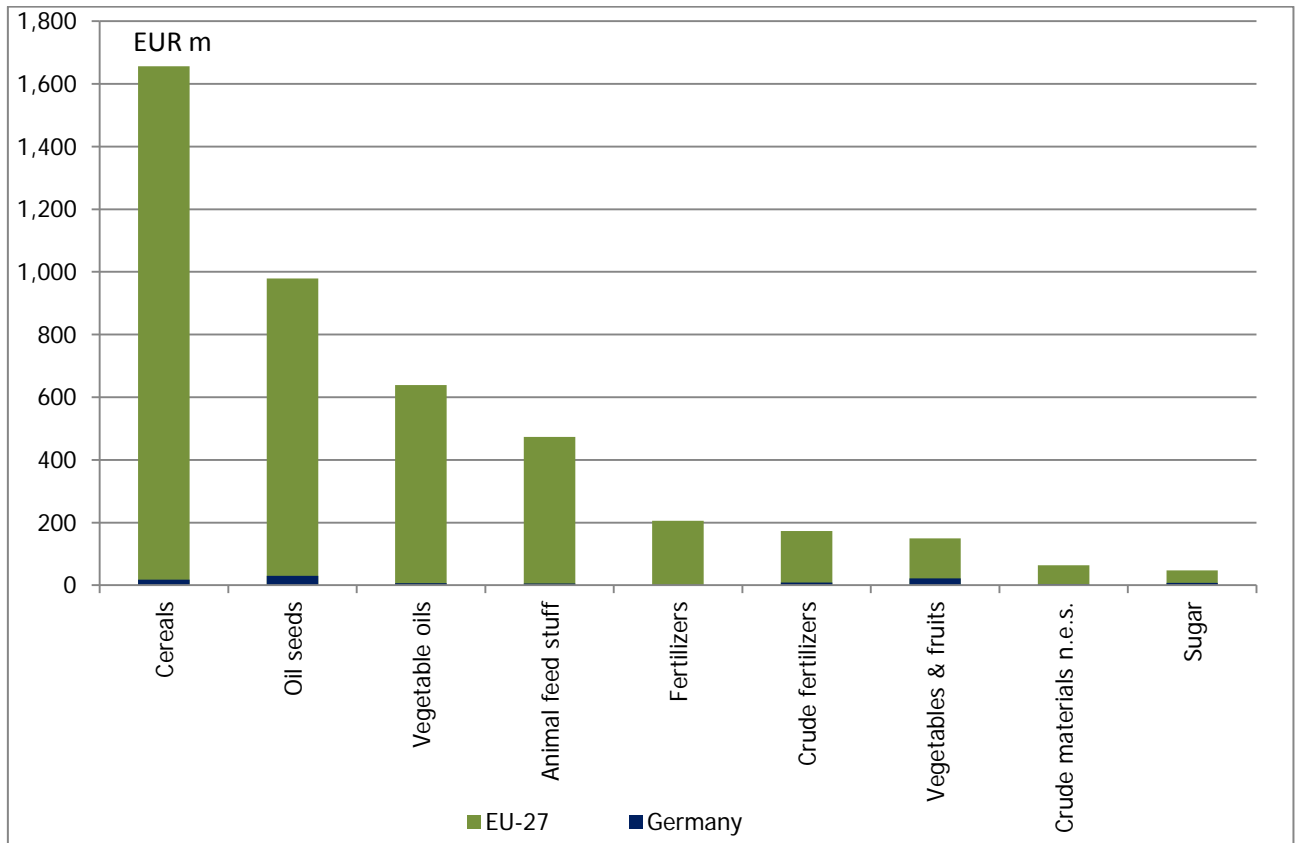
Ukraine's agro-food exports to the European Union

Ukraine's exports of agriculture and agriculture-related products from the EU grew by 563% in 2000-2012 reaching a value of EUR 4.5 bn in 2012. Furthermore, the share of Ukraine's agro-exports of all exports to the EU rose to 31% in 2012 from 11% in 2001 suggesting a rising importance of trade in these areas.

A closer examination shows that the country's agricultural exports to the EU is highly concentrated, and predominantly consists of raw materials. Indeed, as Figure 3 below shows, exports to the EU are dominated by cereals which accounted for more than one third of the trade. This is followed by oil seeds (22%) which play an import role for meeting the European Unions' greenhouse gas reduction targets. Other two large groups of Ukraine's agro-exports to the EU include vegetable oils (14%) and animal feed stuff (11%).

Fertilizers are the largest agriculture-related export category supplied by Ukraine to the EU market. They accounted for 9% of Ukraine's exports of agriculture and related products to the EU. In 2012, the value of exported fertilizers, including crude fertilizers, reached EUR 379 m.

Figure 3: Ukraine's exports of selected agriculture and agriculture-related products to the EU in 2012



Source: Eurostat, own analysis

To sum up, trade in agricultural and related products between Ukraine and the EU has been growing rapidly for more than a decade, and Ukraine achieved a trade surplus since 2008. However, the nature of traded products differs substantially. Currently Ukraine trades raw agricultural products and fertilizers against machinery and equipment from the EU – especially Germany. Processed foods such as meat or dairy products play no meaningful role yet. The question of the following section is how much of the current trade structure could be explained by trade barriers.

2. WHAT ARE THE BARRIERS TO MORE AGRICULTURE AND FOOD TRADE?

Trade in agricultural products remains protected on both sides with the EU exercising an tariff of 16.0% while Ukraine charged an average import duty 6.8%. The most protected product groups include cereals, meat, dairy and eggs, sugar, tobacco, miscellaneous edible products, beverages, feeding stuff for animals and animal oils and fats. The non-tariff measures establish additional barriers to trade.

The previous chapter highlighted that there has already been vibrant trade between Ukraine the European Union in agriculture and related products trade. However, trade in agricultural products is not without obstacles. In this section of the report we investigate the extent of trade barriers affecting agriculture trade between the two regions. Knowing trade barriers will help us to identify how the DCFTA will impact trade. We will start with looking at the tariffs imposed on both sides followed by an analysis of the non-tariff measures.

2.1. Tariffs and tariff quotas

Import tariffs

Both the EU and Ukraine are the WTO members. Consequently, we will use the most favoured nation (MFN) applied tariff rate to analyse and compare tariffs barriers between two regions.

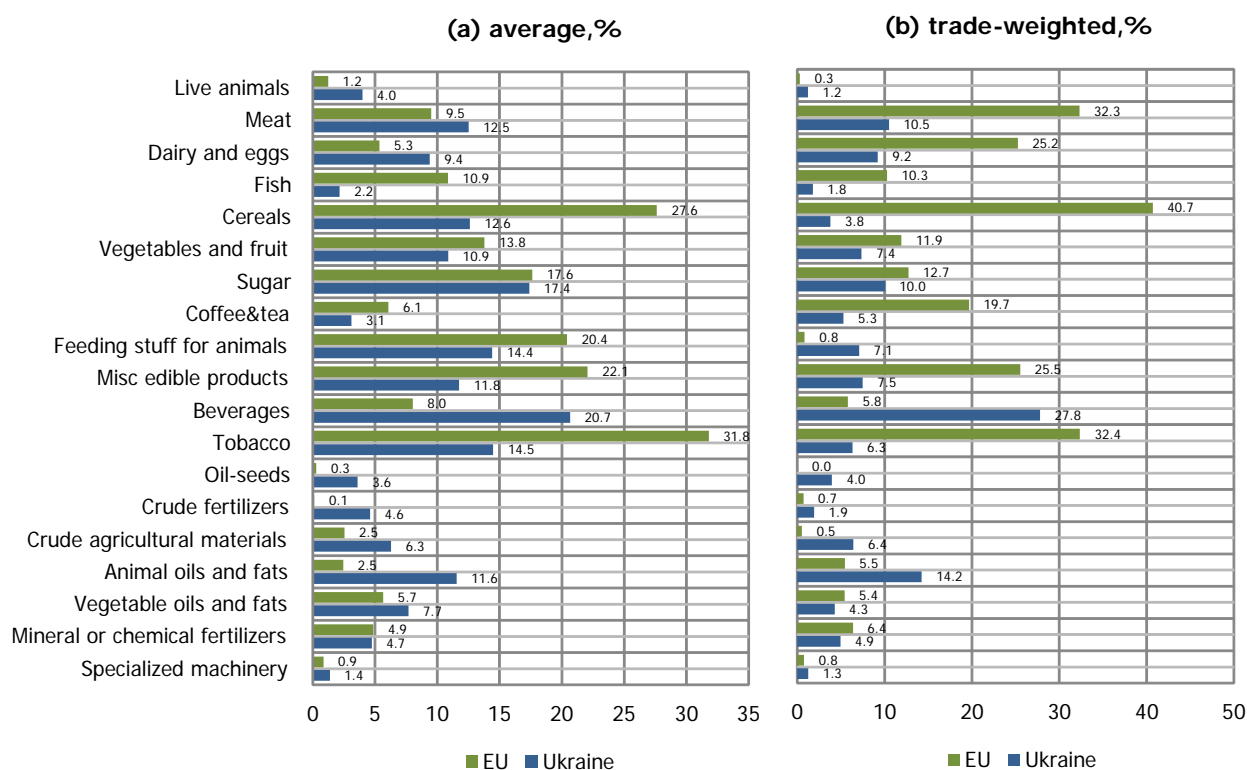
Analysis of tariff protection within EU-Ukraine agro-food trade in 2010-2012 shows that the EU tends to charge higher import tariffs on the Ukrainian goods than Ukraine does with regard to the same goods from the EU. Both simple average and trade-weighted average EU duties (9.8% and 16.0%, respectively) are higher than Ukraine's duties (8.0% and 6.8%, respectively).⁵

Figure 4 shows the breakdown of protection by product groups for both trading partners. In 2010-2012 the EU charged the highest import tariffs on cereals (trade-weighted rate was 40.7%), tobacco (32.4%), meat (32.3%), miscellaneous edible products (25.5%), and dairy and eggs (25.2%). The highest trade-weighted duties charged by Ukraine on the imports from the EU included beverages (trade-weighted rate was 27.8%), animal oils and fats (14.2%), meat (10.5%), sugar (10.0%), and dairy and eggs (9.2%).

High level of the EU tariff protection is partly attributed to more intensive usage of specific duties, which adds uncertainty to the resulting ad valorem equivalent. Analysis of applied tariff schemes of both trade partners shows that in Ukraine 93.8% of agriculture, food and related import tariff lines are charged by ad valorem tariffs and 6.2% by specific ones. The correspondent distribution of import duties for the EU is the following: ad valorem – 62.4%, specific – 25.3%, combined – 12.3%. There is a direct correlation between the rate of protection within analysed product groups and the share of tariff lines charged by specific duties.

⁵ Ad valorem equivalents of applied duties are used for estimates

Figure 4: Ukraine's and EU tariff protection of agriculture, food and related imports



Source: EU-Ukraine Association Agreement, own analysis

It should be additionally mentioned, that according to WTO tariff profiles 11.3% of agrarian tariff lines in EU are covered by tariff rate quotas⁶, while the correspondent ratio for Ukraine is only 0.1%.⁷

Export tariffs

Ukraine applies export duties for some agro-food goods. These duties are charged on live bovine animals of domestic species, except pure-bred breeding animals, and live sheep with the rate of 23%, and on seeds of some types of oil-yielding crops (linseed, sunflower seeds and rape seeds) with the rate of 9.1%.

2.2. Non-tariff measures affecting trade between Ukraine and the EU

Apart from tariffs, trade with agricultural products between the European Union and Ukraine is hindered by a number of other obstacles. These so-called non-tariff measures (NTM) refer to a broad range of administrative measures and regulations that are likely to restrict imports by making it more costly or even impossible to trade certain goods. These measures can include quotas and bans, licenses, bureaucratic delays through the customs administration, state trading, subsidies, technical barriers to trade, sanitary and phyto-sanitary measures, rules of origin and many more NTMs.

⁶ <http://stat.wto.org/TariffProfile/WSDBTariffPFView.aspx?Language=E&Country=E27>

⁷ <http://stat.wto.org/TariffProfile/WSDBTariffPFView.aspx?Language=E&Country=UA>

While it will never be possible to fully abolish non-tariff-measures to trade, they are considered protectionist, unless they can be justified for example with market failures (e.g. information asymmetries or externalities). As the WTO members Ukraine and the European Union should not apply any non-tariff measures which are not in line with the WTO rules.

Ukraine applies multiple non-tariff measures including licensing, TBT/SPS measures, export restrictions, permissions etc.

Exports and imports of spirits, alcoholic beverages and tobacco products,⁸ poultry meat and related products, pig and poultry fats are subject to licensing in Ukraine.⁹ Some of products require a separate licensing approval from the State Veterinary and Phytosanitary Service of Ukraine, which falls under the category of non-automatic licensing and is treated as core non-tariff barrier to trade.

Agricultural products which are moved to Ukraine's customs territory may be subject to sanitary-epidemiological control. State sanitary-epidemiological control is not required for selected goods of ten groups of the UKTZED.¹⁰

Standards play a crucial role for trade in agriculture and food products. As a member of the WTO, Ukraine committed to base its national legislation on the TBT and SPS Agreements, and to harmonize its national standards and technical regulations with respective international standards. However, still the SPS and – to the lesser extent – the TBT have been named among key impediments for trade.¹¹

Between 2006 and 2008 export restrictions on wheat had been imposed five times. In the period 2010-2011, quantitative restrictions were imposed on exports of wheat, corn, barley, rye and buck wheat.¹² To avoid future export restrictions, in 2010 the Government and grain market participants signed the Memorandum of Understanding stipulating exports volumes for which would not trigger export restrictions.

For importers of products of animal origin, crucial NTMs are import permissions. Such permissions are very detailed and limited by the terms and tonnage. Thus, in case of data change, the new permission with new detailed information is required.

Complicated and lengthy customs procedures constitute trade barrier for both importers and exporters of agriculture and agriculture-related products. Another important issue in customs clearance of imported goods in Ukraine has been their customs valuation. Over the years, importers have complained about over-estimation on the import value of goods, assignment of higher customs values to the EU and other

⁸The Law of Ukraine "On state regulation of production and circulation of ethyl, cognac and fruit spirits, alcoholic beverages and tobacco goods" No. 481/95-VR, dated December 19, 1995

⁹Decree of the Cabinet of Ministers of Ukraine "On approval of the lists of commodities, exports and imports of which are subject to licensing and for which quotas are set in 2012" No. 1360, dated December 26, 2011

Decree of the Cabinet of Ministers of Ukraine "On approval of the lists of commodities, exports and imports of which are subject to licensing and for which quotas are set in 2013" No. 1201, dated December 19, 2012

¹⁰ Goods of Chapters 01, 05-07, 10, 12-15, 23, Decree of Ministry of Health of Ukraine "On optimization of state sanitary-epidemiological surveillance on objects of foreign trade by UKTZED codes" № 25, dated December 26, 2008

¹¹ Business Surveys project, www.ier.com.ua

¹² See http://www.fao.org/fileadmin/user_upload/Europe/documents/Publications/Policy_Studies/Ukrain_wheat_2012_en.pdf

countries' imports, including to food and agricultural products, than declared in the import documentation.¹³

The adoption of the new Customs Code in 2012 constitutes important break-through in this sphere. The stricter rules for customs valuation and introduction of electronic declarations have been expected to facilitate trade procedures. However, the system suffers from teething problems, with slow and unreliable service and lack of cooperation between the authorities.

Similar to Ukraine, the European Union exercises a large range of non-tariff-measures on imports of agricultural and food products. Our analysis of UNCTAD data counts 43 different types of rules applied to agricultural imports to the European Union, mostly these rules concern SPS and TBT sphere. Overall, the around 2280 tariff lines of agricultural and related products considered here faced about 46,000 instances of non-tariff-measures. This suggests that most products are covered by more than one non-tariff measure. For example, 'purebred breeding animals' are subjected to NTM in the form of geographical restrictions, storage and transportation, certification, inspection, labelling and authorization requirements.

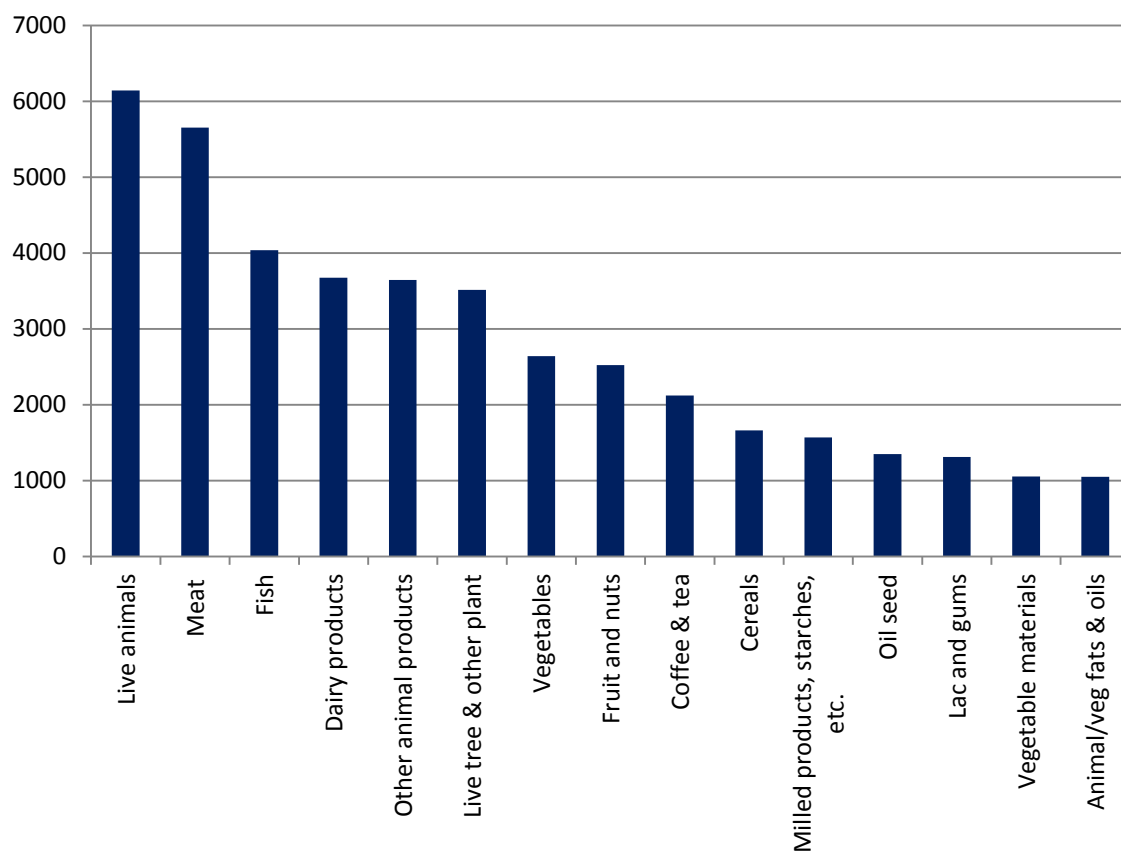
Live animals are subject to the largest number of non-tariff measures with over 6000 individual instances of non-tariff measures.¹⁴ Meat, fish and dairy products are also product categories with many instances NTM (see Figure 5).

Summing up, the non-tariff measures constitute very important barrier to trade in agriculture and agriculture-related products between the EU and Ukraine.

¹³ See <http://www.ustr.gov/sites/default/files/Ukraine.pdf>

¹⁴ How many times an individual tariff line is affected by NTM

Figure 5: Number of non-tariff-measures* by product category (HS two digit level)



Source: UNCTAD (2012)

*Sum of rules for each tariff line

3. CHANGES RESULTING FROM THE EU-UKRAINE DCFTA

The changes initiated by the DCFTA are fundamental. 95% of tariffs will be removed with the remainder reduced. However, even more important is the reduction in the NTMs. Here, Ukraine is committed to gradually adopt EU legislation. In effect this could mean that some goods in certain products areas are treated as if from another EU member state. However, this requires successful approximation to EU regulation.

Following our analysis of the status quo of trade between Ukraine and the EU, we now move on to describing how the DCFTA will affect the existing trade regime. To do so, we first look at how tariffs are expected to change and then how the DCFTA will affect non-tariff measures of agricultural and food trade.

3.1. Trade regime and access to the commodity market

Import tariffs

The DCFTA envisages close to full liberalization of trade in agricultural, food and related goods. The staging period is assumed to be 10 years with gradual reduction or total elimination of import tariffs during this time span. However, the speed and depth of tariff liberalization will differ depending on product groups.

In Ukraine's tariff schedule, import duties on 88.5% of tariff lines will be reduced to zero within 7-year period, but different product groups are supposed to be subject to different types of imports tariffs liberalization. Rates for 38.7% of tariff lines (including initially free-traded) will be reduced to zero immediately after the DCFTA enactment (this type of liberalization will be used mainly for oil-seeds, specialized machinery, tobacco, crude fertilizers, coffee and tea, and vegetable oils and fats), 21.0% - during the first three years (mineral or chemical fertilizers, vegetables and fruit, live animals, beverages, crude animal and vegetable materials), and 27.8% - in 5-7 years (dairy and eggs, beverages, meat, animal oils and fats, feeding stuff for animals).

There are several product groups for which import duties will not reduce to zero level. 8.7% of agro-food tariffs will be subject to linear reduction by 20-60% in 5-10 years with further conservation of the resulting rate (dairy and eggs, sugar, miscellaneous edible products, animal oils and fats, feeding stuff for animals). For some tariff lines within meat (pork, poultry) and sugar groups (2.8% of agro-food tariffs) tariff-rate quotas will be applied, implying non-zero effective duty rate for binding quotas. (Table 1)

The EU's reduction in tariff protection will have some peculiarities. First, the EU will not use partial liberalization. If tariffs are reduced, they are set at zero. The only exception includes products to which an entry price applies¹⁵, including some tariff lines within beverages and vegetables and fruit product groups, as under DCFTA only ad valorem part of the combined duty is eliminated immediately. (Table 1)

¹⁵ See Annex 2 of Commission Regulation (EU) No 861/2010 of 5 October 2010 amending Annex I to Council

Table 1: Peculiarities of import tariffs reduction by product groups in Ukraine and the European Union (share of tariff lines within product group subject to each type of liberalization)

Product group	Ukraine					European Union			
	Immediately fixed as zero	Zero in 3 years	Zero in 5-7 years	Partial reduction	TRQ	Immediately fixed as zero	Zero in 3 years	Zero in 5-7 years	TRQ
Live animals	35.9%	37.5%	23.4%	3.1%	0.0%	100.0%	0.0%	0.0%	0.0%
Meat	0.7%	8.8%	53.3%	13.1%	24.1%	55.4%	0.0%	0.0%	44.6%
Dairy and eggs	4.0%	1.7%	71.0%	23.3%	0.0%	46.8%	0.0%	0.0%	53.2%
Fish	64.0%	6.1%	19.6%	10.3%	0.0%	88.2%	11.8%	0.0%	0.0%
Cereals	53.5%	5.0%	40.9%	0.6%	0.0%	70.1%	0.0%	0.0%	29.9%
Vegetables and fruit	26.8%	49.8%	14.7%	8.7%	0.0%	89.6%	0.0%	4.6%	5.9%
Sugar	50.0%	5.6%	13.0%	18.5%	13.0%	51.0%	0.0%	0.0%	49.0%
Coffee&tea	73.0%	16.9%	4.5%	5.6%	0.0%	93.8%	0.0%	0.0%	6.3%
Feeding stuff for animals	18.6%	21.4%	44.3%	15.7%	0.0%	89.9%	0.0%	0.0%	10.1%
Misc edible products	33.3%	31.7%	16.7%	18.3%	0.0%	89.1%	1.8%	0.0%	9.1%
Beverages	10.3%	35.6%	54.0%	0.0%	0.0%	95.9%	0.0%	2.3%	1.8%
Tobacco	80.6%	9.7%	9.7%	0.0%	0.0%	93.3%	0.0%	0.0%	6.7%
Oil-seeds	90.3%	3.2%	0.0%	6.5%	0.0%	100.0%	0.0%	0.0%	0.0%
Crude fertilizers	79.2%	13.5%	7.3%	0.0%	0.0%	95.6%	4.4%	0.0%	0.0%
Crude animal and vegetable materials	51.3%	32.2%	11.3%	5.2%	0.0%	100.0%	0.0%	0.0%	0.0%
Animal oils and fats	33.3%	0.0%	50.0%	16.7%	0.0%	100.0%	0.0%	0.0%	0.0%
Vegetable oils and fats	64.1%	11.5%	17.9%	6.4%	0.0%	100.0%	0.0%	0.0%	0.0%
Mineral or chemical fertilizers	34.4%	65.6%	0.0%	0.0%	0.0%	32.3%	67.7%	0.0%	0.0%
Specialized food&agri machinery	83.1%	1.2%	15.7%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%

Source: own analysis based on Association Agreement

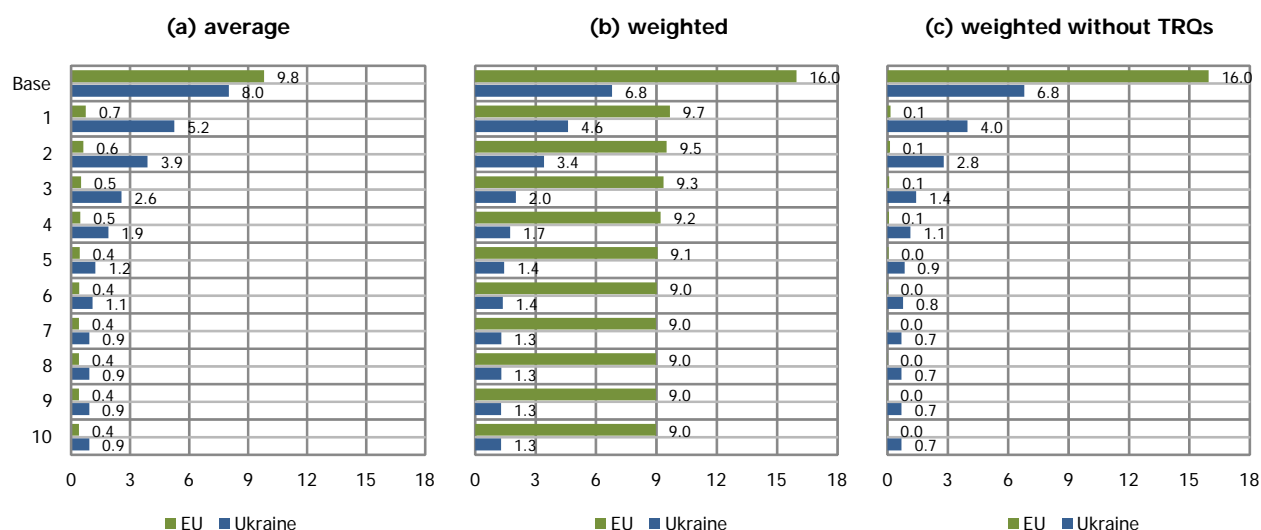
Second, the EU has shorter staging period than Ukraine: 82.2% of tariff rates will be nullified immediately (including initially free-traded), whereas the share of those to be reduced to zero in 3-5-7 years sums to 1.2%. Immediate nullification of import duties will be applied for live animals, oil-seeds, crude animal and vegetable materials, animal oils and fats, vegetable oils and fats, and specialized machinery. Duties on mineral or chemical fertilizers will be liberalized by 3-7 years. (Table 1)

Third, the EU features more intensive use of tariff rate quotas (TRQs), which will be applied to 13.7% of agro-food tariff lines. Comparing to Ukraine, which apply this instrument to only 3 product groups, the EU will apply TRQs for 36 groups of products, including 33 among agriculture, food and related products. The largest TRQs are envisaged for common wheat (increase from 950,000 tons/year to 1,000,000 tons/year in 5 years), maize (400,000-600,000 tons/year) and barley (250,000-350,000 tons/year). Among other affected goods there are meat (beef, pork, lamb, and poultry), dairy products (milk and butter), eggs, sugar, ethanol, starches, bran, tomatoes, apple and grape juice etc.

As Figure 6 (left panel) shows *simple average EU tariff will decline by 9.1 percentage points, or from 9.8% initially to 0.7%, within the first year of the DCFTA implementation, while total reduction by the end of the tenth year will constitute 9.4 percentage points to 0.4%*. Non-zero final tariff is explained by specific duties, which will remain in force, and tariff-rate quotas.

Ukraine's simple average import tariff on agro-food products will decline by lesser 2.8 percentage points or from 8.0% to 5.2% within the first year of the DCFTA implementation. By the end of the tenth year, Ukraine's average import tariff is estimated to be equal to 0.9%, implying total reduction by 7.1 percentage points. Non-zero final tariff is explained by the fact that there are import duties, which will not nullified, but reduced by 20-60% in 5-10 years with further application of the resulting rate, and by introduction of several TRQs.

Figure 6: Average (left panel) and trade-weighted (middle panel) tariff change under DCFTA and those non-distorted by TRQs application (right panel)



Source: EU-Ukraine Association Agreement, own analysis

Trade-weighted EU import duties on agro-food products are much higher than simple average tariffs, and are estimated to reduce from 16.0% to 9.0% within ten years. High final trade-weighted rate are explained by high effective tariffs on products subject to TRQs, many of which are binding. The second reason is a preservation of specific part of duties charged on products, to which an entry prices are applied. High effective tariffs related to TRQs are registered for maize, honey, grape and apple juice, bran, food concentrates, while the specific duties will be retained for apples, apricots peaches, tomatoes and cucumbers.

Ukraine's trade-weighted import duties on agro-food products are lower than simple average tariffs, and they will reduce from 6.8% to 1.3% within the ten-year period.

In order to show the distorting effect of TRQs, we recalculated trade-weighted tariffs replacing TRQs effective tariffs with zero tariff rates (Figure 6, right panel). As shown, in case of Ukraine TRQs add 0.6 percentage points to the trade-weighted final tariff rate, whereas in case of the EU, TRQs are responsible for entire 9.0 percentage points of trade-weighted final tariff rate. Without TRQs, trade-weighted agro-food import tariff imposed by the EU on Ukraine's exports could be expected to be equal to 0.001%.

Figure 7 shows initial and final tariff rates (simple average and trade-weighted ad valorem equivalents) for each agro-food group in Ukraine. Zero tariff rates are envisaged *for cereals, beverages, tobacco, crude fertilizers, mineral or chemical fertilizers, and specialized machinery*. Tariff barriers will be significantly liberalized for vegetable oils and fats, coffee and tea, feeding stuff for animals and sugar.

Meat and animal oils and fats will experience the lowest reduction. It should be also mentioned that TRQ for meat being binding imply rather higher effective tariff rate for this product group but still it will be lower than without DCFTA.

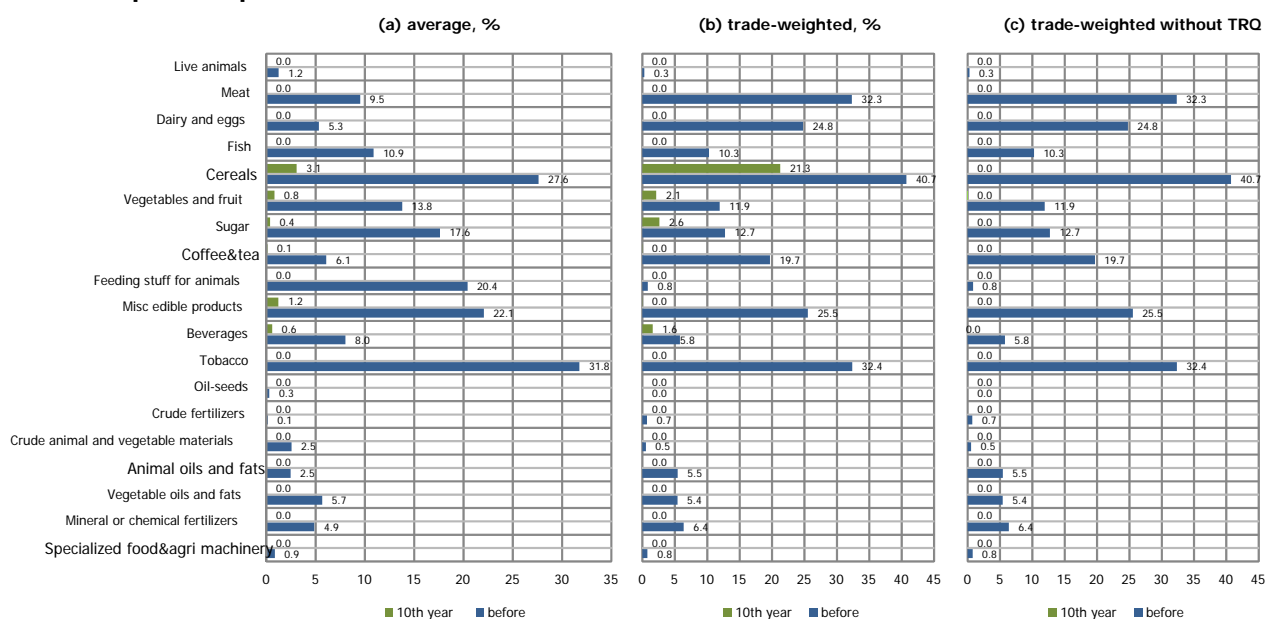
Figure 7: Initial and final average (left panel) and trade-weighted (middle panel) tariffs by product groups and those non-distorted by TRQs application (right panel): Ukrainian import tariffs



Source: own analysis

Figure 8 presents the expected changes in import tariff protection (both in average and trade-weighted terms) by the European Union regarding Ukrainian agro-food exports. **The EU import tariffs for the most of the analysed groups will be set at zero.** Reduction in import duties on cereals, sugar, vegetables and fruit, and beverages will be moderate because of TRQs and price-specific tariffs application; these groups are the main source of high final trade-weighted rate for the EU.

Figure 8: Initial and final average (left panel) and trade-weighted (middle panel) tariffs by product groups and those non-distorted by TRQs application (right panel): European import tariffs



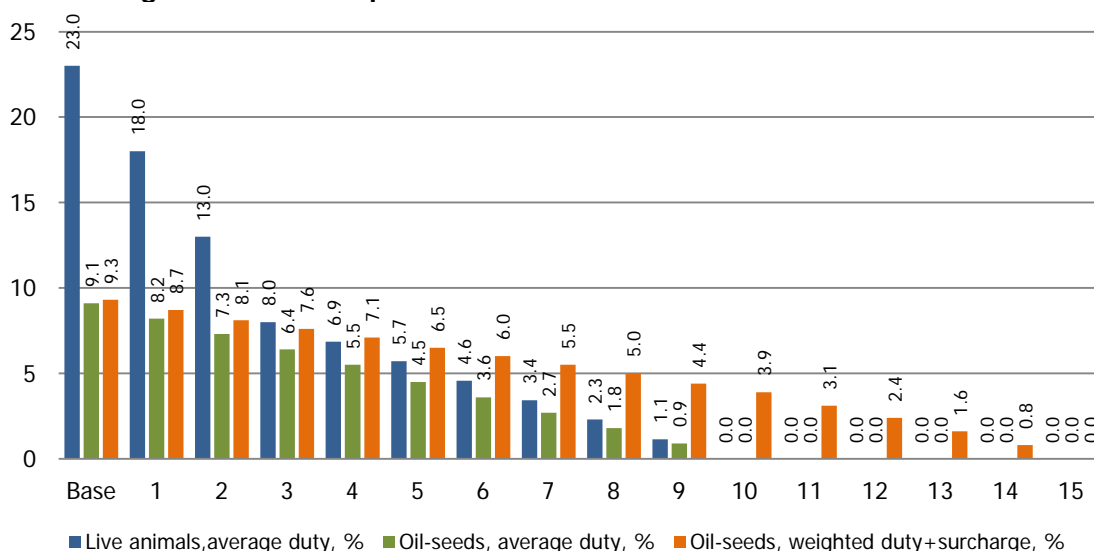
Source: own analysis

Export tariffs

Another part of tariff reduction concerns elimination of Ukraine's export duties, being one of the key requirements of the EU in the framework of negotiations on the DCFTA. Under provisions of the section "National treatment and market access for goods", the parties will not continue to impose and will not impose any duties or other measures with the equivalent effect on exports from Ukraine to the EU and vice versa. ***The existing measures applied by Ukraine will expire within 10 years after enactment of the DCFTA.*** However, as a concession to the Ukrainian side, ***Ukraine will be able to apply a special safeguard mechanism – namely levying a surcharge within certain specified limits –*** for specific products. To each of these commodities surcharge in the range of up to 10% will apply (increasing from the base rate of 0.9% to 10.0% as of the tenth year of DCFTA agreement implementation with further linear decrease to zero by the fifteenth year).

Agro-food export duties cover some tariff lines within live animals and oil seeds product groups. Live animals duty will be eliminated in ten years with annual reduction by 5 percentage points during the first three years and by 1.1-1.2 percentage point per year later. Effective oil-seeds duty, due to surcharge application, will be gradually reduced within 15 years with average annual speed of change equal to 0.5-0.8 p.p., whereas the applied export duty is reduced to zero by the tenth year. (Figure 9)

Figure 9: Timing of Ukrainian export duties elimination



Source: own analysis

Subsidies, quantitative restrictions and trade remedies

The agreement foresees that neither of the parties will apply export subsidies or measures having an equivalent effect for agricultural products in trading with the other party. Besides, with some exceptions, in particular pursuant to Article XI of the 1994 GATT, quantitative restrictions on imports will be cancelled.

Under the provisions of the DCFTA, the parties keep in force the regime under Article XIX of the 1994 GATT, the WTO Agreement on Safeguards. The EU also reserved for it the respective rights and obligations arising from Article 5 of the WTO Agreement on Agriculture on special safeguard provisions, except for trade in agricultural commodities, which will be covered by the preferential treatment under provisions of the AA. Besides, the provision under which the parties, when applying safeguards, shall try to minimize damage to bilateral trade was kept in force.

Regarding anti-dumping and countervailing measures, overall the parties reaffirmed their rights and obligations within the WTO framework. Additionally, Ukraine and the EU established requirements for transparency in safeguards' application, accounting for public interests, applying the smaller anti-dumping or countervailing duty rule as well as review and consultations mechanism.

3.2. TBT and SPS measures

To increase mutual compatibility of the respective systems of Ukraine and the EU in the field of technical regulations and to facilitate access to their markets, the parties agreed to strengthen cooperation on standards, technical regulations, metrology, market oversight, accreditation, and conformity assessment.

Ukraine, in turn, will take the necessary steps to progressively achieve compliance with EU technical regulations, the European procedures of standardization, metrology, accreditation, and conformity as-

assessment, as well as the market oversight system, and to implement the principles and practices enshrined in the relevant EU regulations and directives.

To achieve this objective, Ukraine will, according to an agreed schedule, incorporate the relevant EU *acquis* into its legislation. Furthermore the country commits itself to implement the administrative and institutional reforms necessary for implementation of the AA and the Agreement on Conformity Assessment and Acceptance of Industrial Products (ACAA). Finally Ukraine has agreed to provide the efficient and transparent administrative system required for meeting this section's requirements.

Besides, Ukraine will fully ensure participation of its relevant authorities in European and international organizations for standardization, legal and fundamental metrology and conformity assessment.

Moreover, Ukraine will gradually transpose the body of European standards into national standards, eliminate the national standards that are contrary to such standards, including international standards (GOST) adopted before 1992. Ukraine must also ensure achievement of all other requirements imposed for full membership in the European Organization for Standardization. This will remove a substantial barrier that has hindered Ukraine's imports from the EU and is likely to lead to intensifying trade for those products that had to adhere to Ukraine's national standards.

Furthermore, due to the inclusion of the ACAA Agreement, some Ukrainian products could be treated as if de-facto originating from an EU member state. Specifically, the ACAA annex foresees that trade of goods in the sectors covered there will be held on the terms that are used in trade among EU Member States. For this to happen an EU audit has to testify that harmonization of Ukrainian legislation with the relevant technical regulations, standards and the infrastructure has been successful.

Ukraine has to harmonize its legislation on SPS and well-being (welfare) of animals with the European Union legislation according to a list of EU *acquis* stipulated in the AA. To assist implementation, the provisions of the AA require cooperation not only for harmonization of legislation, but also for the relevant institutional capacity building.

The Chapter IV of the AA provides for creation of an SPS Management Committee, which would regularly conduct monitoring of implementation of the harmonization process and issue respective recommendations. Moreover, within three months after the AA's entry into effect, Ukraine must submit to the committee a comprehensive strategy for implementing provisions of the SPS section, which will serve as a reference document for the purposes of implementation.

To sum up, the process of regulatory harmonization will focus entirely on Ukraine who will have to approximate in a wide range of areas to EU legislation. Once successfully done this should lower trade barriers to an unprecedented level.

3.3. Customs matters and trade facilitation

Under provisions of the AA, the EU and Ukraine agree to enhance cooperation in customs matters and trade facilitation to ensure effectiveness of the respective legislation and procedures and develop the necessary administrative capacity of the relevant agencies, to achieve the objectives of efficient control and legitimate trade facilitation.

Ukraine and the EU agreed that the relevant trade and customs legislation must be stable and comprehensive, as well as proportionate, transparent and predictable, non-discriminatory, impartial and applied equally and effectively. Ukraine also committed itself to gradual harmonization, according to the defined schedule and the list of EU legislation acts, of its customs legislation with EU *acquis*.

At the same time, in the AA the parties developed respective provisions on cooperation for providing technical assistance for capacity building and promotion of reforms in this field.

Thus, the DCFTA will see a mostly one-sided approximation of Ukraine's legislation to EU legislation. The trade and trade-related issues and sector cooperation chapters of the AA contain obligations to transpose and implement around 350 directives and *acquis*. These contain the necessary administrative, regulatory and institutional reform steps and time line to approximate to EU legislation.

For EU producers the DCFTA presents a real reduction of NTMs for their exports to the Ukrainian market. For example, they will, after the DCFTA has been fully implemented, not be required anymore to adhere to Ukrainian food safety standards.

4. IMPACT ASSESSMENT

Reduced tariff protection will boost both Ukraine's exports to the EU as well as the EU exports to Ukraine. Ukraine will expand exports of oil-seeds, tobacco, cereals and meat, whereas the EU will exports more of beverages, vegetable oils and fats, meat and mineral or chemical fertilizers. To ensure that Ukraine is able to capture benefits of the DCFTA, the government needs to assist the required adjustment processes. In particular, in order to realize the potential increases in Ukraine's exports to the EU, the government would have enable domestic producers to meet EU regulation thus allowing them benefit from higher demand for their products. Unlike tariffs, non-tariff measures are currently higher for Ukraine's imports from the EU than those faced by its exports to the EU. Hence, removing them will offer in the tendency larger export potential for European producers than vice versa.

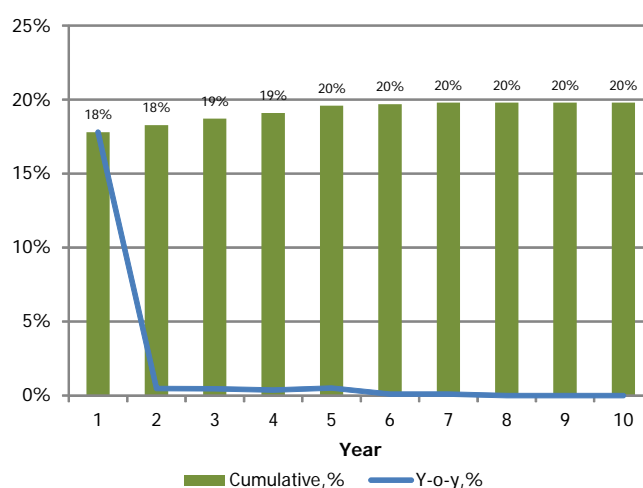
This chapter presents assessment of liberalization effects on both agro-food exports and imports. We consider effects of mutual reduction of import tariffs (taking in account TROs), as well of elimination of export duties by Ukraine. The estimates are conducted using partial equilibrium model with import demand elasticities extracted from the WITS/SMART solution.¹⁶

4.1. Changes of Ukraine's exports due to tariff elimination

Impact of reduction of the EU import tariffs

As impact assessment of the EU import tariff reduction shows that over the first ten years of DCFTA implementation **Ukraine will be able to export 18-20% more** than without liberalization (Figure 10). Ukraine will capture the most of gains immediately after the DCFTA enactment thanks to immediate tariff liberalization committed by the EU.

Figure 10: Induced by DCFTA gains in terms of Ukrainian agro-food exports



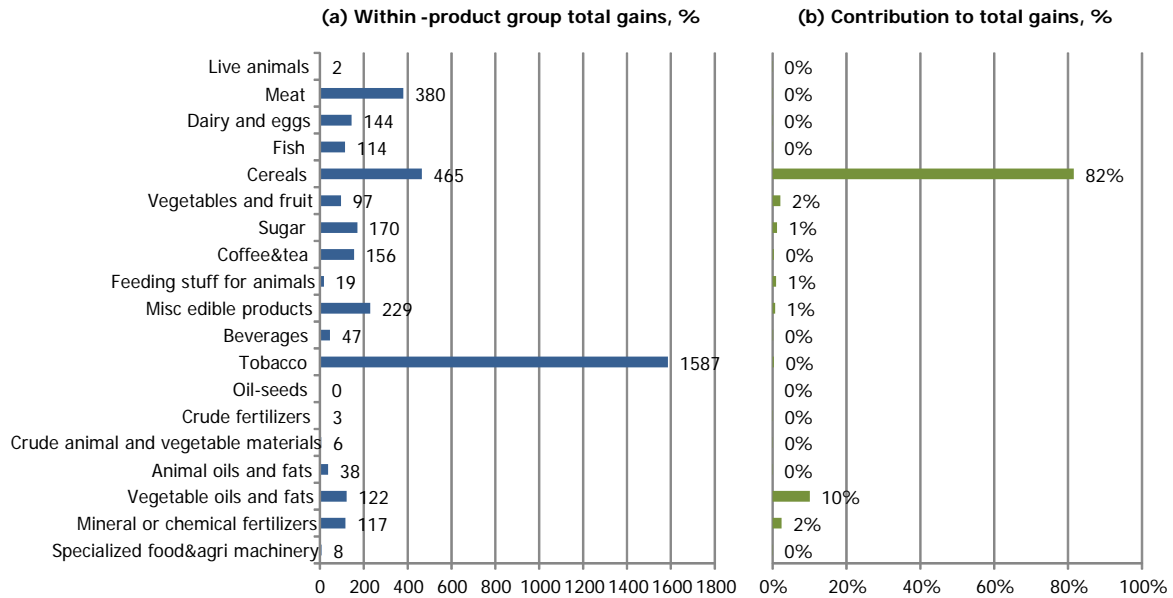
Source: own analysis

As shown on left panel of Figure 11, during the first ten years of liberalized trade **Ukrainian exports of tobacco, cereals, meat and miscellaneous edible products will increase the most** in terms of

¹⁶ Methodology is discussed in annex.

total sum of additional shipments. However, due to the structure of Ukrainian agro-food exports to EU, the main contributors to total exports increase are cereals and vegetable oils and fats (Figure 11, right panel).

Figure 11: Total gains for Ukrainian exports by product groups (left panel) and their contribution to the total imports change (right panel)



Source: own analysis

Impact of elimination of Ukraine's export duties

Elimination of exports duties on agro-food products will benefit primarily oil-seeds and oleaginous fruits. We found that export duties are very restrictive. Thus, gradual reduction till the full elimination **doubles oil-seeds exports over ten years**. Additionally, we should mention that export duties elimination impact on Ukrainian agro-food exports will be comparable with the effect of the reduction of the EU import tariffs.

Ukraine's export potential: trade in products not exported to the EU before

We estimated that over first ten years of the DCFTA implementation, liberalization of import tariffs and export duties could result in additional USD 2.3 bn of Ukraine's exports to the EU for products, which are currently not exported to the EU by Ukrainian firms. The highest potential is estimated for dairy products and birds' eggs, cereals and cereal preparations, meat and meat preparations; specialized machinery; marine products, and fixed vegetable fats and oils. Top-10 goods in terms of exports potential are presented in Table 2.

Table 2: Top-10 new goods that have the highest potential to be exported by Ukraine

HS code	Product name	Product group	Potential sum of shipments, USD m
110220	Maize (corn) flour	Cereals	729
040410	Whey and modified whey, whether or not concentrated or containing added sugar or other sweetening matter	Dairy and eggs	254
020329	Other frozen meat of swine	Meat	240
040299	Other milk and cream	Dairy and eggs	182
020120	Other cuts of bovine animals meat with bone in	Meat	157
040490	Other whey	Dairy and eggs	86
310280	Mixtures of urea and ammonium nitrate in aqueous or ammoniacal solution	Mineral or chemical fertilizers	83
040811	dried egg yolks	Dairy and eggs	81
040610	Fresh (unripened or uncured) cheese, including whey cheese, and curd	Dairy and eggs	60
160413	Sardines, sardinella and brisling or sprats	Fish	54

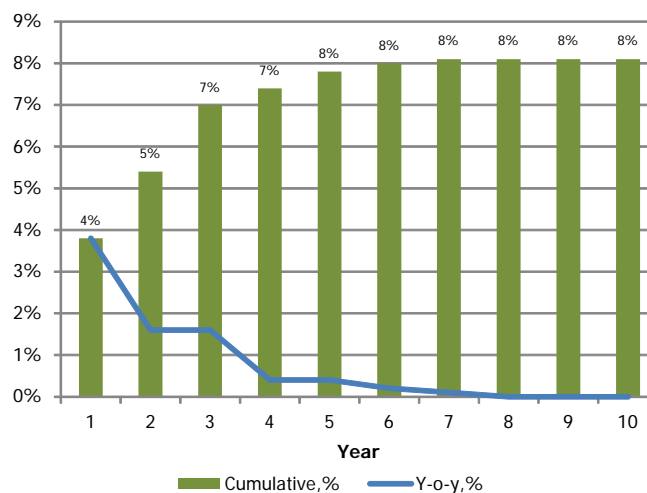
Source: own analysis

4.2. Changes of Ukraine's imports due to tariff elimination

Impact of reduction of Ukraine's import tariffs

As Ukraine reduces its import tariff protection, it will face **increase of its agro-food imports by 4-8%**. Increase in imports will be gradual reaching full-scale effect in seven years reflecting longer staging period for Ukraine (Figure 12).

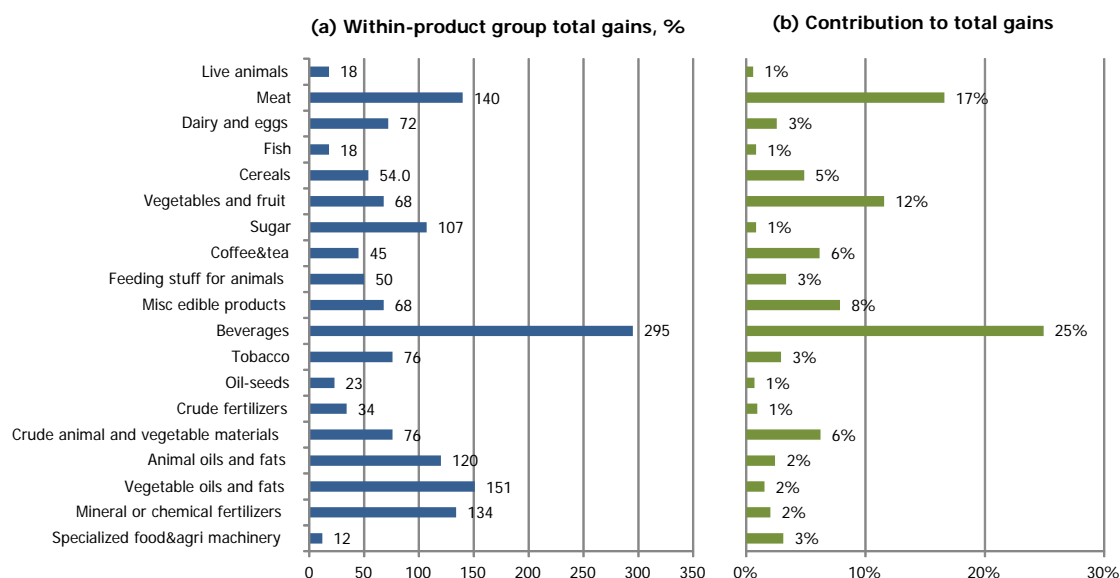
Figure 12: Induced by DCFTA gains in terms of Ukrainian agro-food exports



Source: own analysis

Considering effects for particular product groups, we conclude that during the first ten years of DCFTA implementation **imports of beverages, vegetable oils and fats, meat, mineral or chemical fertilizers, animal oils and fats, and sugar will increase the most** in terms of total sum of additional shipments (Figure 13, left panel). Due to imports structure, the main contributors to the total imports increase are beverages, meat, and vegetables and fruit (Figure 13, right panel).

Figure 13 Gains for Ukrainian imports by product groups (left panel) and their contribution to the total imports change (right panel)



Source: own analysis

Ukraine's imports potential: trade in products not imported from the EU before

Over the first ten years of the DCFTA, Ukraine could import USD 0.7 bn worth of products not currently imported by Ukraine from the EU. The highest import potential will emerge for marine products, oil-seeds and oleaginous fruits, meat and meat preparations, sugars, sugar preparations and honey, and cereals and cereal preparations. Top-10 goods, which have the highest imports potential, are presented in Table 3.

Table 3: Top-10 new goods that have the highest potential to be imported in Ukraine

HS code	Product name	Product group	Potential sum of shipments, USD m
030559	Other dried fish, whether or not salted but not smoked	Fish	27
120220	Shelled ground-nuts, not roasted or otherwise cooked, shelled, whether or not broken.	Oil-seeds	10
020621	Frozen tongues of bovine animals	Meat	9
120740	Sesamum seeds	Oil-seeds	7
251020	Ground natural calcium phosphates, natural aluminium calcium phosphates and phosphatic chalk	Crude fertilizers	6
170390	Other molasses resulting from the extraction or refining of sugar	Sugar	5
100640	Broken rice	Cereals	3
230330	Brewing or distilling dregs and waste	Feeding stuff for animals	2
020130	Fresh or chilled boneless meat of bovine animals	Meat	1.5
040291	Concentrated milk and cream not containing added sugar or other sweetening matter	Dairy and eggs	0.5

Source: own analysis

4.3. Impact of DCFTA through the reduction of NTM

Removing the non-tariff measures through the DCFTA may actually have a larger impact than removing the import tariffs on both sides. Additionally, only if Ukrainian legislation is compliant with the relevant EU *acquis*, will Ukraine's producers be able to get full-scale access the European market and harness some of trade gains estimated in section 4.1.

However, it is difficult to quantify the impact which aligning of the NTMs will have on Ukraine's agricultural exports. One indication could be provided through so-called trade restrictiveness indices. The measures provide an estimate of the tariff that would have the same effect as the non-tariff-barriers currently in place. Table 4 shows that NTM in place in the EU have the same effects as a tariff of around 6% on all imports. For EU exports to Ukraine the NTM in place are estimated to have the same effect as a tariff of 22% suggesting that the barriers faced by importers to Ukraine are unlike higher than those Ukraine exports to the EU.¹⁷ Clearly, this is only a rough estimate and will be significantly higher for agricultural products as these are traditionally more affected by NTMs such as standards.

Nevertheless, the analysis shows that NTM such as products standards and health regulations currently hamper Ukraine's imports from the European Union much more than its exports to the EU. So unlike for tariffs a subsequent removal of these barriers is likely to see a larger increase of Ukraine's imports from the EU compared to its exports. This will be visible in increased competition for domestic producers.

Table 4: How much do NTM limit imports?

	<i>Tariff equivalent of NTM</i>
<i>How do NTM limit imports to the EU</i>	6%
<i>How do NTM limit imports to the UKR</i>	22%

Source: Hiau Looi Kee (2009)

The DCFTA is likely to significantly reduce the cost resulting from NTMs on both sides. However, this depends on a successful implementation. The potential for export growth estimated in section 4.1. will only remain a theoretical potential as long as Ukraine's producers do not meet the relevant EU standards.

This is also true for access to other non-EU markets. With EU sanitary and phyto-sanitary and other standards widely accepted internationally, Ukraine's producers will be able to access markets currently not available to them if the DCFTA is successfully implemented.

5. CONCLUSIONS AND RECOMMENDATIONS

The introduction of DCFTA will provide winners and losers in business on both, EU and Ukrainian, sides. Especially in short run, sectors previously protected through high import duties in Ukraine will feel the

¹⁷ Hiau LooiKee & Alessandro Nicita & Marcelo Olarreaga, 2009. "Estimating Trade Restrictiveness Indices," Economic Journal, Royal Economic Society, vol. 119(534), pages 172-199, 01

pressure as the EU products will become more competitive. In medium- and long-terms the opportunities for exports from Ukraine will outweigh.

Considering model assumptions, particularly current differentiation of competitiveness, our analysis draws the following detailed conclusions:

- Trade in agricultural and related products between Ukraine and the EU is largely balanced and Ukraine achieved a little trade surplus since 2008. However, the nature of products traded differs substantially. Currently the data suggest that Ukraine trades raw agricultural products, mainly cereals and oil-seeds, against machinery and equipment from the EU – especially Germany.
- The European Union has, as far as tariff barriers are concerned, a higher protection for its agriculture and food industry than Ukraine. Currently simple average and trade-weighted EU duties are 9.8% and 16.0%, respectively, whereas Ukraine's import duties are equal to 8.0% and 6.8%, respectively.
- The DCFTA will see many tariffs disappear, but the character of tariff reductions differ: while the EU will eliminate almost all tariffs immediately, it also applies a wider scope of tariff-rate quotas (33 agro-food product categories will be subject to the TRQs). Ukraine will reduce tariffs more gradually and even preserve non-zero tariffs for selected products, but will apply tariff rate quotas only to three product groups.
- As of the tenth year of DCFTA, average tariff rate on agriculture and agriculture-related products will equal to 0.9% in Ukraine and 0.4% in EU; however, reductions in terms of trade weighted tariffs will be lower due to binding tariff-rate quotas.
- For NTM such as TBT and SPS measures, however, the process will focus almost entirely on Ukraine, which will have to approximate in a wide range of areas to EU legislation. This requires significant resources on Ukraine side, although technical and financial support of the EU is expected. Once legislative harmonization is successfully done this should lower NTM trade barriers to an unprecedented level.
- For EU producers the DCFTA presents a real reduction of NTMs for their exports to the Ukrainian market. For example, after the DCFTA has been fully implemented, they will not be required to adhere to Ukrainian food safety standards anymore.
- Due to the EU import tariffs reduction and despite binding TRQs, Ukraine will be able to export about 20% more of agro-food products with the main winners to be tobacco, cereals, meat and miscellaneous edible products.
- Reduction of Ukraine's import duties will result in approximately 7% additional imports, mostly due to increased shipments of beverages, vegetable oils and fats, meat, mineral or chemical fertilizers, animal oils and fats, and sugar.
- Export duties elimination will benefit oil seeds exports. The gains generated by elimination of these duties are comparable with the impact of the EU import duties reduction.

- Tariff liberalization could generate new trade flows of products not previously traded by the EU and Ukraine. This new trade potential is estimated at USD 2.3 bn for Ukraine's exports to the EU and USD 0.7 bn imports from the EU over the first ten years of the DCFTA implementation.
- The NTMs such as products standards currently hamper Ukraine's imports from the European Union much more than its exports to the EU. So unlike for tariffs a reduction of these barriers is likely to see a larger increase of Ukraine's imports from the EU compared to its exports, leading to increased competition for domestic producers. Although this was not a subject of modeling in the current study.
- With EU sanitary and phyto-sanitary and other standards widely accepted internationally, if the DCFTA is successfully implemented Ukraine's producers will be able to access markets currently not available to them.

So there will be challenges as well as opportunities. Ukraine, as a major agriculture producer with a number of natural and economic comparative advantages should be able to benefit from signing the EU-Ukraine DCFTA. However, this requires that the government sets immediately an adequate policy framework in place. Indeed, by managing the process the government can make sure that the sector adjusts quickly to post-DCFTA realities and contributes more intense to overall welfare. In this context we would suggest the following recommendations:

- 1) Competition through increased imports to Ukraine, particularly for meat and vegetables, will put pressure on domestic producers. Temporary state support in form of access to information, advisory services, trainings etc. might be considered by the Ukrainian government to avoid steep further rise of unemployment in rural areas. Training and education offers can assist those employees in areas of falling labor demand to retrain and to reemploy in areas where new export chances exist.
- 2) For those areas where we expect an increase in Ukraine's export potential to the European Union, e.g. in the area cereals and oil-seeds, government needs to make sure companies have the right framework so they can realize the potential. Specifically, the government should put a strong focus of state support to producers on how to meet the relevant EU standards / regulations. Intense information and know-how exchange as well as training and education will be of key importance here.
- 3) In this context the government should make all efforts and put in place corresponding resources to get immediate access to the specific technical assistance programs and other support tools from the EU, particular EU-countries and other international organizations, supporting EU approximation of Ukraine.
- 4) In order to make more use out of the advantages of the DCFTA government should elaborate immediately and introduce in short-term a strategy on the development of processing and infrastructural industries in order to insure a boost of high value added production.
- 5) The government and EU should provide further broad and transparent information for the affected industries, possibly through a common information campaign, in order to assist understanding of the likely challenges and opportunities for the agribusiness community from the signing of EU-Ukraine DCFTA.

The DCFTA, being a part of EU-Ukraine Accession Agreement, if signed, is an important step towards European integration and EU approximation of Ukraine on the base of mutually agreed, stable and fair ground rules, which have been proven in western European countries over decades successfully. This agreement will contribute to the effectiveness of Ukraine's legislation, hopefully increase stability of it and decrease the impact of particular economic interests in policy making. It will improve the administration system and hopefully hamper bribes. All these are important expectations by domestic and international investors. The DCFTA gives them the right signal to consider investments in Ukraine's agriculture sector as a worthy business.

ANNEX. METHODOLOGY

The methodology of this policy paper heavily relies on World Integrated Trade Solution Global Tariff Cut and Trade Simulator¹⁸, more specific, its Tariff Cuts module. Using this analytical tool, we are able to obtain import demand elasticity for a specific tariff lines over the period of 2010-2012, which later are combined with tariff schedules under DCFTA obtained from the Association Agreement and imports data disaggregated at 6-digit level of HS 2007 classification for the same time horizon.

- As a first step, we convert all the import tariffs into ad valorem equivalents. Here we apply a standard formula for this exercise, which is as the following:

$$\text{-----} \quad (\text{A.1})$$

For mixed tariffs, we add ad valorem part with the equivalent of the specific one. While we aggregate the data by higher levels of SITC classification, for the analysis we use simple and trade-weighted tariff rates.

- Second step include computation of expected exports and imports value using the following formula:

$$\text{-----} \quad (\text{A.2})$$

Here we should mention that import demand elasticity is trimmed to be equal 5 in case, when the actual value exceeds this threshold, in order to rule out statically insignificant outliers.

- As a third step, for quotas, we compare the estimated trade quantities with quantity under quota in order to decompose them by free-traded and charged by the base rate parts. For surcharged export duties, we compare estimated quantity with the trigger level in order to distinguish between the quantity charged by a duty rate and those subject to a surcharge.

Finally, for export and import potential we apply the following logic. For example, for evaluation of import potential from EU to Ukraine, we combine Ukrainian data on imports from EU and the rest of the world over 2010-2012 in order to see which goods Ukraine imports from other countries but not from EU. On the other hand, we merge this data with EU exports statistics to the rest of the world in order to combine Ukrainian demand, which is not currently satisfied by EU, and European supply, which is not currently shipped to Ukraine. Then we apply the liberalization exercise for tariff lines, where opportunities for mutual supply and demand exist, assuming the whole volume of trade within these tariff lines to be subject to DCFTA-specific liberalization. The overlapped EU exports and UA imports gains are considered as Ukrainian import potential for the specific tariff lines. Ukrainian exports potential (or, EU imports potential) is estimated in the same manner but with the trade parties being swapped.

¹⁸ See <http://wits.worldbank.org/wits/>