Regional integration choice for Ukraine: between the EU and Russia

by

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Abstract

The modern Ukraine faces two key option of future regional integration: the EU and CIS. On the one hand, Ukraine proclaimed its willingness to joint the EU. The current relations between the EU and Ukraine are set within the framework of the Partnership and Cooperation Agreement, and the EU Neighbourhood Policy. In the late 2006 the EU opened negotiations on extended agreement, though no association prospects are envisaged. On the other, Ukraine is a member of the CIS and the Single Economic Space, the Russian regional integration initiative that aimed at the establishment of the customs union among Russia, Ukraine, Kazakhstan, and Belarus. This study is aimed at providing some economic assessment of regional integration options for Ukraine. This question is obviously very wide, thus only some aspects – namely the reduction of trade barriers – are studied using a computable general equilibrium model for Ukraine. Several scenarios are considered, including the establishment of the FTA with the EU and the different options of regional integration within the CIS.

1 This paper continues the research conducted in the framework of two projects conducted by Institute for Economic Research and Policy Consulting (Kyiv, Ukraine) upon the request of the Ministry of Economy of Ukraine in 2006. These project concerned the economic impact of the establishment of the FTA between Ukraine and the EU (Registration No. 0106U011576) and the economic consequences of the sub-regional integration processes within the CIS (Registration No. 0106U011575).

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Introduction

Since Ukraine has gained the independence, it struggles to develop its way of integration into the global economic and political structures. Unlike Baltic countries that opted for quick integration into the European and Euro-Atlantic economic and security structures, Ukraine choose the mixed strategy of combining accession to existing world political and economic organizations (like the NATO, WTO, closer relations with the EU, etc.) with searches for different interstate institutional arrangements on the post-Soviet space (Burakovsky, 2003).

Ukraine applied for the WTO membership in 1993, and after fourteen years it finally approaches the end of negotiations. Since 1996, Ukraine repeatedly proclaimed its willingness to join the EU\(^4\), although so far the EU has not accepted its membership aspirations. The current relations between the EU and Ukraine are set within the framework of the Partnership and Cooperation Agreement, and the EU Neighborhood Policy. The Ukrainian government itself showed a rather limited commitment to actually introduce the necessary reforms to achieve the EU membership goal. Kuzio (2003) described the relations between Ukraine and the EU as a virtual ones.

Alongside setting the European links, Ukraine participated in regional integration organisations on the post-Soviet space. It joined the CIS, although this organisation proved to failed to gain the reasonable success besides in the first years after the collapse of the Soviet Union. In particular, the initiated establishment of the free trade within the CIS failed (Russia did not ratify the agreement), and was substituted by the web of bilateral free trade agreements among the most of the CIS member countries (Freinkman, Polyakov, and Revenco, 2004). In addition, Ukraine became the observer in the Eurasian Economic Community and one of the founders of the GUAM.

Currently, expecting the close conclusion of the WTO negotiations, Ukraine is once again facing a regional integration choice. On the one hand, in the late 2006 the EU opened negotiations on extended agreement that includes the possibility to set the free trade area (FTA) after Ukraine joins the WTO. On the other, in 2003 Ukraine signed the agreement on the establishment of the Single Economic Space, the Russian regional integration aimed at the forming the customs union among Russia, Ukraine, Kazakhstan, and Belarus.

\(^4\) One of the latest official claim backed my key political forces is put in “Declaration of National Unity” (“Універсал національної єдності”), Ukraine, August 3, 2006
This study is aimed at providing some economic assessment of regional integration options that Ukraine faces. This question is obviously very wide, thus only one some aspects – namely the elimination of tariffs and the reduction of non-tariff barriers – are studied, using a computable general equilibrium model for Ukraine.

The welfare and trade implications of various regional trade agreements (RTA) that proliferated in the world over the last two decades are studied very intensively, both theoretically and empirically. As shown in the overview of the regional integration related studied prepared by Robinson and Thierfelder (1999), the trade theory is ambiguous on whether the RTA are welfare-improving, although such model features as imperfect competition, increasing returns to scale, and dynamics usually generate bigger welfare gains compared to models incorporating only neoclassical production structures.

The empirical evidences are more decisive. In the most of studies the regional integration is beneficial for the countries (see, for example, the general overview of studies conducted by Robinson and Thierfelder (1999); resent papers by Monteagudo and Watanuki (2003); Bartholomew (2002) for Latin America; and by Frandsen, Bach, Stephensen (1997), Le Jour et al. (2001) for Europe, etc.). Though, the conclusion is not as straightforward as could be expected. For instance, a recent study by Sulamaa and Widgren (2004) showed that to be beneficial for Russia free trade between the EU and Russia requires improved productivity in the latter, which may be due to better institutions or increased FDI. Also, recent studies of the FTA applying elaborated multi-sector models that the regional integration could adversely affects the non-member countries (see McDonald and Walmsley, 2003; Francois, McQueen, and Wignaraja, 2005).

There were several studies analyzing the impact of trade liberalization on Ukraine’s economy. Pavel at el. (2004) studied the impact of the WTO accession of Ukraine and showed that the main welfare gain for the country came from tariff reduction and internal reforms, namely the reduction of subsidies. CEPS (2005), Jakubiak and Kolesnichenko (2006), and CASE (2007) found that the deep FTA between Ukraine and the EU is welfare-improving. Moreover, CASE (2007) demonstrated that the EU and Russia also gains from this free trade agreement. However, to the best knowledge of authors, there are no studies conducting quantitative assessment of several regional integration options that Ukraine has and comparing these options. This paper is our attempt to answer the question.
The rest of the paper is as follows. Section 2 briefly describes Ukraine’s trade regimes with the EU and Russia. Section 3 shows the evolution and the current state of commodity trade relations of Ukraine. Section 4 describes the model and presents scenarios. Results are discussed in Section 5, while Section 6 concludes the paper.

2. Trade regimes

2.1. Ukraine – EU

The current relations between Ukraine and the EU are based on the Partnership and Cooperation Agreement (PCA), which was concluded in 1994 but entered into force only in 1998, for an initial period of ten years. The PCA proclaims the principles of democracy, human rights, and market economy, and establishes the framework of corporation between the countries in political, economic, and other spheres. Though, the PCA contains neither explicit plans and mechanisms of cooperation, nor the tool used to assess progress in the cooperation. Thus, it does not replace a traditional “Association Agreement” that has EU membership as its final aim (Vinhas de Souza et al., 2005). Another important document in EU-Ukrainian relations is the Action Plan Ukraine-EU for 2005-2007 accepted in the framework of new European Neighbourhood Policy. The Plan contains rather detailed list of objectives that Ukraine promised to achieve to improve the relations with the EU. But the plan lacks the efficient enforcement mechanisms as well as clear vision of all steps necessary to achieve the goals (Razumkov Centre, 2007).

In commodity trade, Ukraine’s access to the EU market is far less preferential than for many other countries. According to the PCA, the countries trade under the MFN. Also, Ukraine is a beneficiary under the Generalized System of Preferences (GSP). The GSP allows for lower duties than the MFN rates on certain products. Currently there are two categories of products covered by the scheme: non-sensitive, for which duties are suspended, and sensitive, for which rates are reduced. The scheme allows high proportionate reduction for most industrial products, but relatively low proportionate reductions for agricultural products. Also, major exemptions are made for textile and clothing (World Bank, 2004).

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5 The Agreement on Partnership and Cooperation signed on June 16, 1994 between the European Union and Ukraine
7 Council Regulation (EU) No 980/2005 of 27 June 2005 applying a scheme of generalised tariff preferences
Until 2006, Ukraine was excluded from the GSP preferences for iron and steel, grain, seeds, fruits, and plants, fishery products, and fertilizers. These products constitute Ukraine’s core export basket, and thus the GSP provided far less trade concessions for Ukraine than it could be expected. Also, a number of agricultural products of particular importance for the country, notably wheat, are entirely excluded from the scheme (World Bank, 2004).

There are also several agreements between the EU and Ukraine that regulate trade in textile, and in iron and steel. Since 2001 Ukraine has faced no quantitative restrictions on exports of textile and clothing products to the EU. The removal of the quotas was conditioned on Ukraine’s cuts in its tariff for EU textile exports to the maximum rates bound by the EU in the WTO. Several year later all licensing requirements were also lifted.

Ukraine’s exports of certain types of iron and steel products to the EU has been subject to quantitative restrictions since 1995. The newest agreement was signed in June 2006. According to this document, EU import quotas for Ukrainian steel manufacturers was elevated and reached 1.32 million tons per year. The parties also agreed that steel products trade would completely be liberalized after Ukraine’s accession into the WTO.

In 2005 Ukraine received a market economy status. This status ensures that possible antidumping investigations against Ukrainian exporters to the EU are conducted applying normal value of exports based on the prices paid or payable in Ukraine, and not in the third country, as it is required for non-market economies. However, this decision did not eliminate the use of the commercial defence instruments between trading partners. As of the first half of 2007, the EU has set eight antidumping measures and investigations against Ukrainian products, notably on metal and chemical products, while Ukraine has introduced eleven antidumping and countervailing measures that concern the EU exports.

Thus, the current trade concessions between Ukraine and the EU are rather limited. Due to oncoming PCA expiration in December 2006 the EU officially opened negotiations on extended agreement. The mandate for negotiations include the option for the FTA negotiations between the countries as soon as Ukraine becomes the WTO member.

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8 Council Regulation (EU) No 2501/2001 of 10 December 2001 applying a scheme of generalised tariff preferences for the period from January 2002 to 31 December 2004
2.2. Ukraine – Russia

The low efficiency of a ‘wide’ integration within the CIS resulted in the active sub-regional integration processes (Burakovsky, 2003). In particular, it lead to a series of bilateral agreements on free trade among the CIS members, including the agreement between Ukraine and Russia signed in 1993\(^9\). The texts of the agreements are rather similar (Freinkman, Polyakov, and Revenco, 2004). They stipulate duty-free trade in all goods, while allowing for unspecified potential exemptions. The core exemptions, frequently introduced in the protocols of bilateral agreements, include sugar, tobacco, and cigarettes, alcohol and sometimes non-alcohol beverages. Also, there is a practice of reciprocal exemptions in the response to export duties set by a trading partner. Currently the list of reciprocal exemptions include around 150 positions for Russian exports, including fishery products, mineral products, fertilizers, etc.\(^{10}\), and several for Ukrainian exports, namely cattle, skins, and metal scrap. Also, sugar and spirits are exempted from the free trade regime. The tobacco was exempted till 2006.

The intensity of the use of the commercial defence measures and other non-tariff barriers between Ukraine and Russia is high enough to allow some commentators to call the situation a trade war. Indeed, as of July 2007 Ukraine applied fifteen antidumping and countervailing measures and investigations that fully or partially concern the Russian exports, while Russia introduced ten measures, primarily against the machine building and metal products from Ukraine.

The most pronounced example of tensed trade relations between two countries has been a ban on exports of livestock products to Russia introduced in January 2006 (Nivyevskiy, 2006). The formal reason for banning livestock products’ exports was violations of Russian veterinary legislation by Ukrainian meat exporters. However, it remained unclear why this ban has been extended to dairy products instead of tackling meat products directly, as no complaints on dairy products were filed. This decision significantly harmed Ukraine’s dairy production, inflicting losses to both dairy industry and raw milk producers. Russia has traditionally been the largest export market for Ukraine’s dairy industry, accounting for 64% of the entire Ukraine’s dairy export in 2005. In October 2006 two sides came to an agreement

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\(^9\) The agreement was never ratified, but nevertheless it entered into force via the exchange of letters between ministers

\(^{10}\) [http://www.exportsupport.ru/1-ru/law/tarif/tarif](http://www.exportsupport.ru/1-ru/law/tarif/tarif)
that seemed to solve the conflict. A list of Ukrainian companies was agreed to be inspected by Russian veterinary inspection services. However, due to non-transparency and a lack of information on the resolution process, it remained unclear whether and when all Ukrainian dairy and meat producers would receive the permissions from Russian side.

The newest regional integration initiative within the CIS is the Single Economic Space (SES) between Russia, Ukraine, Kazakhstan, and Belarus, launched in 2003. As follows from the agreement, the SES is aimed at the establishment of the customs union among its members with common trade policy. However, the members of the SES seems the desired progress in integration differently. While Ukraine insists on gradual integration with the establishment of the FTA without exemptions as the first stage, Russia wants faster integration (Movchan, Sysenko, 2007). The discrepancy between the objectives of member countries hampers the realization of the project.

The most important concerns raised by the ratification of the SES agreement were its compatibility with the WTO membership and EU integration aspirations of Ukraine (IER, 2003; Tumbarello, 2005). It was clear that the establishment of the customs union prior to the WTO membership would become the major problem with the WTO accession process as it could require re-negotiations on the tariff order (IER, 2003). At the same time, the WTO membership of Ukraine would significantly bind its ability to change duties in line with the partners’ requirements, while tariff adjustment requests should definitely be expected from Russia that has more protectionist strategy and greater political and economic power than Ukraine (World Bank, 2004). Also, it is impossible to be in two different customs union at the same time, the union within the SES would prevent Ukraine’s membership in the EU customs union.

Summing up, the framework of trade relations between Ukraine and Russia is officially more favourable than between Ukraine and the EU. However, numerous tariff exemptions and non-tariff barriers make the trade regime with Russia less certain, and thus less attractive than could be otherwise.
3. Trade flows: EU – Ukraine – Russia

After the enlargement in May 2004, the EU became the largest partner of Ukraine in commodity trade. Since 2002 Ukraine’s trade with the EU-25 accounted for around one third of total merchandize turnover, although the share of exports reduced after its peak in 2003. At the same time, the import share increased and reached record 35% in 2006. Despite this fact, the share of trade with the EU is still substantially below the share from the other Central and Eastern European countries several years before they joined the EU in 2004 (Vinhas de Souza et al., 2005). Moreover, Ukraine remains a minor trade partner for the EU, accounting for less than 1% of its turnover.

The role of Russia – still the largest single country trade partner for Ukraine – has significantly diminished over last decade. The significant decline is registered for Ukraine’s exports to Russia, which reduced from 36% in 1996 to 22% in 2006. Export flows were redirected towards both the EU and the rest of the world, including Asia.

**Chart 1. Merchandize Trade Shares with the EU-25 vs. Russia**

Merchandise imports from Russia also dropped substantially, the share reduced from 44% in 1996 to 31% in 2006. The decline occurred in the imports of energy products, while the share of imports of non-energy products even slightly increased. Thus, despite high energy
intensity of Ukraine\textsuperscript{13}, the country has gradually managed to diversify the sources of energy imports and reduce the energy consumption.

As it was shown in Vinhas de Souza et al. (2005), in the most simplified terms the structure of Ukraine’s trade could be described as westward movement of raw materials and semi-processed goods, and the eastward – of final products, primarily investment goods. These counter-movements characterize both Ukraine-EU and Ukraine-Russia trade relations.

Ukraine exports to the EU-25 metals (mostly, semi-finished products), fuels\textsuperscript{14}, and crude materials, including ores. The share of agro-food exports vary depending on the harvest level and the trade regime applied in the particular marketing year. At the same time, a half of Ukraine’s imports from Russia constitutes fuels and lubricants, while machines and transport equipment account for 19\% of imports.

\begin{like-table}{lcccr}
\toprule
\text{} & \text{Russia} & \text{} & \text{} & \text{EU-25} & \text{} & \text{} \\
\cmidrule(lr){2-3} \cmidrule(lr){5-6}
\text{0} & \text{Food and live animals} & 5.9 & 2.9 & 4.5 & 5.6 \\
\text{1} & \text{Beverages and tobacco} & 3.4 & 0.7 & 0.2 & 1.0 \\
\text{2} & \text{Crude materials, inedible, except 
fuels} & 2.2 & 2.6 & 12.1 & 1.9 \\
\text{3} & \text{Fuels, lubricants, etc.} & 0.9 & 50.3 & 13.4 & 2.6 \\
\text{4} & \text{Animal, veg. oils, fats} & 0.9 & 0.0 & 4.3 & 0.2 \\
\text{5} & \text{Chemicals, related products} & 9.2 & 6.3 & 9.9 & 20.8 \\
\text{6} & \text{Manufactured goods} & 38.3 & 16.1 & 38.1 & 18.0 \\
\text{7} & \text{Machines, transport equipment} & 34.9 & 18.7 & 8.8 & 41.8 \\
\text{8} & \text{Misc. manufactured articles} & 3.6 & 1.9 & 8.5 & 6.9 \\
\text{9} & \text{Goods not classified by kind} & 0.6 & 0.7 & 0.3 & 1.2 \\
\text{Total} & \textbf{100.0} & \textbf{100.0} & \textbf{100.0} & \textbf{100.0} \\
\text{Total (USD m)} & 8650.7 & 13787.2 & 10871.4 & 15611.9 \\
\end{like-table}

\textit{Source: UN ComTrade database, authors’ estimates}

The eastward movement of goods is characterised by much higher value added. Ukraine imports from the EU-25 is dominated by machines and transport equipment that accounts for 42\% of total imports, followed by chemicals and related products. It makes the EU-25 the primary supplier of investment products to Ukraine. The share of machines and transport equipment in Ukraine’s exports to Russia is around 35\%, slightly lagging behind manufactured goods, notably metals. Railway equipment and gas turbines dominate the machine-building exports to Russia, suggesting that the preservation of Soviet Union

\textsuperscript{13} In 2002 the energy intensity in Ukraine is 22 times higher than in Germany on the GDP basis, and approximately 4 times higher than in Germany on purchasing power parity basis (Movchan, 2006).

\textsuperscript{14} Primarily, petroleum processing products. Raw oil is imported from Russia, processed in Ukraine, and sold to the EU.
industrial links determined the structure of Ukraine’s trade more than its newly developed competitive advantages. Russia purchases in Ukraine machines and equipment largely serving as spare parts for capacities that were installed in the country before (Vinhas de Souza et al., 2005).

Summing up, during the last decade Ukraine has significantly reoriented its trade flows, loosening the links with Russia and intensifying the links with other partners, chiefly the EU. It happened despite formally better trade regime that Ukraine has with Russia than with the EU. Thus, it is especially interesting to investigate how the future changes in trade regimes could affect Ukraine’s economy.

4. Model and scenarios

We simulate the impact of the change of trade regime using a Computable General Equilibrium (CGE) model15. The model is constructed on the basis of Ukraine’s Input-Output table and National Accounts for 2004 (Table 2). It can therefore be understood as replication of the whole Ukrainian economy including all major technical and institutional characteristics.

<table>
<thead>
<tr>
<th>Activities</th>
<th>Commodities</th>
<th>Factors</th>
<th>Households</th>
<th>Government</th>
<th>Savings /Investmenets</th>
<th>Change in inventories</th>
<th>ROW</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
<td>882269</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commodities</td>
<td>560589</td>
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<td>185503</td>
<td>60610</td>
<td>77953</td>
<td>-4883</td>
<td>211248</td>
<td>1091020</td>
</tr>
<tr>
<td>Factors</td>
<td>309950</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1128</td>
<td>311078</td>
</tr>
<tr>
<td>Households</td>
<td>302820</td>
<td>23433</td>
<td>8258</td>
<td>79154</td>
<td></td>
<td></td>
<td>844</td>
<td>362692</td>
</tr>
<tr>
<td>Government</td>
<td>11730</td>
<td>23433</td>
<td>8258</td>
<td>79154</td>
<td></td>
<td></td>
<td>279</td>
<td>122854</td>
</tr>
<tr>
<td>Savings /Investmenets</td>
<td>98035</td>
<td>11216</td>
<td>-36181</td>
<td>73070</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Change in inventories

ROW 185318

Total 882269 1091020 311078 362692 122854 73070 -4883 185318

Sources: State Committee of Statistics of Ukraine, authors’ estimates

15 The model used in this study is the modified version of the model developed by the consortium of three institutions (Copenhagen Economics, Denmark; Institute for East European Studies Munich, Germany; and Institute for Economic Research and Policy Consulting, Ukraine) within the framework of the project “Analysis of the Economic Impact of Ukraine’s WTO Accession” (2005). Dutch Grant № TF 050270
As in preceding model developed by Pavel et al. (2004), the production side of the economy is summarized in 38 sectors. Production in each sector requires the use of intermediate inputs of goods and services as well as primary factors capital and labour, the latter distinguished by two skill levels. Aggregate output can either be exported to several different regions (divided into Russia, Belarus, Kazakhstan, rest of the CIS, EU-15, 10 new member states of the EU, other European countries with MFN trade regime, American countries, African countries and Asian countries with MFN regime, and ROW) or sold on domestic markets. Together with imports from all trade partners it forms the total aggregate of goods and services available for domestic consumption.

To sufficiently reflect the technical characteristics of Ukraine’s economy production is divided into perfectly and imperfectly competitive sectors. With the exemption of the capital stock in coal mining and energy transit pipelines, all production factors are perfectly mobile.

On the consumption side, the model distinguishes between public, investment and intermediate consumption as well as final household consumption for four different types of households, non-poor rural and urban households and poor rural and urban households. Non-poor households are endowed with both, labour and capital and spend a constant share of their income for investment goods. In contrast, poor households only have labour endowments. Final consumption of each household type is modelled within a Linear Expenditure System (LES), the parameters of which have been econometrically estimated on the basis of household survey data.

Consumers treat imported and domestically produced goods as imperfect substitutes while producers regard sales on domestic markets or exports as imperfect alternatives, a standard Armington assumption. Exports and imports are disaggregated into different trading partners and modelled with constant elasticities of transformation and substitution. Direct taxes/subsidies are modelled as sector-specific taxes/subsidies on the use of primary input factors. Indirect taxes/subsidies are modelled as a commodity specific tax on private (household) and investment demand. Import tariffs are commodity- and region-specific and apply for all imports.

The government receives income from public capital endowments and collects a variety of taxes. These taxes and the associated ad-valorem rates include taxes on output, taxes on intermediate inputs, tariffs, taxes on public demand, taxes on investment demand, taxes on
exports, and taxes on consumption. Total government revenue is used for public investments and the provision of public goods.

The model uses two closure procedures. First, on the macro economy level, total investments must equal the sum of depreciation, public and private savings and the current account balance. Second, on the government level, fiscal revenue from various direct and indirect taxes must increase to offset the lost revenue from tariff reduction in any counterfactual in which tariffs are reduced. In other words, there is an equal government yield constraint. This is achieved through adjustment of the level of lump sum transfers to households.

Several scenarios were considered to estimate the economic impact of the possible changes in trade regimes with key Ukraine’s trading partners, namely with the EU-25 and Russia.

Currently Ukraine conducts preliminary unofficial talks with the EU concerning the establishment of the free trade area. The official talks are expected to start as soon as Ukraine becomes the member of the WTO, the negotiations with which are at the final stage. Thus, the scenarios concerning the change in the trade regime with the EU include the following:

**Scenario 1: Deeper integration with the EU.**

**Scenario 1a:** Establishment of a simple FTA that envisages a mutual nullification of import duties.

**Scenario 1b:** Establishment of a extended FTA that envisages a mutual nullification of import duties and the reduction of the non-tariff barriers. The latter is modelled as a reduction in the import price for EU-25 products and the increase in the export price for Ukrainian products by 5%\(^{16}\), respectively.

The future regional integration process with the CIS could be modelled by the following scenarios:

**Scenario 2. Deeper integration within the CIS.**

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\(^{16}\) According to the results of IER survey of manages in 2004, the total costs of various non-tariff barriers add up to 13% of total value of shipment. It is obvious that the establishment of the FTA would not result in elimination of barriers. Thus, we assumed that the cost will be reduced by a bit more than one third of original costs.
It includes the elimination of exemptions from the free trade (in particular, in trade with Russia on fishery products, fuels, and wood products), and the reduction of non-tariff barriers. The latter is modelled as a reduction in the import price for the CIS products and the increase in the export price for Ukrainian products to the CIS by 3%, respectively\(^\text{17}\).

**Scenario 3. Deeper integration within the SES.**

**Scenario 3a.** The adjustment to the Russian tariff schedule by Ukraine, and the change in treatment of Ukraine as a trade partner (the EU sets import duties for Ukraine at the level of duties for Russia), and the elimination of exemptions in trade with the SES members\(^\text{18}\).

**Scenario 3b.** The adjustment to the Russian tariff schedule by Ukraine, the change in treatment of Ukraine as a trade partner, the elimination of exemptions in trade with the SES members, and the reduction of non-tariff barriers. The latter is modelled as a reduction in the import price for the SES products and the increase in the export price for Ukrainian products to the SES by 3%, respectively.

For all scenarios, it is assumed that Ukrainian tariff schedule is set within the bounds of its WTO obligations\(^\text{19}\). The tariff duties used in scenarios are presented in Table 3. As could be seen, agro-food tariffs are the highest in all three trading partners (Ukraine, Russia, and the EU), with Russia outbidding the rest of countries. Tariffs on industrial products are on average the lowest in the EU, and the highest in Russia.

### Table 3. Estimate of imports duties of Ukraine, Russia, and the EU, %

<table>
<thead>
<tr>
<th>SAM code</th>
<th>Sector</th>
<th>Ukraine import duties after WTO accession</th>
<th>Russia import duties</th>
<th>EU import duties for Ukraine</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01</td>
<td>Agriculture, hunting</td>
<td>2.1</td>
<td>8.3</td>
<td>4.4</td>
</tr>
<tr>
<td>A02</td>
<td>Forestry</td>
<td>1.3</td>
<td>10.2</td>
<td>0.4</td>
</tr>
<tr>
<td>A03</td>
<td>Fishing</td>
<td>2.8</td>
<td>10.9</td>
<td>5.9</td>
</tr>
<tr>
<td>A04</td>
<td>Mining of coal and peat</td>
<td>0.0</td>
<td>5.0</td>
<td>0.0</td>
</tr>
<tr>
<td>A05</td>
<td>Production of hydrocarbons</td>
<td>0.0</td>
<td>5.0</td>
<td>0.0</td>
</tr>
<tr>
<td>A06</td>
<td>Production of non-energy</td>
<td>1.1</td>
<td>5.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

\(^{17}\) As the level of harmonisation of the system of non-tariff barriers in the former Soviet Union is higher than between Ukraine and the EU, the reduction in non-tariff barriers costs is estimated to be lower.

\(^{18}\) It means the decrease in export prices for selected Ukrainian products: in A01 (agriculture) by 0.24%, in A07 (food products) by 1.76%, and A14 (metals) by 0.43%.

\(^{19}\) The major changes in Customs Tariff in Ukraine occurred in 2005 when more than three quarters of tariff lines were changed in line with Ukraine’s tariff proposal. Tariffs for agro-food products are to be adjusted after the accession.
### Table 4. Macroeconomic impact of the changes in trade regime

<table>
<thead>
<tr>
<th>SAM code</th>
<th>Sector</th>
<th>Ukraine import duties after WTO accession</th>
<th>Russia import duties</th>
<th>EU import duties for Ukraine</th>
</tr>
</thead>
<tbody>
<tr>
<td>A07</td>
<td>Food-processing</td>
<td>12.0</td>
<td>19.6</td>
<td>15.0</td>
</tr>
<tr>
<td>A08</td>
<td>Textile and leather</td>
<td>5.1</td>
<td>15.4</td>
<td>6.1</td>
</tr>
<tr>
<td>A09</td>
<td>Wood, furniture, paper, publishing</td>
<td>0.3</td>
<td>15.9</td>
<td>0.4</td>
</tr>
<tr>
<td>A10</td>
<td>Production of coke</td>
<td>1.4</td>
<td>7.5</td>
<td>0.0</td>
</tr>
<tr>
<td>A11</td>
<td>Petroleum refineries</td>
<td>0.2</td>
<td>5.0</td>
<td>0.0</td>
</tr>
<tr>
<td>A12</td>
<td>Chemicals, rubber and plastic</td>
<td>3.0</td>
<td>7.5</td>
<td>1.0</td>
</tr>
<tr>
<td>A13</td>
<td>Non-metallic mineral products</td>
<td>8.1</td>
<td>14.5</td>
<td>0.9</td>
</tr>
<tr>
<td>A14</td>
<td>Metallurgy and metal processing</td>
<td>1.8</td>
<td>10.3</td>
<td>0.4</td>
</tr>
<tr>
<td>A15</td>
<td>Machinery and equipment</td>
<td>4.2</td>
<td>8.3</td>
<td>0.3</td>
</tr>
<tr>
<td>A16</td>
<td>Other products</td>
<td>1.2</td>
<td>13.0</td>
<td>0.1</td>
</tr>
<tr>
<td>A17</td>
<td>Electricity</td>
<td>2.0</td>
<td>5.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: Ukraine Customs Tariff, Market Access Map, authors’ estimates

### 5. Results

#### 5.1. Impact on welfare and GDP

The simulations showed that in general the deeper trade integration is beneficial for Ukraine, both in the case of trade with the EU and with the CIS. As shown in Table 4, in scenario 1b, the establishment of the deep FTA with the EU after the WTO accession could result in 3.1% increase in the real GDP and significant 8.1% improvement in the welfare over the medium-term horizon. The benefits are distributed quite evenly, as both skilled and unskilled workers see an increase in real wages.

<table>
<thead>
<tr>
<th>Change in real GDP, %</th>
<th>Deeper integration with the EU</th>
<th>Deeper integration within the CIS</th>
<th>Deeper integration within the SES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sc1a</td>
<td>sc1b</td>
<td>sc2</td>
</tr>
<tr>
<td>Change in real GDP, %</td>
<td>0.4</td>
<td>3.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Total change in welfare, %</td>
<td>0.6</td>
<td>8.1</td>
<td>6.3</td>
</tr>
<tr>
<td>Change in the skilled real wage, %</td>
<td>0.0</td>
<td>2.6</td>
<td>2.1</td>
</tr>
<tr>
<td>Change in the unskilled real wage, %</td>
<td>0.1</td>
<td>2.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Change in exports, %</td>
<td>0.3</td>
<td>2.9</td>
<td>2.2</td>
</tr>
<tr>
<td>Change in imports, %</td>
<td>0.4</td>
<td>3.7</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Source: authors’ estimates

The most of benefits are associated with the reduction of non-tariff barriers to trade, including border costs, while the welfare gains from the mutual nullification of tariffs are quite low. According to scenario 1a, the elimination of import duties only result in only 0.4% increase in real GDP and 0.6% rise in welfare. This finding goes in line with results of
Edwards (2005) who showed that the effects of harmonisation and mutual recognition are important for the trade and welfare effects of regional integration.

The results are also comparable with other studies of the impact of trade regime changes in Ukraine. According to CEPS (2006), the simple FTA results in negligible welfare gains, while for the deep FTA, gains constitute 4-7%. Also, CASE (2007) concluded that the positive welfare effects are largest in the extended FTA between Ukraine and the EU. They estimated that the integration leads to 2% increase in welfare for Ukraine. Jakubiak and Kolesnichenko (2006) expect that the deep FTA between Ukraine and the EU could result in 1-2% welfare gains, mainly due to the elimination of non-tariff barriers to trade as a result of harmonisation of Ukrainian regulation and mutual recognition of norms and standards.

Pavel et al. (2004) showed that the welfare gains of Ukrainian households from the WTO accession constitute around 3%, largely due to reduction of subsidies and import tariffs. It should be noted that the gains from the tariff reduction due to WTO accession are larger than in the case of the FTA, as the scope of tariffs change is much higher in the former case.

Deeper integration within the CIS, namely the elimination of exemptions from free trade and the reduction of non-tariff barriers, also bring gains for Ukraine, although the scope of GDP and welfare gains is smaller than in the case of the deep FTA with the EU. As results of scenario 2 shows, deeper integration within the CIS could result in 2.1% gain in real GDP and 6.3% gain in welfare. Here, skilled workers are expected to be better off than the unskilled workers facing higher real wage increase.

On the contrary, the deep integration within the SES that envisages the adjustment to the Russian import duties schedule has clear negative impact on Ukraine’s economy. As shown in scenario 3a, it could result in 0.6% reduction in real GDP and 0.7% reduction in welfare over medium-term horizon. It is explained by higher tariff protection in Russia than in Ukraine. The reduction of non-tariff barriers could counterweight this effects as scenario 4b shows. However, the same effect could be achieved by the deeper integration within the CIS. Moreover, in the latter case the effect of non-tariff barriers reduction could be stronger as it is expanded over larger number of countries.
Thus, the overview of the macroeconomic consequences of Ukraine’s trade regime changes confirms the accuracy of the declared strategy for deeper integration with the EU as the most beneficial option for the economic development and welfare. Further harmonisation of non-tariff barriers within the CIS is also an important direction for Ukraine’s regional integration. At the same time, the establishment of the common tariff schedule with Russia currently is not in the interests of Ukraine, as it could result in the welfare gains due to higher level of protectionism in Russia and the differences in country’s industrial structures.

5.2. Trade effects

The discussion of the impact of various regional integration scenarios would be incomplete without the overview of trade effects. As shown in Table 5, both deeper integration with the EU and with the CIS increases total turnover due to higher exports and imports. However, the trade outside the relevant regional trade agreement (RTA) not always increase. In particular, the deeper integration with the EU could result in the reduction of trade with the rest of the world by 1.4% in the case of establishment of the simple FTA, largely due to the diversion of imports from non-EU countries. However, the deep FTA allows to overcome these negative consequences boosting the economic development of the country, and thus its trade with all partners. In scenario 1b the merchandise trade turnover increases by 0.8% for non-EU countries, due to higher imports.

<table>
<thead>
<tr>
<th>Table 5. Trade effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deeper integration with the EU</td>
</tr>
<tr>
<td>sc1a</td>
</tr>
<tr>
<td><strong>Total turnover</strong></td>
</tr>
<tr>
<td>including</td>
</tr>
<tr>
<td>Turnover with relevant RTA</td>
</tr>
<tr>
<td>Turnover outside relevant RTA</td>
</tr>
<tr>
<td><strong>Total exports</strong></td>
</tr>
<tr>
<td>including</td>
</tr>
<tr>
<td>Exports to relevant RTA</td>
</tr>
<tr>
<td>Exports to outside relevant RTA</td>
</tr>
<tr>
<td><strong>Total imports</strong></td>
</tr>
<tr>
<td>including</td>
</tr>
<tr>
<td>Imports from relevant RTA</td>
</tr>
<tr>
<td>Imports from outside relevant RTA</td>
</tr>
</tbody>
</table>

Source: authors’ estimates
The deepening of regional integration within the CIS appears to be the most beneficial for trade, although has lower welfare effects that the deep FTA with the EU. In particular, the trade turnover, as well as imports grow not only within, but outside this RTA. Thus, there are no evidence of trade diversion due to the deeper CIS integration from Ukraine’s standpoint.

Contrary to the previous scenarios, deeper integration within the SES demonstrated a signs of trade diversion effects. Specifically, for both scenarios 3a and 3b total imports from the SES increases, while the imports from the non-SES members drops by 1.6-5.0%. Also, exports to the countries outside the SES reduces.

Summing up, the involvement of Ukraine into the RTA that envisage the significant reduction of trade barriers for member states without an increase in trade barriers for the non-member countries results in aggregate trade augmentation effect (at least, from Ukraine’s standpoint). At the same time, the building-up of external barriers even in the case of the reduction of trade restrictions with the RTA, as it seems to be the case for the SES, has a clear negative effect on trade with the non-member states, deteriorating welfare.

6. Summary and conclusions

More than two thirds of Ukraine’s merchandize trade are conducted with its closest neighbours: the EU and the CIS, although over the last decade a considerable reorientation of trade flows occurred towards the EU. This reorientation occurred despite the fact that formally the EU provides Ukraine with less favourable trade concessions than the country has with Russia. While the trade with the EU is conducted under the MFN with benefits provided within the basic system of the GSP, there is a duty-free trade with Russia for the most of products.

Currently Ukraine faces several options of further regional integration, including the FTA with the EU and deeper integration within the CIS or SES. The analysis of the economic impact of these options demonstrated that Ukraine gains both from deep FTA with the EU and the elimination of exemptions and the reduction of non-tariff barriers within the CIS. At the same time, the deep integration within the SES results in the reduction in Ukraine’s welfare because of the expected increase in trade barriers for the non-member countries compare to Ukraine’s level of protection.
Thus, currently it seems economically beneficial for Ukraine to opt for the continuation of the mixed strategy of regional integration. It means the country should pursue the goal of the establishment of the deep FTA both with the EU and CIS, but avoiding the establishment of something like the customs union within the SES. Clearly, such a dual regional integration strategy would require further work on the bringing standards and regulation to one common denominator, likely to the EU standards and regulations, the improvement of border control, and the decision on a proper rules of origin to avoid the transhipment problems.

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