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Abstract

A functioning Belarus-Russia-Kazakhstan Customs Union (BRK-CU) would comprise the bulk of the FSU economy and represent a significant step towards an attempted re-integration of the FSU – even more so if Ukraine were also to join. There are still important structural differences in intra-regional compared to extra-regional trade of these countries, regarding exports in particular. The existing specialization patterns and comparative advantages may – apart from purely political considerations – provide some economic rationale for closer trade integration. Our difference-in-difference gravity-based estimates indicate that during the period 1999-2009 liberalization took place primarily in the trade of Belarus, Russia, Kazakhstan and Ukraine with third countries, whereas in their mutual trade barriers in many manufacturing and services sectors actually increased.

The BRK-CU largely eliminated the remaining non-tariff barriers in mutual trade and, upon the adoption of a Common External Tariff (CET) in 2010, unified the participating countries' trade policies vis-à-vis third countries. As a result of CET adoption, the average (unweighted) level of protection declined by about 2 p.p. in Russia and 1.3 p.p. in Belarus, but increased by around 2.5 p.p. in Kazakhstan. Available estimates of the economic effects of the BRK-CU differ by a wide margin. Our computable general equilibrium (CGE) estimation results suggest that joining the BRK-CU might potentially bring net GDP losses to Ukraine. BRK-CU membership appears to bring net GDP and welfare losses also to Kazakhstan whereas Belarus and Russia benefit in terms of GDP and labour income growth. There seems to be little (economic) justification for Russia prompting Ukraine to join the BRK-CU. Ukraine, on the other hand, is likely to have a significant increase in GDP and real labour income after implementing the DCFTA with the EU.

Keywords: *foreign trade, integration, Customs Union, gravity and CGE modelling, Belarus, Kazakhstan, Russia, Ukraine*

JEL classification: *C5, F1, F5, P3*

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Institutional benchmarking, economic and trade analysis

1. Key economic developments and linkages on the post-Soviet space

1.1 Introduction

The republics of the former Soviet Union (FSU) provide a unique opportunity to examine the impact of alternative economic integration agreements. Even more than twenty years after the collapse of the USSR there still remain significant – albeit diminishing and varying in individual cases – economic, trade and cultural linkages among the FSU republics. At the same time, there is a substantial variation in the institutional arrangements governing trade between FSU republics, both across the region and over time.[1] In addition, as some countries in the region already belong to the WTO (Kyrgyzstan, Moldova, Georgia, Armenia and Ukraine; Russia joined in July 2012) while others still do not (in particular Belarus and Kazakhstan), external institutional constraints also vary across the region.

The Belarus-Russia-Kazakhstan Customs Union (BRK-CU) has been in preparation for several years (the idea was first launched already in 1995 and the respective agreement was signed in October 2007 in Dushanbe at the meeting of the Euro-Asian Economic Community – EurAsEC).[2] This section starts with an overview of recent economic developments in the countries concerned, followed by an outline of their key trade, production and investment links. A more detailed analysis of foreign trade specialization patterns, both within and without the region, follows. Finally, a broad assessment of policy implications stemming from the findings is enclosed.

1.2 Recent economic developments

BRK-CU countries account for more than 85% of the CIS' GDP and exports, for 78% of imports and 60% of population (168 million inhabitants). A successfully functioning BRK Customs Union would thus comprise the bulk of the FSU economy and represent a significant step towards an attempted re-integration of the FSU.[3] Including Ukraine, the economy

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[1]   The CIS (Commonwealth of Independent States), established in 1992 after the collapse of the Soviet Union, currently comprises 11 FSU states (Estonia, Latvia and Lithuania have never joined, while Georgia quit in 2009 after the war with Russia in 2008).

[2]   Apart from these 3 countries, EurAsEC comprises another two FSU republics: Kyrgyzstan and Tajikistan. For details on the various integration steps on the post-Soviet space, see Section 3 below.

[3]   The latter was announced as the ultimate aim of an enlarged BRK-CU (adding Kyrgyzstan and Tajikistan) after the launch of the Common Economic Space in January 2012 by Russian Prime Minister V. Putin – see *Izvestiya*, 5 October 2011.

of which is smaller than that of Kazakhstan (but with a much bigger population, 46 million versus 16.5 million), the Customs Union would comprise more than 90% of FSU's GDP (nearly USD 2300 billion in 2011). Indeed, a re-integration strategy has been pursued for years mainly by Russia, so far without much success. There are many reasons and explanations for this, but the sheer predominance of Russia in any post-Soviet integration arrangements – 75% of the CIS' GDP, resp. 82% of the BRK plus Ukraine's GDP – represents one of the key economic aspects of post-Soviet integration difficulties (Figure 1.1).

Figure 1.1

Nominal GDP of BRK countries and Ukraine, 2000-2011

(in USD billion, at exchange rates)
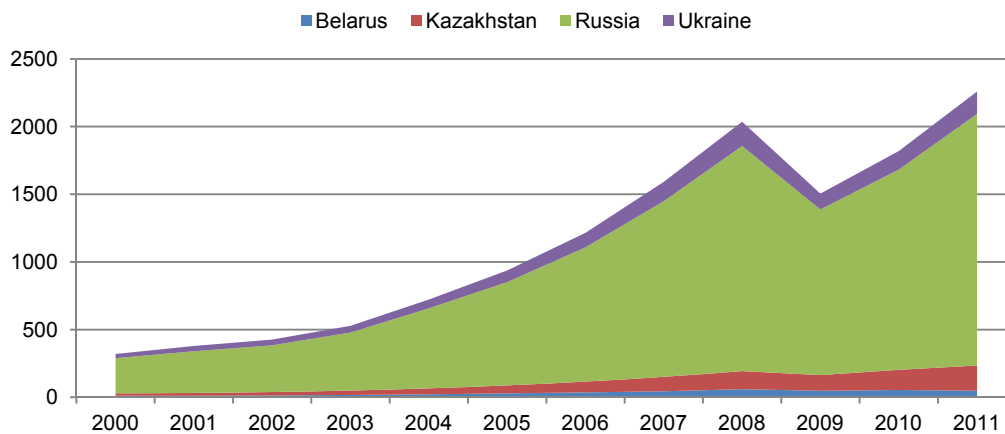
Source: CISSTAT Database, own calculations.

Overall, economic growth in most countries concerned has not been particularly impressive during the transition period: between 1990 and 2011, GDP increased by about 90% in Belarus and by 65% in Kazakhstan, but just 12% in Russia. In 2011, Ukraine's GDP was still 30% below the 1990 level according to wiiw calculations.[4] This compares with a 66% GDP increase in the New EU Member States (NMS) and a nearly 50% GDP increase in the EU-27 in the same period, according to wiiw estimates. The more recent period has been more successful: between 2000 and 2011, the real GDP more than doubled in Belarus and Kazakhstan, in Russia and Ukraine it increased by 67% and 60%, respectively (this compares with a 48% increase of GDP in the NMS and 18% in EU-27 during the same period).[5]

In 2009, Belarus and Kazakhstan were among the few transition countries (others being Albania and Poland) who could avoid a recession whereas both Russia (-7.8% drop in GDP) and Ukraine (-14.8%) were hit particularly hard. In both 2010 and 2011, GDP growth resumed in all four countries (more than 7% increase in Belarus and particularly in Kazakhstan, more than 4% in Russia and Ukraine). The latest forecasts reckon with decelerating yet still respectable growth in the range of 3%-6% per year in the coming years,

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[4]   wiiw estimates are based on the CIS Statistical Database (http://www.cisstat.com).

[5]   See Podkaminer et al. (2012).

slowly abating inflation (except Belarus) and current account surpluses (Kazakhstan and Russia) resp. current account deficits (Belarus and Ukraine).[6]

1.3 Comparison of economic structures

Another aspect complicating the integration attempts on the post-Soviet space is a remarkable diversity in the economic performance and economic structures of the countries concerned (other diversity aspects being the above-mentioned size of the economy and economic development levels, the latter ranging from 23% of the average EU-27 level in terms of GDP per capita at PPP in 2011 in Ukraine to 53% in Russia, with Belarus and Kazakhstan lying in between at about 45% of the average EU level).[7]

The broader economic structures of BRK-CU countries (and Ukraine) differ: the share of industry in total gross value added ranged from 26% in Ukraine to 33% in Kazakhstan in the year 2010 (with Belarus and Russia in between – Figure 1.2). Except for Kazakhstan, in all four countries the relative importance of industry has declined over the past two decades; the share of agriculture dropped as well (most in Belarus and Ukraine). At the same time, the share of services increased everywhere and the respective shares varied again: from less than 50% of the total gross value added in Belarus to more than 62% in Ukraine (year 2010 – see Figure 1.2). Generally, the processes of de-industrialization, de-agrarization and structural shifts towards services have been broadly similar to those observed earlier in other transition countries in Central and Eastern Europe (see Havlik in Grinberg et al., 2008).

Even more pronounced structural differences can be observed at the more detailed industry level. Within industry, Belarus and Ukraine have the highest shares of manufacturing (nearly 90% of the total industrial output in Belarus) whereas Russia and especially Kazakhstan have a large extraction sector. Within manufacturing, the biggest sector (in terms of shares in gross output) is food and beverages (in Belarus) and basic metals (Ukraine, Kazakhstan and Russia) respectively. In Belarus, chemicals as well as machinery and equipment play a relatively prominent role – at least compared with the remaining countries (Figure 1.3). These specialization patterns reflect both the legacy of the Soviet past, varying resource endowments, the widely different transformation strategies[8] and, last but not least, the general lack of foreign direct investment and a resulting delayed restructuring coupled with lagging integration in the global economy. From the perspective of their diverse industrial specialization, a joint import tariff structure of the Customs Union should affect the individual member countries differently (see below).

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[6]   See tables with the main economic indicators in Annex I. The authors' brief country reports and forecasts were published in Podkaminer et al. (2012). For Belarus see, for example, *CISSTAT Bulletin*, No. 12(507), December 2011.

[7]   Own estimates based on Eurostat and CISSTAT database.

[8]   E.g. the relatively favourable industrial structure of Belarus is to a large extent the result of state-supported 'pro-growth' economic policies over the past 20 years.

Figure 1.2
Structure of gross value added in BRK and Ukraine, 2005 and 2010 (in % of total GVA)
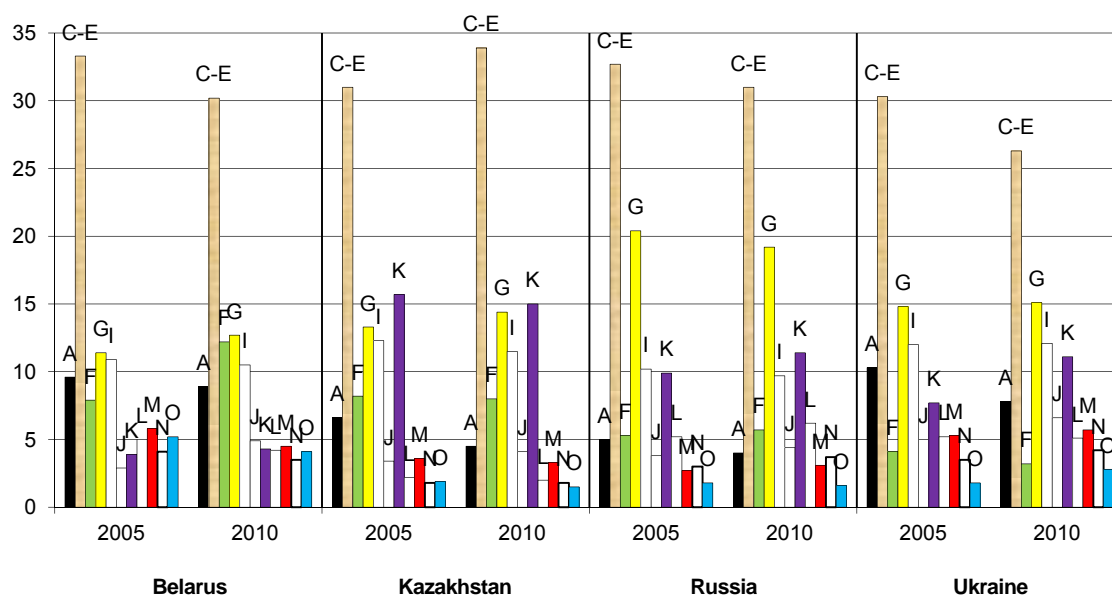
A: Agriculture, hunting and forestry, C-E: Industry total (C: Mining and quarrying, D: Manufacturing, E: Electricity, gas and water supply), F: Construction, G: Wholesale, retail trade, repair motor vehicles, I: Transport, storage and communications, J: Financial intermediation, K: Real estate, renting & business activities, L: Public administration, defence, compulsory social sector, M: Education, N: Health and social work, O: Other community, social & personal services.

Source: CISTAT, *Statistical Bulletin*, No. 6, 2011, pp. 44-46, Moscow

Figure 1.3
Structure of industry by branch in BRK and Ukraine, 2005 and 2010 (in % of gross output)
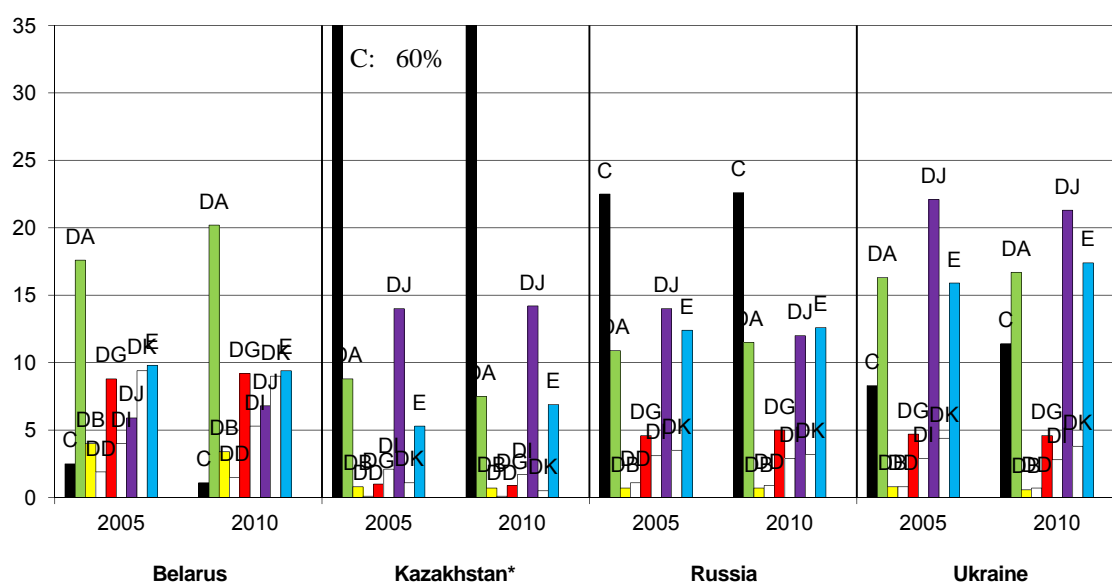
C: Mining and quarrying, DA: Food products, beverages and tobacco, DB: Textiles and textile products, DD: Wood and wood products, DG: Chemicals, chemical products and man-made fibres, DI: Other non-metallic mineral products, DJ: Basic metals and fabricated metal products, DK: Machinery and equipment n.e.c., E: Electricity, gas and water supply.

*) The share of mining and quarrying (C) in Kazakhstan was about 60% in both 2005 and 2010.

Source: CIS Statistical Abstract 20 Years, CISSTAT, Moscow, 2011, pp. 114-115.

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2. Regional trade developments

2.1 Soviet disintegration

The economic effects of Soviet disintegration have been analysed in detail already before the actual break-up of the USSR. The detailed study of the Soviet economy undertaken jointly by The World Bank, IMF and OECD (1991) addressed trade issues as well. In a broader context, Havlik (1991) analysed issues related to the economic consequences of the CMEA disintegration. Comprehensive analyses covering various (not only trade) aspects of Soviet disintegration were done by Vavilov and Vyugin (1993) and others (e.g. Williamson, 1993). The economic implications of the 'Slavic dis-Union' were studied inter alia by Boss and Havlik (1994), Senik-Leygonie and Gordon (1992), as well as by Linn (2004). Michalopoulos and Tarr (1994) investigated in detail trade patterns in the FSU. Havrylyshyn and Pritchett (1991) studied post-transition trade patterns, Hoekman and Djankov (1997) analysed determinants of export structure in the region. Havrylyshyn and Al-Atrash (1999) investigated the geographic diversification of trade, Djankov and Freund (2000) analysed various aspects of the trade disintegration in the former Soviet Union.

More recently, the economic restructuring and integration in Eastern Europe (experiences of new EU member states – NMS – and selected CIS countries) were investigated by a large international research network coordinated by wiiw (Grinberg, Havlik and Havrylyshyn, 2008). Issues covered included intra-industry trade patterns and trade integration between the EU and the CIS, foreign trade restructuring in Belarus, Kazakhstan, Moldova, Russia and Ukraine, estimating the effects of WTO accession in Belarus (Kurilionak et al. in Grinberg et al., 2008), simulating WTO accession effects with the GSIM model for Russia, Ukraine and Belarus (Wörz et al. in Grinberg et al., 2008), as well as lessons from the trade restructuring in the NMS for the CIS (Havlik in Grinberg et al., 2008). Following Vinhas de Souza (2003), Kurilionak et al. (2008) also address the consequences of Russia's likely earlier WTO accession for Belarus. Broadman (2005) analysed the path from disintegration to reintegration in the region on behalf of the World Bank. Lissovolik and Lissovolik (2006) studied the implications of being outside the WTO for Russia, Vinhas de Souza (2006) discussed trade between the enlarged EU and Russia in a wider Europe, and Vinhas de Souza et al. (2006) looked at the evolution of Ukraine's relations with the EU.

Rutherford, Tarr and Shepotylo (2005) looked in detail at welfare effects of Russia's WTO accession. The same authors studied WTO accession effects on FDI in services (Rutherford, Tarr and Shepotylo, 2006). A comprehensive summary of various estimates regarding the effects of WTO accession on Russia as well as other topics related to Russia's WTO accession were analysed by Tarr (2008). The implications of free trade agreements between the individual CIS countries and the EU were analysed also by CASE.[9]

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[9]   See Francois and Manchin (2008) and Jarocinska et al. (2010). For recent studies, see Section 2.2 below.

Documents relevant to WTO accession are available inter alia at the WTO website (www.wto.org). The BRK Customs Union has launched its own website as well (http://www.tsouz.ru/Pages/Default.aspx) where various normative documents, the detailed customs code (more than 500 pages, only in Russian) and selected BRK trade statistics are available.[10]

Trade disintegration has been one of the consequences of the collapse of the Soviet Union. The economic disintegration had far reaching adverse consequences for all individual newly independent states. Various attempts at re-integration had been launched since 1991: the establishment of the Commonwealth of Independent States (CIS) initially comprising 12 former Soviet republics and other (less comprehensive) integration efforts (such as the Common Economic Space, EurAsEC, Union of Russia and Belarus, GUAM), mostly initiated by Russia,[11] have so far largely failed. On the contrary, further trade disintegration could not be averted and the shares of mutual (intra-CIS) trade have markedly declined. As far as the CIS' external trade is concerned, there has been an ongoing geographic trade reorientation to markets outside the former Soviet Union, namely in Europe and Asia.[12]

Simultaneously with the process of regional disintegration there has been an integration of post-Soviet states in the global economy. Several FSU republics have already become members of the WTO (Armenia since 2003, Kyrgyzstan since 1998, Moldova since 2001, Georgia since 2000, Ukraine since 2008 and Russia since July 2012), others – notably Belarus and Kazakhstan – have been negotiating WTO accession since the mid-1990s. The negotiating process has been dragging on for years, in several cases (Russia, Belarus) additionally hampered by political developments.

2.2 Geographic and commodity structure of merchandise trade

In this section we provide first a brief overview of key trade developments and of the regional structure of Belarus', Kazakhstan's, Russia's and Ukraine's external trade. Furthermore, we look at the commodity composition of exports and imports in their total and bilateral trade, respectively. The mutual (intra-CIS) trade has been diminishing in relative terms, yet there remain important structural differences compared to extra-CIS trade of these countries, especially regarding exports. These differences have important implications for growth and development patterns in the countries concerned. The existing specialization patterns and comparative advantages may – apart from purely political considerations

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[10] There is an unofficial English translation of the abbreviated version of the Customs Union's customs code available at: http://www.tsouz.ru/Docs/kodeks/Documents/TRANSLATION%20CUC.pdf.

[11] Only GUAM (a more political club comprising Georgia, Ukraine, Azerbaijan and Moldova) does not include Russia.

[12] However, the recent integration steps (EurAsEC, Customs Union, Common Economic Space – see Section 3 below for details) give rise to claims with some observers that the post-Soviet regional integration is making progress – see e.g. Grinberg (2012).

which seem to prevail (at least in the case of Russia) – provide some economic rationale for closer trade integration and the establishment of a customs union.

Figure 2.1

Belarus: Foreign trade by country groupings

% of total

■ EU ■ CIS ■ China ■ Other

Exports

Imports

Source: CISSTAT.

The main structural features of Belarus', Kazakhstan's, Russia's and Ukraine's external trade developments are summarized in Figures 2.1-2.4 (detailed trade statistics are shown in Annex II). Despite the disintegration mentioned above, trade exchanges within the CIS still remain rather important – especially for the smaller CIS republics such as Belarus. In 2010, exports to the CIS region accounted for up to 54% of total exports in Belarus (a jump by 10 p.p. compared to 2009) and for 36% in Ukraine.[13] The CIS region has been an even more important source of imports – up to 60% of the total imports in the case of Belarus, 46% in Kazakhstan and 44% in Ukraine (year 2010). Russia's dependence on the CIS markets has been much smaller (about 15% of total exports and only 14% of imports were

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[13] During the final years of the USSR, Vavilov and Vyugin (1993) estimated that more than 80% of Belarus, Kazakh and Ukrainian exports went to other Soviet republics (import shares were only marginally lower). Even Russia traded more than half of its exports and imports with other Soviet republics in 1987.

traded with the CIS) as it has by far the largest economy and is trading mainly with the European Union. For Russia, the CIS shares in exports and imports (both roughly 15% in 2011) are now nearly equal to the results of the gravity model estimated by Vavilov and Vyugin (1993); in Belarus and Ukraine the respective shares are still much higher (50%-60% in Belarus, 36%-45% in Ukraine, and in Kazakhstan 46% of imports). Indeed, it could be possibly interpreted that Russia's interest (if it exists at all) in the CIS integration (Customs Union, EurAsEC, etc.) is more of a political than an economic nature.

Figure 2.2

Russia: Foreign trade by country groupings

% of total

■ EU-15 ■ NMS-12 □ CIS ■ China □ Other

Exports

Imports
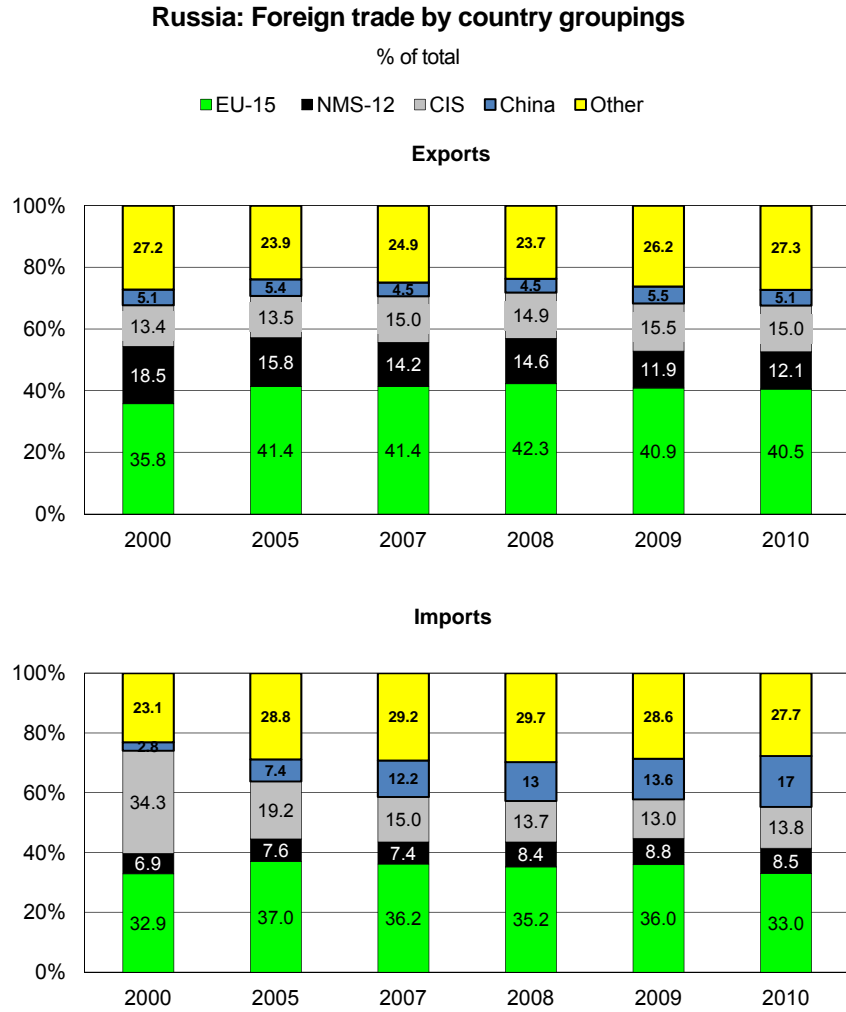
Source: CISSTAT.

During the past decade, the overall external trade of the countries concerned grew rather fast – despite the interruption in 2009 which resulted from the combination of global crisis and the collapse of commodity prices. Between the years 2000 and 2010, Kazakhstan's overall exports increased by more than 550%, exports from Belarus, Russia and Ukraine by around 250% (Figures 2.5-2.8 and Annex II). With respect to imports, the fastest growth is reported by Russia (+540%), followed by Kazakhstan (+390%), Ukraine (+340%) and Belarus (+300% – see Figures 2.5-2.8 and Annex II). All four countries recorded the tem-

porary peak of exports and imports in 2008; the overall trade values in 2010 were still around 20% lower than before the crisis in 2008 (imports of Kazakhstan and Ukraine were in 2010 still 30% below the peak level of 2008 according to UN COMTRADE data – see Annex II). Pre-crisis trade levels could be fully recovered only in 2011 (see Figures 2.5-2.8 and Annex I).[14]

Figure 2.3

Kazakhstan: Foreign trade by country groupings

% of total

■EU □CIS ■China □Other

Exports

Imports
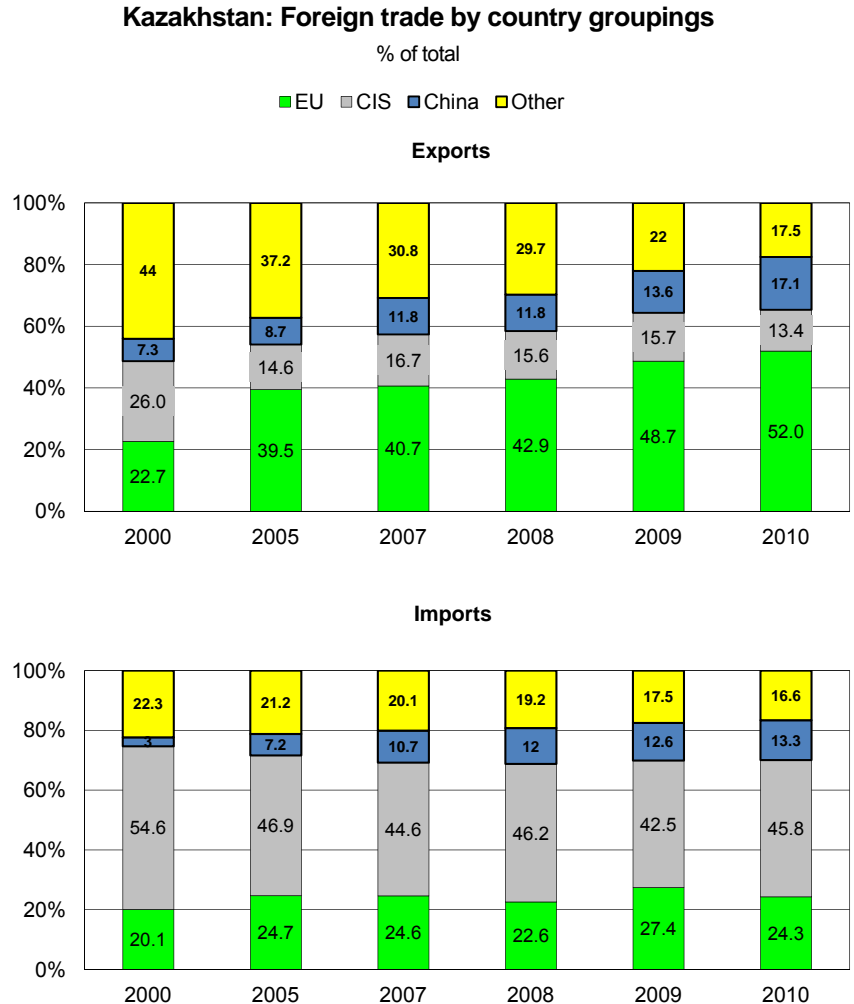
Source: CISSTAT

Mutual trade exchanges (intra-BRK CU trade plus Ukraine) have been rather heterogeneous (and contradictory when comparing mirror statistics). Belarus' exports to Russia grew below average during 2000-2010 yet its exports to Ukraine and especially to Kazakhstan expanded much faster than average (Annex II, Table 6). Ukraine's exports to the BRK re-

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[14]   The quality and reliability of trade data are highly questionable: there are substantial differences between figures reported in the UN COMTRADE database and the CISSTAT resp. national statistics, in recent years (2010) especially for Kazakhstan and Russia. The inspection of bilateral trade flows in the mirror statistics indicates widely divergent results. Preliminary data available from the CISSTAT and national statistics for 2011 indicate an increase of overall trade and a return to pre-crisis trade volumes in all countries concerned. As of time of writing (June 2012) detailed trade statistics for 2011 from UN COMTRADE are not yet available. Annex II provides the latest foreign trade data from both sources.

gion grew also faster than average. Especially Ukraine's exports to Kazakhstan increased a lot before the 2008/2009 crisis. By way of contrast, Kazakh and Russian exports to rest of the world (other than BRK and Ukraine) had been much more dynamic during the 2000-2010 period and the relative importance of the intra-regional trade for these two countries thus diminished in that period.

Figure 2.4

Ukraine: Foreign trade by country groupings

% of total

■ EU-15   ■ NMS-12   □ CIS   ■ China   □ Other

Exports

Imports
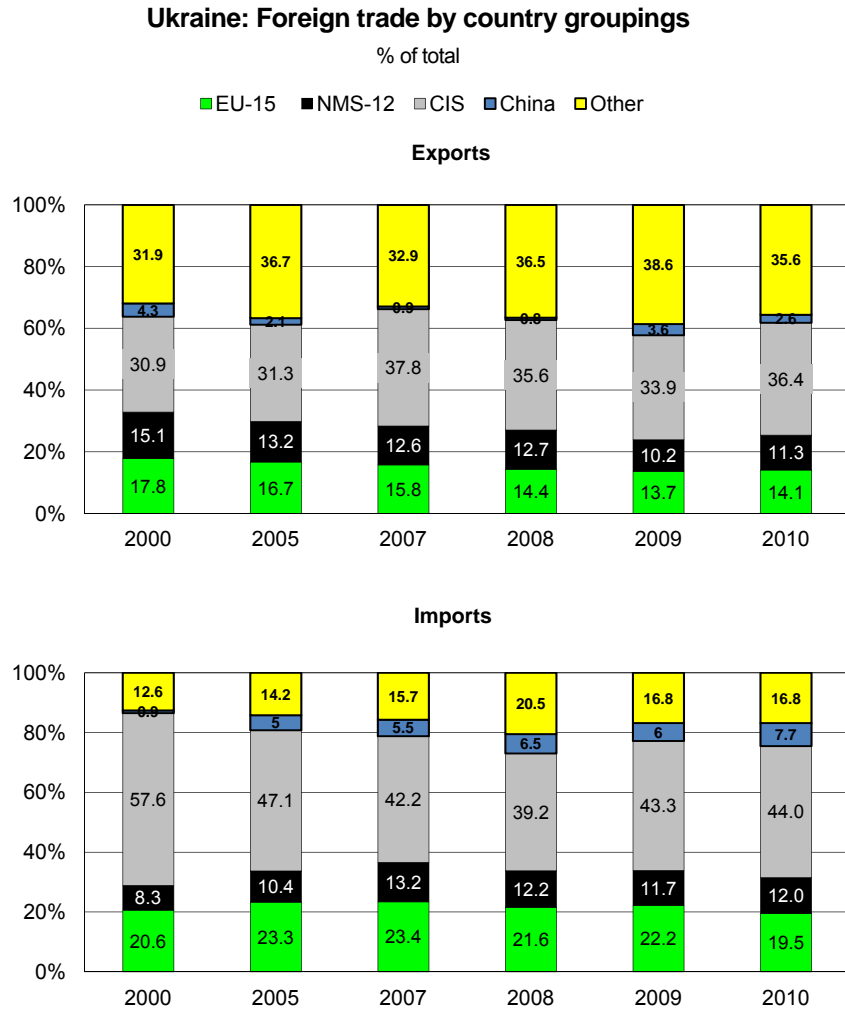
Source: CISSTAT.

In Belarus and Ukraine, intra-regional exports recovered slightly faster than total exports since the 2008/2009 crisis (though – with the exception of Belarus' exports to Kazakhstan – by the year 2010 they still did not reach the pre-crisis level of 2008). Russian and Kazakh exports to their regional partners suffered particularly strongly during the recent crisis, suggesting temporary regional trade disintegration.[15] As far as imports are concerned, the regional trade did not recover after the 2008 crisis, at least until 2010, again with the excep-

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[15]   UN COMTRADE data for Russia and Kazakhstan are incomplete: in analogy with published Customs Union statistics – figures for 2010 presumably do not fully cover the mutual trade of countries concerned.

Figure 2.5

Kazakhstan: Foreign trade developments (goods), 1995 = 100
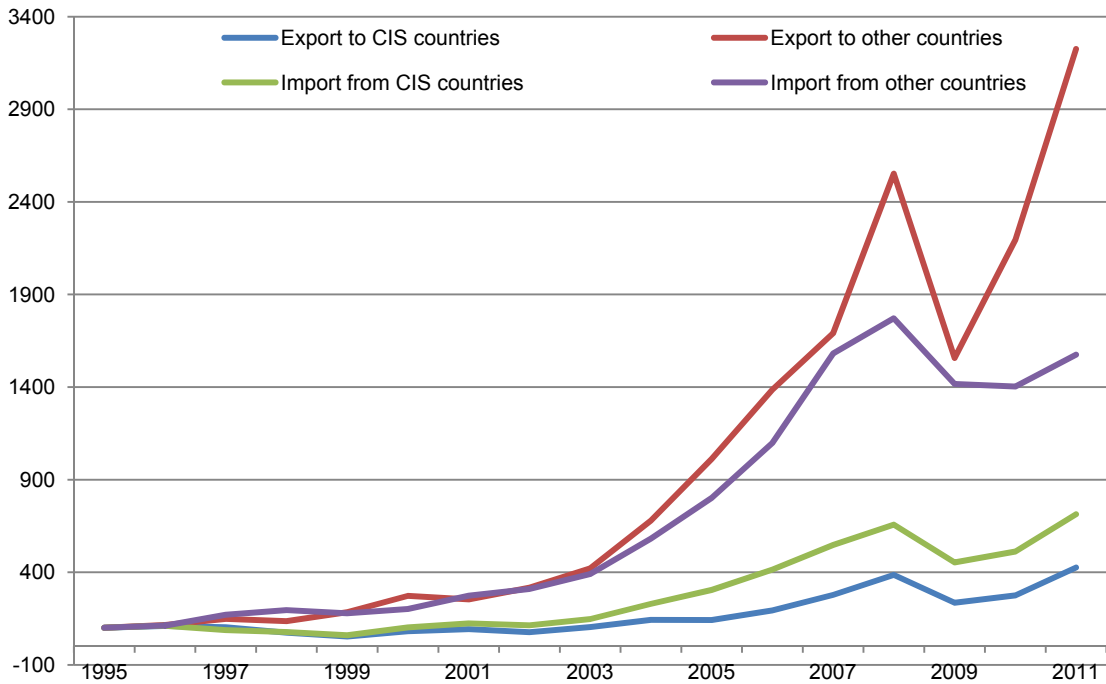
Figure 2.6

Russia: Foreign trade developments (goods), 1995 = 100
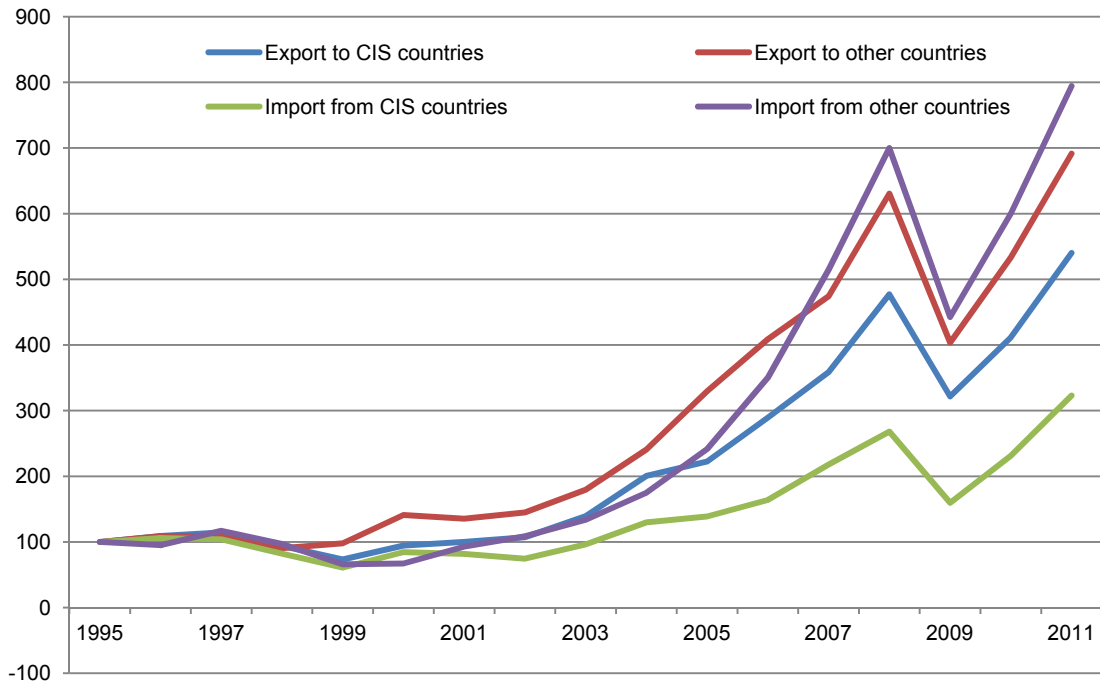
Source: CISSTAT, wiiw calculations.

Figure 2.7

Belarus: Foreign trade developments (goods), 1995 = 100
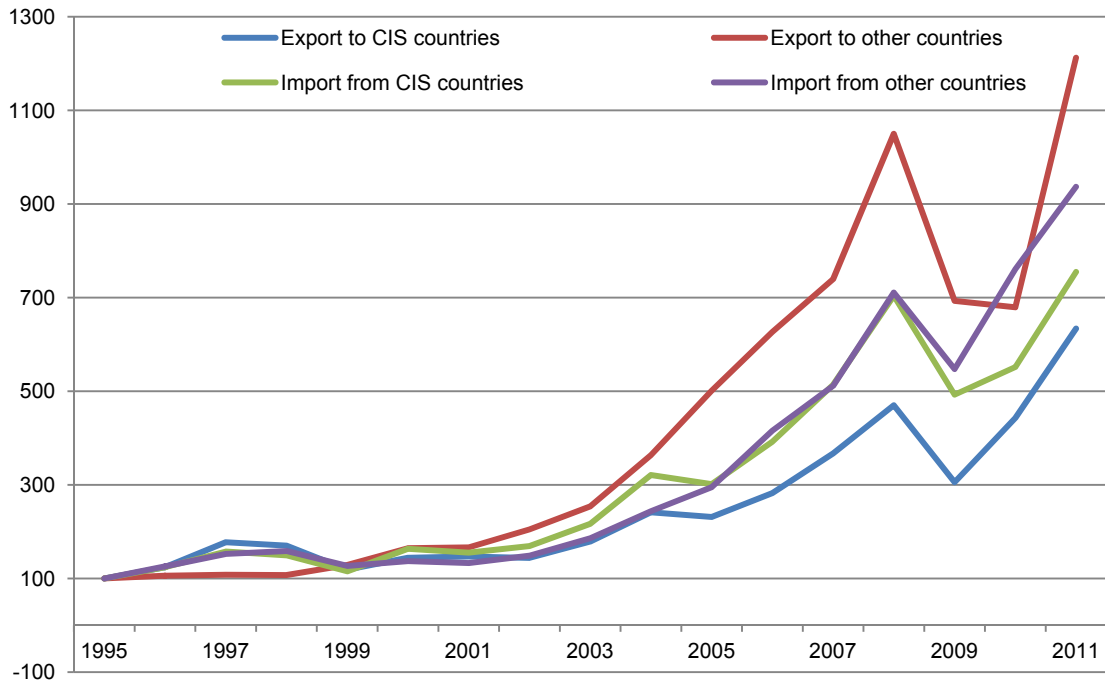
Figure 2.8

Ukraine: Foreign trade developments (goods), 1995 = 100
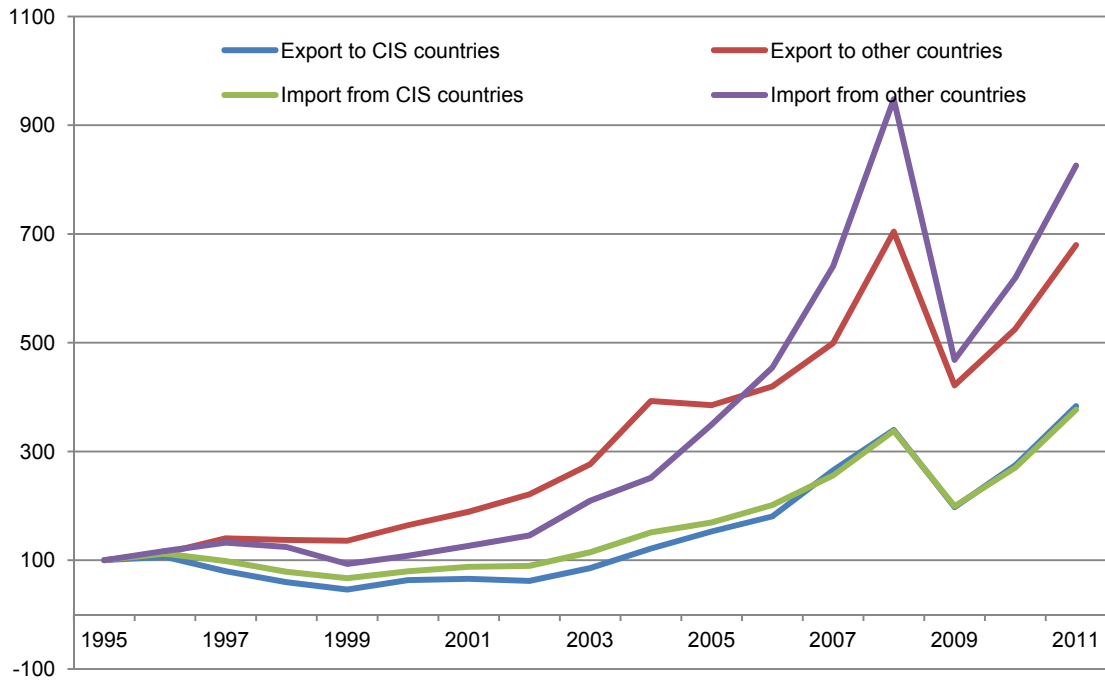
Source: CISSTAT, wiiw calculations.

tion of Belarus' imports from Kazakhstan (Annex II). However, the preliminary data for 2011 from CISTAT suggest a robust recovery of overall exports (Belarus: +60% compared to 2010, Kazakhstan: +46%, Russia: +30%, Ukraine: +33%), with intra-CIS exports expanding at similar rates. Extra-CIS imports of Kazakhstan and Ukraine (as well as extra-CIS exports of Ukraine) in 2011 still did not reach their peak from 2008 whereas both Belarus' and Russia's trade already recovered from the crisis (Figures 2.5 - 2.8).

As far as the commodity composition of trade is concerned, Belarus and Ukraine have a fairly diversified export structure whereas Russian and Kazakh exports are strongly concentrated on mineral fuels (SITC 3) and metals (SITC 6 – see Annex II for details). As far as imports are concerned, it is worth mentioning that both Belarus and Ukraine import a lot of mineral fuels (about 1/3 of both countries' total imports – mostly from Russia and Kazakhstan) whereas the two latter countries have much higher import shares of machinery, transport equipment and other manufactured articles. The same import specialization pattern prevails within the BRK-Ukraine region. Broadly speaking, machinery and other manufactured exports of Belarus and Ukraine are exchanged for energy and metals from Russia and Kazakhstan.

An important feature of the CIS and BRK-CU plus Ukraine trade is the above-mentioned structural and regional dichotomy in the commodity trade composition – again mostly with respect to Belarus and Ukraine. For example, more than 25% of Belarus' exports to the CIS consisted of machinery and transport equipment whereas in exports outside the CIS these commodities account for just 6% of exports (and more than half of exports are mineral products which are imported from Russia, processed and re-exported – see Annex II). On the other hand, nearly 80% of Kazakh and more than 70% of Russian exports outside the CIS consist of mineral products (Annex II). In general, and with the important exception of Russia, the intra-CIS trade structure is more 'advanced', still reflecting the inherited links from the Soviet period and a limited progress in restructuring (see also Grinberg et al., 2008).

Figure 2.9 illustrates differences in the commodity composition of BRK countries' and Ukraine's exports by juxtaposing their total and bilateral structure.[16] Belarus, for example, reports much bigger shares of mineral fuels exports to Ukraine than in its total exports (these are essentially re-exports of Russian oil); it also exports relatively more manufactured products to its CIS partners. Similarly, though Russian (and Kazakh) exports are dominated by mineral fuels, in their intra-regional trade some manufactures (SITC 5-SITC 8) are a bit more represented. From this point of view, Ukraine has a more balanced export structure than its regional peers with a much less divergent regional export structure (and a more diversified commodity export structure – especially recently – see Figure 2.9).[17]

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[16] A similar juxtaposition on a more aggregated regional level (and based on CISSTAT) is presented in Annex II.

[17] However, Annex II Table 5 shows that the commodity structures of Ukrainian exports within and outside the CIS differ a lot: the share of metals in exports outside the CIS (40.6% in 2010) is nearly twice as large as in exports to the CIS; the opposite is true for machinery and transport equipment exports.

Figure 2.9 **Exports of goods by SITC commodity groups (shares in %)**
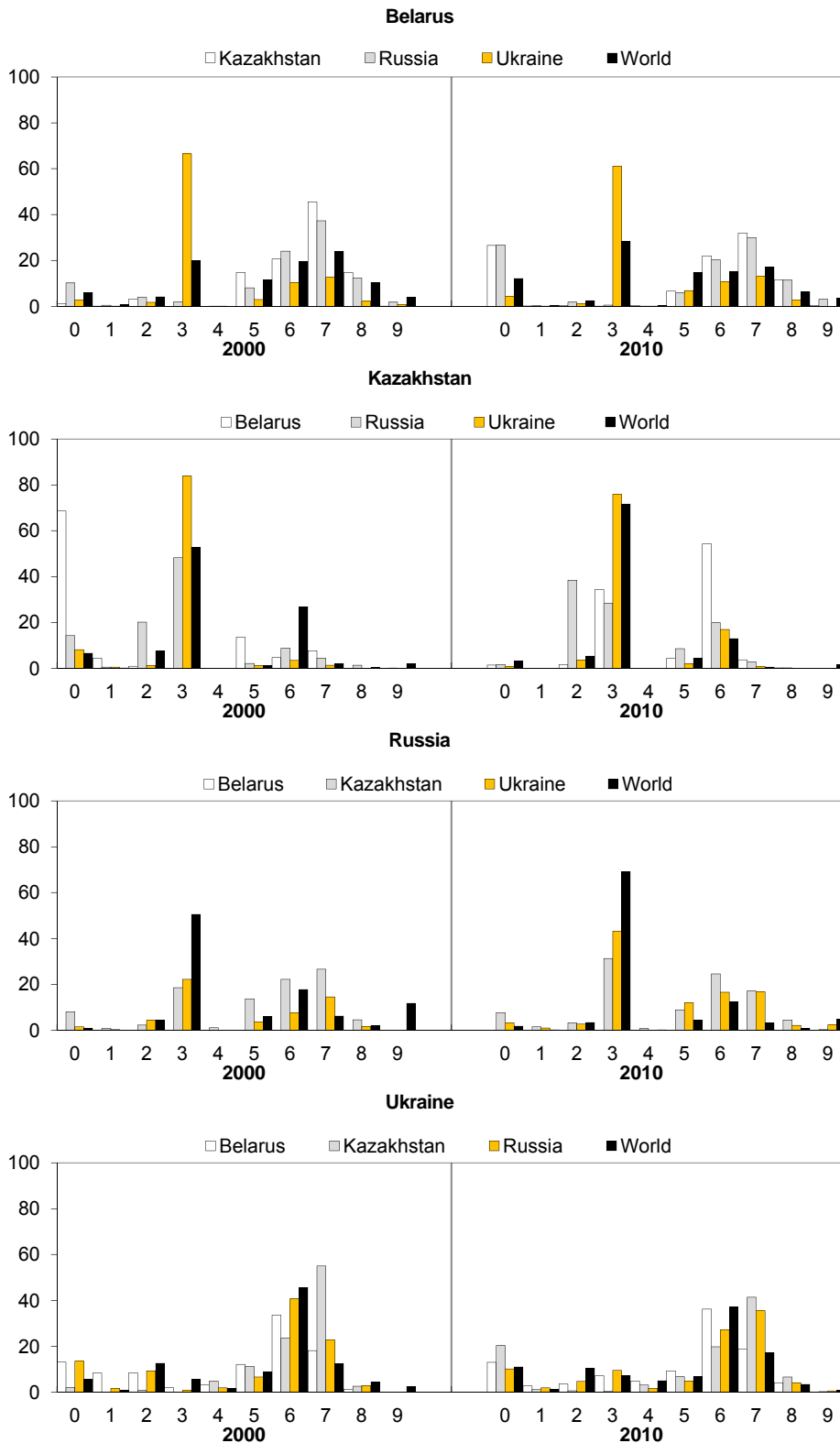
Remark: SITC-groups: 0 Food and live animals; 1 Beverages and tobacco; 2 Crude materials, inedible, except fuels; 3 Mineral fuels, lubricants and related materials; 4 Animal and vegetable oils, fats and waxes; 5 Chemicals and related products, n.e.s.; 6 Manufactured goods classified chiefly by material; 7 Machinery and transport equipment; 8 Miscellaneous manufactured articles; 9 Commodities and transactions not classified elsewhere in the SITC.

Source: UN COMTRADE, wiiw calculations.

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Figure 2.10   **Revealed comparative advantages by SITC commodity groups**
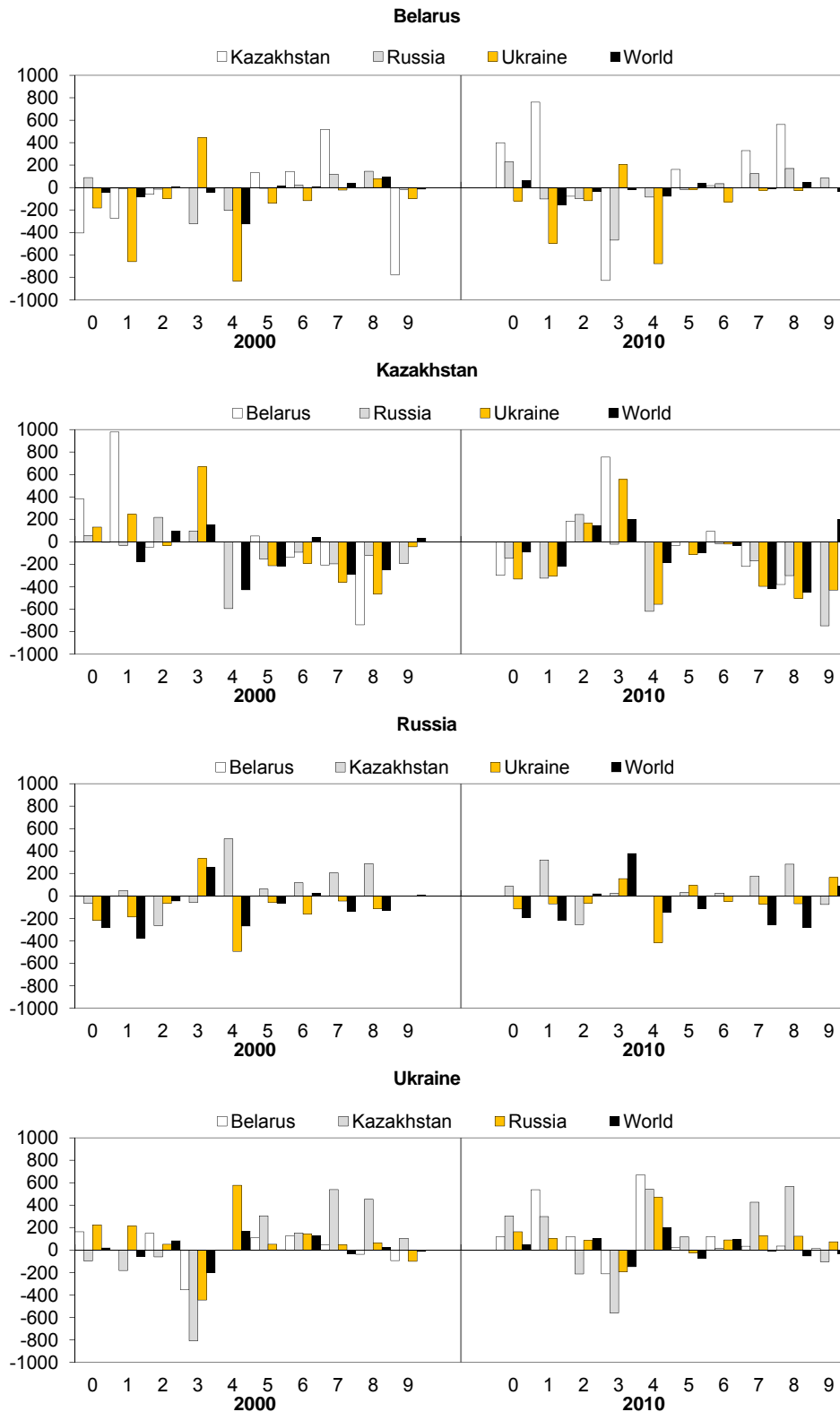
Remark: SITC-groups: 0 Food and live animals; 1 Beverages and tobacco; 2 Crude materials, inedible, except fuels; 3 Mineral fuels, lubricants and related materials; 4 Animal and vegetable oils, fats and waxes; 5 Chemicals and related products, n.e.s.; 6 Manufactured goods classified chiefly by material; 7 Machinery and transport equipment; 8 Miscellaneous manufactured articles; 9 Commodities and transactions not classified elsewhere in the SITC.

Source: UN COMTRADE, wiiw calculations.

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Last but not least, the patterns of revealed comparative advantages (RCAs) in bilateral and total trade of BRK countries and Ukraine are shown in Figure 2.10.[18] Again, there is a considerable differentiation both across individual countries and in RCA patterns in their bilateral and total trade. Positive RCAs in mineral fuels (Russia and Kazakhstan) are mirrored by negative RCA values (= comparative disadvantage) in their trade with most other commodity groups (especially in Kazakhstan; Russia has a minor comparative advantage in machinery trade with Kazakhstan). Ukraine has positive RCAs in most commodity groups (except mineral fuels) in trade with both BRK-CU partners and the world.

Needless to say, apart from numerous data problems, the above-shown structural differences and varying specialization patterns of the BRK countries and Ukraine are highly relevant for the formulation of trade policies – be it WTO accession, the Customs Union or other alternative trade arrangements (for example, the Deep and Comprehensive Free Trade Agreement between Ukraine and the EU which is currently pending signature). These and related issues (such as policies for an envisaged economic diversification) will be analysed in more detail below, followed by a discussion of various policy options.

2.3 Trade in services

In this section we will provide an overview of major trends of services trade of Belarus, Kazakhstan, Russia and Ukraine. The data on services trade come from the TSD dataset,[19] which contains data on annual bilateral services trade flows for 244 reporting countries and 244 partners for the period of 1995-2010. The dataset is compiled from the OECD, Eurostat, UN and IMF data.

As Figure 2.11 shows, Russia is a leading services exporter among the four countries. During 2000-2008, Russia's services exports were growing at about 40% on average per annum – twice as fast as the rest of the countries, which demonstrated approximately equal growth rates during that period. The slump in 2009 was much smaller than in the case of merchandise exports, and the recovery started already in 2010 in all four countries.

In services imports, Russia is again the largest market yet it was Kazakhstan that grew the fastest during 2000-2008 (on average by 30% per annum). The rest of the countries experienced 20% average annual growth, which was still quite a speedy development. It is worth noting that Belarus and Ukraine are net exporters of services in contrast to Kazakhstan and Russia. The former two countries specialize in oil and gas transit, as we

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[18] RCAs are calculated from a simple Balassa's formula:

$$RCA = 100 * \ln\left((X_{ci}/M_{ci})/(TotX_c/TotM_c)\right),$$

where X_{ci} resp. M_{ci} are exports (imports) of country c and i denotes SITC 1-digit commodity group. Tot denotes total exports/imports. Positive (negative) RCAs denote revealed comparative advantage (disadvantage).

[19] For the detailed description of the dataset see Francois, Pindyuk and Wörz (2009).

will see in more detail later, while the latter are oil and gas exporters and import transit services.

Figure 2.11

Services imports, USD million

Source: TSD.

Figure 2.12

Services exports, USD million
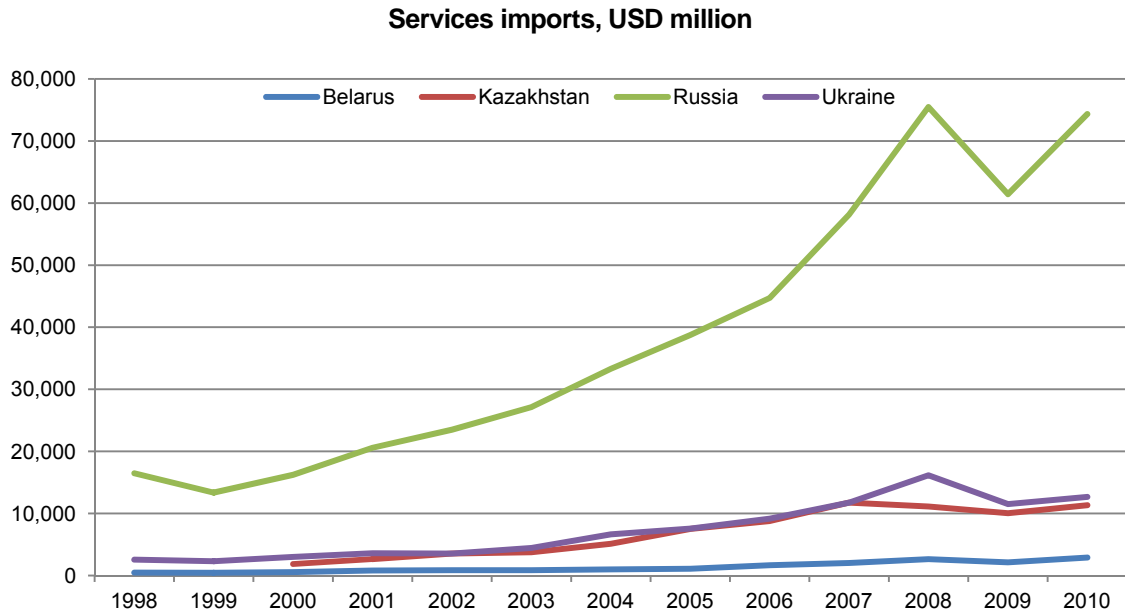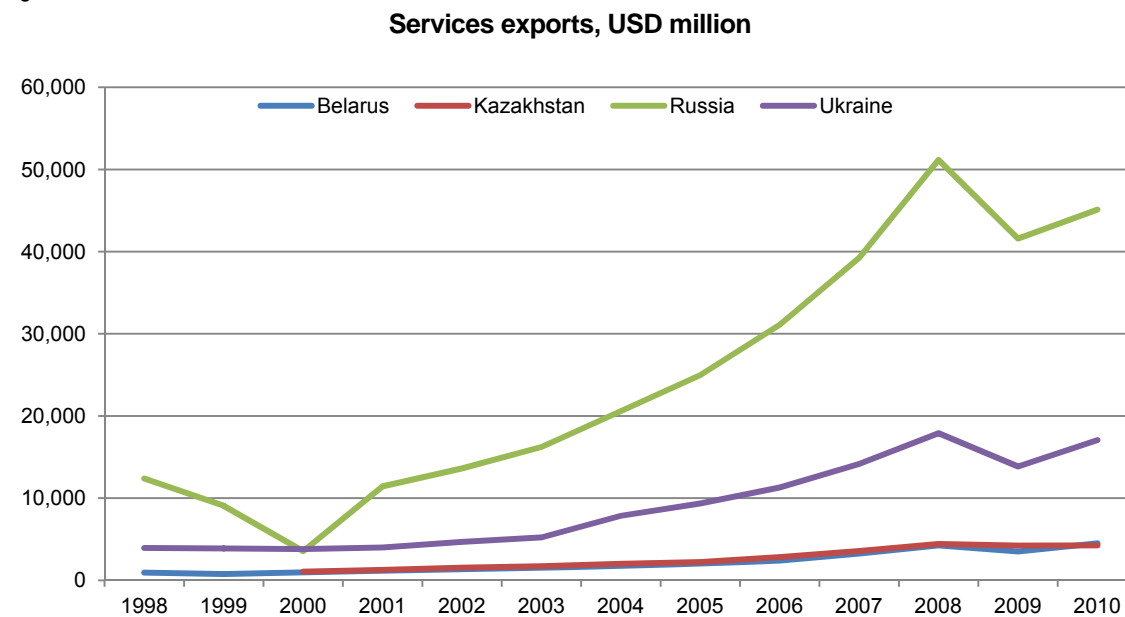
Source: TSD.

Figures 2.13-2.20 show the sectoral structures of the four countries' services exports and imports. Exports of services of all countries is dominated by transports services, which accounted for around 50% of total services exports in 2007 – twice higher share than the average global one. The second biggest sector is travel services, the share of which in

17

2007 ranged from around 10% in Belarus and Russia to around 30% in Kazakhstan and Ukraine. More advanced producer-related services (such as financial services, other business services, computer and information services) have been exported relatively little.

Figure 2.13

Sectoral structure of Belarus' services exports, %
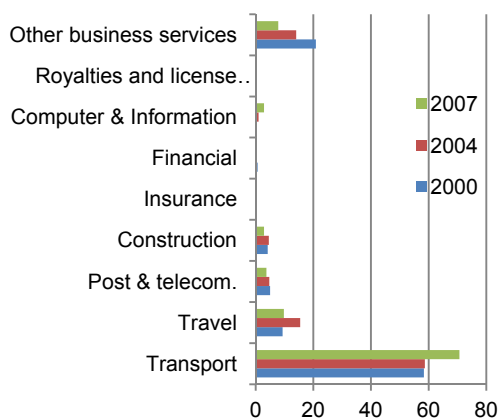
Source: TSD

Figure 2.14

Sectoral structure of Belarus' services imports, %
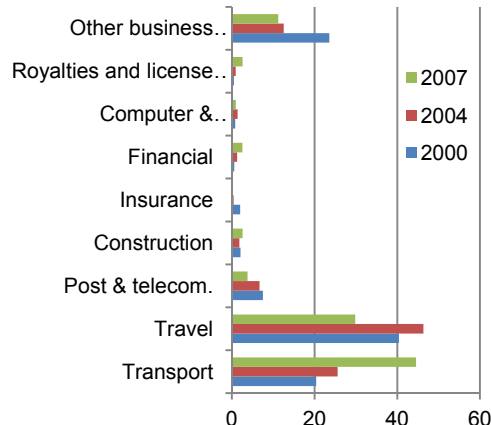
Source: TSD

Figure 2.15

Sectoral structure of Kazakhstan's services exports, %
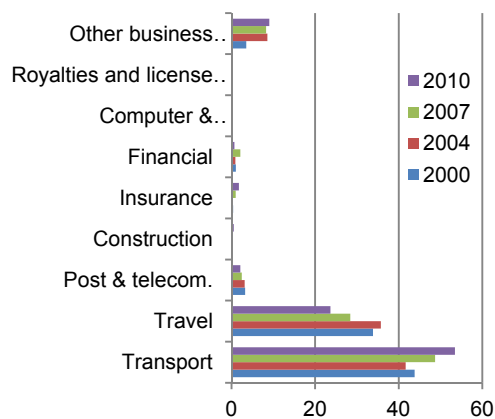
Source: TSD.

Figure 2.16

Sectoral structure of Kazakhstan's services imports, %
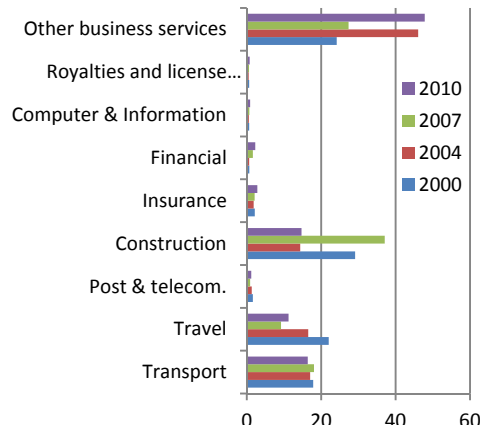
Source: TSD.

Services imports structures of the four countries turn out to be more heterogeneous than export ones: Belarus and Ukraine import relatively more transport and travel services, while in Kazakhstan and Russia, other business services account for the highest share in imports.

Figure 2.17

Sectoral structure of Russia's services exports, %
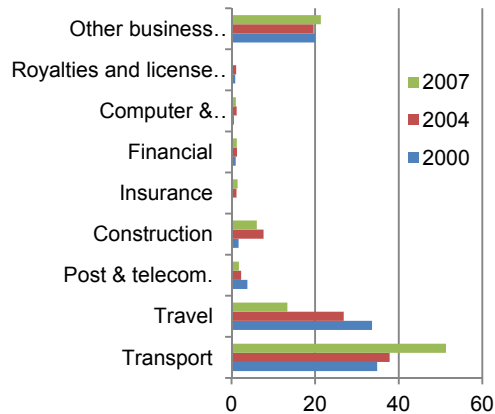
Source: TSD.

Figure 2.18

Sectoral structure of Russia's services imports, %
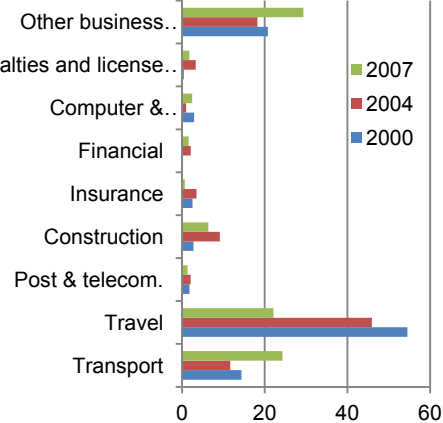
Source: TSD.

Figure 2.19

Sectoral structure of Ukraine's services exports, %
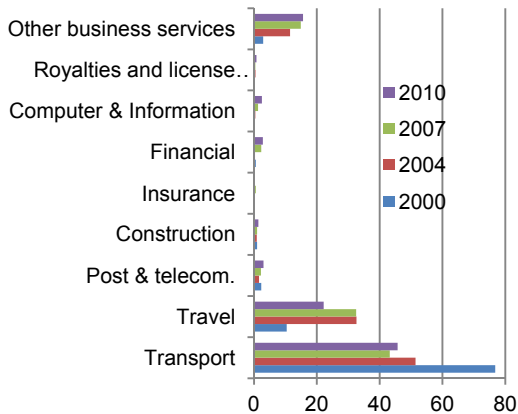
Source: TSD.

Figure 2.20

Sectoral structure of Ukraine's services imports, %
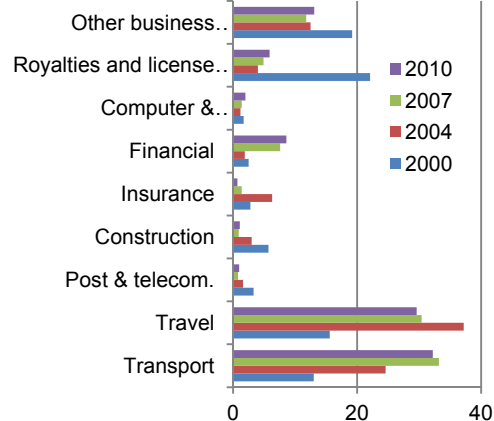
Source: TSD.

3.   Integration arrangements on the post-Soviet space

3.1 Previous (re-)integration attempts

As highlighted in the previous section, the CIS countries are still relatively well integrated (arguably even 'over-integrated') with each other.[20] This is of course a legacy of their common Soviet past, and also because a large part of the non-restructured manufacturing sector in these countries is uncompetitive outside the post-Soviet space: Belarus is a case in point. The dependence of many post-Soviet republics on Russia as the main export market and the principal energy source (particularly in view of the inefficient energy use in many of them) are sometimes viewed as factors of risk. This does not mean however that

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[20]   See e.g. Elborgh-Woytek (2003), Havlik (2008).

intra-regional trade on the post-Soviet space has reached its full potential. On the contrary, it is argued that deeper intra-regional integration could, for instance, benefit local SMEs through economies of scale and provide incentives for the modernization of these countries' traditional industries (such as the metals industry in Ukraine).[21]

At the same time, the attempts at *institutional* (re-)integration of the CIS countries over the past two decades have been generally half-hearted and faced numerous setbacks. In 1992, ten CIS countries (except Turkmenistan and Ukraine) signed a free trade agreement. However, the agreement has never been ratified by Russia which was interested in preserving exemptions to free trade, mostly covering oil and gas.[22] In 1993, eleven CIS countries (including Georgia at that time, but excluding Ukraine)[23] formally set up a Common Economic Space. This move was followed by the creation of the International Economic Committee in 1994, of the International Currency Committee in 1995, and the Council on Small Entrepreneurship Promotion in 1997. In total, over 80 CIS-wide integration agreements have been concluded since the disintegration of the USSR, aimed at further promotion of intra-CIS integration, but they largely remained on paper.[24]

As a result, the CIS can be hardly called a proper free trade area. In reality, the free trade regime is being applied to a large number of (mostly manufactured) goods, but there are a number of 'exemptions and limitations' mostly concerning agricultural products, food, and metals. Protectionist instruments typically applied against these goods in intra-CIS trade include e.g. anti-dumping duties and quotas. The lack of real integration among the CIS countries has also been clearly visible in the area of energy trade, with Russia gradually raising the price of its exported natural gas closer to 'European' levels. Even the CIS-wide visa-free area, which had been agreed upon in the early 1990s, de facto broke apart with the departure of Turkmenistan and, more recently, Georgia.[25]

Some regional agreements on the post-Soviet space initiated on a smaller scale proved to be more successful. The most advanced integration block on the post-Soviet space is the Russia-Belarus Union State which formally exists since 1999. The respective treaty envisaged a high degree of economic integration, including a common economic space and a monetary union, and set up a range of supra-national institutions such as the Supreme State Council, the Council of Ministers, and the Union Parliament. Trade regimes between the two countries have indeed been to large extent harmonized, a common labour market implemented, and border controls largely abolished, although the planned introduction of the Russian rouble on the territory of Belarus has been repeatedly delayed.

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[21] See OECD (2011).

[22] See Tochitskaya (2010).

[23] Ukraine opted for associate membership instead.

[24] See Shumskiy (2003).

[25] Later however Georgia unilaterally reinstalled visa-free regime for Russians.

Regional arrangements on the post-Soviet space without Russia's participation have been generally less of a success. One example is GUAM, which included Georgia, Ukraine, Azerbaijan, Moldova and initially Uzbekistan as well, and was conceived to ensure the energy exports from the Caspian basin to Europe by circumventing the Russian territory. With pro-Russian forces coming to power in Ukraine in 2010 and Azerbaijan increasingly eager to cooperate with Russia in the energy sphere, GUAM has meanwhile virtually lost its relevance. Another example of a regional CIS arrangement without Russia (and Turkmenistan) was the Central Asian Economic Community, which largely remained on paper and merged in 2005 with the Eurasian Economic Community – see below.

3.2 Customs Union of Belarus, Russia and Kazakhstan

3.2.1   Historical background

The initial idea of a Customs Union (CU) goes back to January 1995, when four CIS countries (Russia, Belarus, Kazakhstan and Kyrgyzstan) signed a corresponding agreement which formally entered into force in December 1997. In October 2000, the CU was joined by Tajikistan and renamed into Eurasian Economic Community (EurAsEC). Uzbekistan acceded to EurAsEC in 2006, but suspended its membership two years later. The idea behind EurAsEC was to set a common external tariff and harmonize non-tariff trade barriers, with the stated ultimate goal being the creation of a single economic space. Kazakhstan went even further by proposing to introduce a common currency by 2008. However, in reality the integration process virtually stalled, and even the participating countries' trade policies were far from being conform to the principles of free trade. This was particularly the case after the Russian financial crisis of 1998, when a dramatic devaluation of the Russian rouble boosted the country's competitiveness and urged Kazakhstan to impose a temporary ban on the imports of food products from Russia.[26]

In view of these disappointing developments, September 2003 witnessed another attempt at regional integration via the creation of a Common Economic Space (CES) – this time encompassing Russia, Belarus, Kazakhstan and Ukraine. The declared principles behind the CES were the free movement of goods, services, labour and capital; the unification of technical standards, sanitary and phytosanitary norms; the harmonization of macroeconomic policies; and the uniform regulation of 'natural monopolies' (such as energy infrastructure, railways, and telecommunications), including the equalization of tariffs and the provision of free access to their services to all member states. Also, the CES agreement stipulated a coordination of policies related to WTO accession.[27] In particular, the CES member states acceding to the WTO earlier than others committed themselves to promot-

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[26]   See UN ECE (2003).

[27]   None of the four countries participating in the CES was a WTO member at that time.

ing a rapid accession of the remaining countries, as well as to refraining from putting additional demands on them.

The CES agreement was supplemented by 93 sector agreements. However, Ukraine agreed to participate in only 40 of them. The country's interest in the CES project was largely confined to a free trade area, as Ukraine was eager to preserve access to the vast Russian market but was reluctant to enter more advanced stages of integration – not least for political reasons. One reason was that the CES envisaged the establishment of a Single Regulatory Body, to which the member states delegated part of their powers and where the votes of individual countries were weighted according to their economic potential, thus giving Russia a decisive influence on the CES policies. In turn, Russia was insisting that a free trade area without a common external tariff (i.e. without a customs union) was unlikely to work properly, since any differences in the external trade regime can be used as loopholes for third countries' exporters.[28] The adoption by Ukraine of a pro-Western policy course following the 'orange revolution' of 2004-2005 and the country's subsequent accession to the WTO in 2008 virtually froze up the country's involvement in the CES and thus effectively reduced the number of participating countries to three, i.e. corresponding to the current CU format.

3.2.2 Institutional structure and stages of implementation

The Customs Union (CU) of Belarus, Russia and Kazakhstan in its present form was conceived in 2007 when the presidents of the three countries adopted a respective Action Plan. The underlying agreement was signed in 2009 and ratified by the national parliaments during the first half of 2010. In the wake of CU implementation, the participating countries have largely eliminated the remaining non-tariff barriers in mutual trade, unified their trade regimes vis-à-vis third countries, and adopted a common Customs Code. Essentially, the CU aimed at reviving an earlier idea dating back to 1995 (see previous section) and was conceived within the framework of EurAsEC.[29] This means that at some point, the two remaining EurAsEC members – Kyrgyzstan and Tajikistan – are also expected to join the CU and ultimately the Common Economic Space (see below). The government of Kyrgyzstan took a strategic decision to join the CU in April 2011, with the accession negotiations reportedly going on. The CU legislation has been evolving since October 2007 when the first four treaties were signed dealing with the founding principles and the status of the CU, its institutional structure and the procedure of joining EurAsEC. The bulk of decision-making competencies were assigned to the Commission of the CU, which in February 2012 was replaced by the Eurasian Economic Commission of the Common Economic Space – see below.

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[28] This was the case, for instance, with the imports of textiles into the Russia-Belarus Union State from third countries, when importers of textiles took advantage of the lower import duties in Belarus for their subsequent shipment to Russia.

[29] See Glazyev and Mansurov (eds) (2011).

The CU implementation proceeded in several steps. In the *first step* (January 2010), the remaining non-tariff barriers in intra-CU trade were largely eliminated.[30] Besides, the participating countries' trade policies vis-à-vis third countries were largely unified with the adoption of a Common External Tariff (CET), which is analysed in detail in the next section. Starting from September 2011, the revenues from duties levied on imports from third countries entering the territory of the Customs Union have been divided as follows: 87.97% to Russia, 7.33% to Kazakhstan and 4.7% to Belarus, with shares being based on the weights of the respective countries in the overall CU imports in 2007-2008.[31] At the same time, unlike customs *duties*, other customs-related payments (customs clearance fees, fees for customs escort and customs storage, etc.) are not re-distributed among the CU member states and stay with the national budget of the country through which the imported good is entering the Customs Union.[32]

At the *second stage* (July 2010), a common Customs Code of the CU entered into force. It is based on the international convention on the simplification and harmonization of customs procedures (the so-called Kyoto convention of the WTO) and sets common rules for goods' declaration, customs procedures, the methodology of estimating the customs value, customs control, and assessment and collection of customs duties. It also envisages uniform sanitary, phytosanitary and veterinary measures, and mutual administrative assistance in customs clearance issues.

Customs controls on the internal borders of the CU were abolished in two steps: on the Russian-Belarusian border in July 2010 and on the Russian-Kazakhstani border in July 2011.[33] This means that now there is a free movement of goods on the CU territory irrespective of whether they were produced on the CU territory or imported from a third country.

3.2.3   Common External Tariff

As mentioned above, the Common External Tariff (CET) of the CU was adopted in January 2010. It required at least some tariff adjustment from each participating country. However, in the case of Russia and Belarus, the adjustments were relatively minor. This is because 95% of their tariff lines had been unified already before thanks to the common Union State.[34] Still, 25% of tariff positions had to be modified in the case of Belarus (7% of tariffs

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[30]   However, the imports of selected meat products into individual CU member states are subject to tariff quotas which are country-specific and change from year to year.

[31]   The actual share of Russia in the CU imports is however higher; in the first half of 2011, it hovered above 90%. Should this share stay at the same level, this potentially means that the weights of individual countries in the distribution of customs revenues may be reconsidered (the existing CU agreements leave this option) – see *Vedomosti*, 22.08.2011, 'Rossiya mozhet poteryat' 37 milliardov rublei v god na Tamozhennom Soyuze'.

[32]   This should benefit first and foremost Belarus and Kazakhstan, since many goods imported from third countries and destined for the Russian market enter via these two countries.

[33]   On the Russian-Belarusian border, there are no passport controls either, although they have been provisionally retained on the Russian-Kazakhstani border.

[34]   See Tochitskaya (2010).

were raised and 18% lowered) and 18% in the case of Russia (14% of tariffs were raised and 4% lowered). Of the three countries, tariff adjustments were the greatest in Kazakhstan, where only 38% of tariff lines had been harmonized with Russia before the CET adoption. Overall, 55% of Kazakhstan's tariff lines had to be changed, of which 10% were raised and 45% lowered – see Figure 3.1.

Figure 3.1

Common External Tariff of the BRK Customs Union
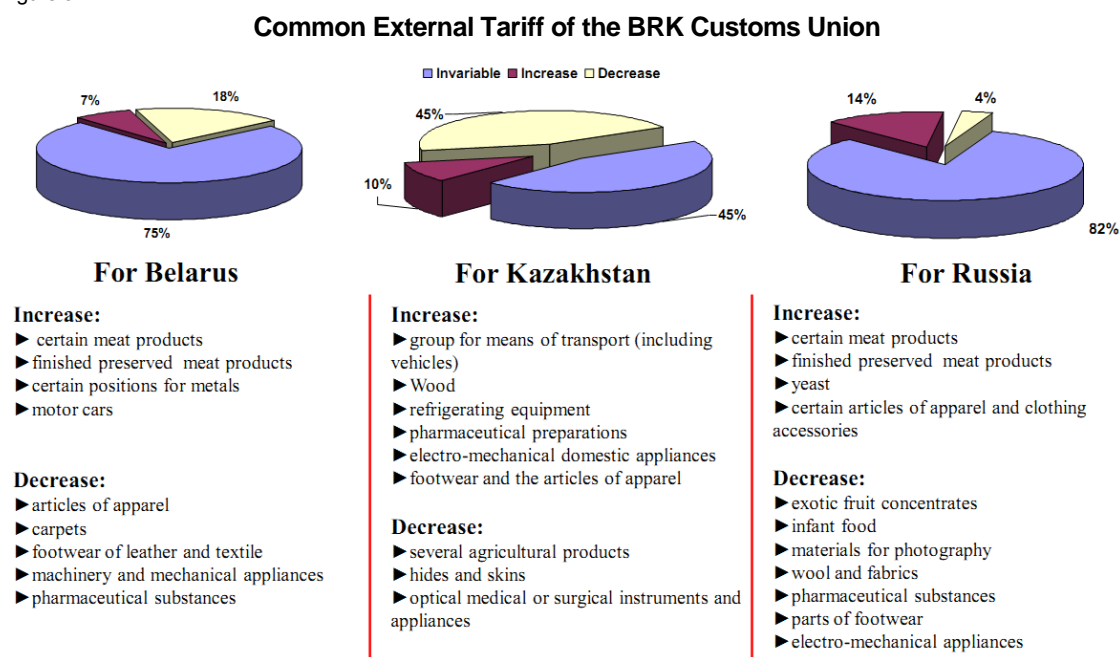
Source: Glazyev (2010).

On aggregated level, the ensuing changes can be traced from Table 3.1 which presents effectively applied import tariffs in the three CU member countries and Ukraine (for comparison purposes). For Belarus, Russia and Kazakhstan, the import tariffs are provided for 2009 and 2010,[35] i.e. before and after the CET entered into force. The import tariffs represent un-weighted averages of individual tariff lines aggregated for 97 product chapters corresponding to the Harmonized System (HS) 2-digit level.

Table 3.1 demonstrates that as a result of CET adoption, the average level of protection declined by about 2 percentage points (p.p.) in Russia and 1.3 p.p. in Belarus, but increased by around 2.5 p.p. in Kazakhstan. It can be seen that the average levels of protection in the three CU member countries have substantially converged in the wake of CET adoption and stood in 2010 at above 6% in all three countries. In Belarus and Russia, the applied tariffs have also become somewhat more uniform, as can be derived from the small decline in standard deviations. The opposite is true for Kazakhstan, where the standard deviation increased in the wake of CET adoption. Finally, the highest applied tariff rates fell in both Belarus and Kazakhstan (from 50% and 30%, respectively) to Russia's level of 25%.

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[35]   For Kazakhstan, 2008 and 2010 have been chosen because of the data reasons.

Table 3.1 also suggests that the external tariff regimes of the CU member countries have been unified in the wake of CET adoption only partially. The remaining differences are largely explained by the transitory provisions which envisage a full harmonization of tariffs not before 2015. This applies first and foremost to Kazakhstan which has secured temporarily duty-free imports of 409 products, with the transitory periods ranging up to 2015. The products involved include primarily pharmaceuticals (chapter 30 of the HS classification), railway carriages and trams (chapter 86), and medical equipment (chapter 90). Besides, in both Kazakhstan and Belarus some important tariff adjustments – such as tariff hikes for imported cars – only took place in July 2011, and are therefore not visible in Table 3.1. Finally, each CU member country has negotiated tariff quotas for a number of (mostly agricultural) products.[36]

Table 3.1 also demonstrates that in *trade-weighted* terms, the levels of tariff protection in all countries are much lower than those measured by taking simple (unweighted) averages. Thus, in trade-weighted terms, the level of tariff protection stood in 2010 at 3.7% in Russia, 3.6% in Kazakhstan, and 2.2% in Belarus. One reason is that part of these countries' imports which comes from within the CU (but also from other CIS countries, thanks to the above-mentioned CIS-wide free trade area which applies to many goods) is traded duty-free. Another – and a more universal – reason is that a high level of import duty imposed by the CU member country on a particular product originating outside the CIS *ceteris paribus* discourages the imports of this product, which thus enters the trade-weighted average with a relatively lower weight. Conversely, a low import duty imposed on a particular product encourages its imports, so that this product enters the trade-weighted average with a relatively high weight.

Interestingly, while the trade-weighted averages vastly differ from the simple averages in terms of *levels*, their *changes* resulting from the CET adoption have been largely in line with the changes of unweighted averages. Thus, similarly to the unweighted averages, the effective (trade-weighted) level of protection has declined in Russia and (to a lesser extent) Belarus as a result of CET adoption, but it has increased in Kazakhstan. This suggests that in Russia and (to a lesser extent) Belarus, the 'trade creation' effect of the CU is likely to dominate 'trade diversion'. In both countries, tariff barriers with the outside world have been *on average* reduced, thus providing more import competition to both domestic products and imports from other CU countries. On the contrary, in Kazakhstan – where the trade-weighted rate of protection has gone up – the issue of 'trade diversion' is potentially more of a concern. Such 'diversion' might result from the crowding-out of Kazakhstan's imports from third countries by imports from Russia and Belarus which may be more costly to produce and/or technologically inferior – a potential source of inefficiency.

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[36] See Vinhas de Souza (2011).

Table 3.1

Import tariffs of BRK Customs Union members and Ukraine

aggregated at HS 2-digit level unweighted averages of effectively applied rates		Russia		Belarus		Kazakhstan		Ukraine
		2009	2010	2009	2010	2008*	2010	2010
HS	Product Name							
01	Live animals	2.64	1.89	1.81	1.37	0.00	1.94	3.81
02	Meat and edible meat offal	5.00	3.01	3.00	2.76	1.59	0.75	11.14
03	Fish & crustacean, mollusc & other aquatic invert	8.78	6.86	8.75	8.79	3.68	7.94	1.40
04	Dairy prod; birds' eggs; natural honey; edible pr	12.10	10.90	4.99	6.22	7.03	6.56	10.23
05	Products of animal origin, nes or included.	6.73	4.89	5.73	4.89	3.61	5.69	2.83
06	Live tree & other plant; bulb, root; cut flowers	10.11	6.45	10.47	9.85	4.48	10.50	9.21
07	Edible vegetables and certain roots and tubers.	11.22	8.11	11.66	11.42	11.18	11.18	14.61
08	Edible fruit and nuts; peel of citrus fruit or me	5.08	2.99	5.50	4.79	3.91	4.02	6.01
09	Coffee, tea, matï and spices.	3.45	2.53	2.81	2.76	3.18	3.14	2.37
10	Cereals	3.58	2.85	2.50	2.38	2.14	1.97	5.51
11	Prod.mill.indust; malt; starches; inulin; wheat g	8.34	6.93	5.42	5.65	7.35	5.82	15.90
12	Oil seed, oleagi fruits; miscell grain, seed, fru	3.36	2.92	3.72	3.62	3.78	3.37	2.95
13	Lac; gums, resins & other vegetable saps & extrac	4.43	3.87	4.49	4.48	4.09	4.61	0.56
14	Vegetable plaiting materials; vegetable products	11.06	7.68	11.54	11.25	15.00	13.42	2.00
15	Animal/veg fats & oils & their cleavage products;	7.49	6.63	6.39	5.59	6.54	5.83	6.92
16	Prep of meat, fish or crustaceans, molluscs etc	11.73	7.72	8.46	7.08	8.15	9.76	9.72
17	Sugars and sugar confectionery.	6.35	4.54	5.78	5.97	1.84	5.83	15.60
18	Cocoa and cocoa preparations.	6.09	6.73	5.61	8.43	14.02	9.02	6.17
19	Prep.of cereal, flour, starch/milk; pastrycooks'	11.79	7.74	8.07	8.71	11.48	8.71	10.15
20	Prep of vegetable, fruit, nuts or other parts of	8.74	5.89	6.78	6.63	8.99	6.29	10.30
21	Miscellaneous edible preparations.	13.45	10.69	12.42	12.03	10.95	11.94	9.62
22	Beverages, spirits and vinegar.	12.71	8.74	10.11	10.71	3.08	10.12	14.60
23	Residues & waste from the food indust; prepr ani	3.45	3.25	3.01	3.13	0.58	3.85	7.80
24	Tobacco and manufactured tobacco substitutes	5.82	4.18	5.03	5.09	6.86	5.20	15.38
25	Salt; sulphur; earth & ston; plastering mat; lime	4.20	3.72	3.72	3.56	1.69	3.64	4.70
26	Ores, slag and ash.	2.62	1.82	2.08	1.40	2.94	2.20	1.45
27	Mineral fuels, oils & product of their distillati	4.33	3.73	3.77	3.89	3.82	3.66	1.61
28	Inorgn chem; compds of prec mtl, radioact element	4.84	4.33	4.09	4.16	3.36	4.26	3.12
29	Organic chemicals.	5.01	4.22	4.45	4.25	3.45	4.14	2.50
30	Pharmaceutical products.	8.99	7.88	8.31	8.25	0.00	0.59	0.00
31	Fertilizers	8.84	8.66	6.80	7.11	0.00	6.90	4.57
32	Tanning/dyeing extract; tannins & derivs; pigm et	4.45	3.55	5.18	3.97	4.69	4.13	2.63
33	Essential oils & resinoids; perf, cosmetic/toilet	12.69	10.06	12.25	11.67	4.12	11.92	6.18
34	Soap, organic surface-active agents, washing prep	11.97	10.24	11.41	11.10	4.52	11.43	4.68
35	Albuminoidal subs; modified starches; glues; enzy	4.50	3.86	4.36	4.39	4.24	4.54	4.07
36	Explosives; pyrotechnic prod; matches; pyrop allo	19.10	16.85	13.33	13.33	13.91	14.05	6.50
37	Photographic or cinematographic goods.	11.76	5.66	9.26	5.79	3.35	7.13	6.02
38	Miscellaneous chemical products.	5.24	4.55	4.60	4.57	3.94	4.54	2.77
39	Plastics and articles thereof.	10.72	8.65	10.99	9.88	6.67	8.45	3.89
40	Rubber and articles thereof.	7.20	5.19	7.62	5.83	6.20	5.95	3.62
41	Raw hides and skins (other than furskins) and lea	4.53	3.34	3.44	3.48	3.06	2.39	3.53
42	Articles of leather; saddlery/harness; travel goo	10.76	1.06	6.96	3.93	0.00	2.84	12.09
43	Furskins and artificial fur; manufactures thereof	12.76	9.24	9.81	9.40	7.25	11.12	6.57
44	Wood and articles of wood; wood charcoal.	14.20	11.83	12.90	12.91	6.42	12.96	0.00
45	Cork and articles of cork.	4.72	4.30	4.50	4.57	4.17	4.67	4.40
46	Manufactures of straw, esparto/other plaiting mat	16.73	8.45	17.14	13.08	9.00	13.94	5.00
47	Pulp of wood/of other fibrous cellulosic mat; was	13.31	5.87	9.38	4.82	0.00	3.21	0.00
48	Paper & paperboard; art of paper pulp, paper/pape	12.16	10.48	10.47	10.79	5.82	9.56	0.00
49	Printed books, newspapers, pictures & other produ	6.34	4.96	5.96	6.43	2.16	5.43	0.00
50	Silk.	4.42	3.51	4.42	4.01	4.69	4.06	1.69
51	Wool, fine/coarse animal hair, horsehair yarn & f	13.57	8.92	10.83	8.19	5.17	5.94	0.21
52	Cotton.	11.58	9.38	10.86	10.65	4.97	8.45	2.18
53	Other vegetable textile fibres; paper yarn & wove	7.83	6.58	7.20	7.71	2.63	6.18	3.65
54	Man-made filaments.	9.82	7.68	9.00	8.25	3.99	7.83	2.96
55	Man-made staple fibres.	8.29	6.73	7.27	7.40	3.66	6.83	0.45

Table 3.1 (continued)

aggregated at HS 2-digit level unweighted averages of effectively applied rates	Russia		Belarus		Kazakhstan		Ukraine
	2009	2010	2009	2010	2008*	2010	2010
HS Product Name							
56 Wadding, felt & nonwoven; yarns; twine, cordage,	7.30	6.59	6.76	6.57	5.09	7.61	3.90
57 Carpets and other textile floor coverings.	0.00	0.00	0.00	0.00	0.00	0.00	7.51
58 Special woven fab; tufted tex fab; lace; tapestri	19.15	12.14	17.98	13.67	8.91	12.71	6.82
59 Impregnated, coated, cover/laminated textile fabr	4.97	4.52	4.48	4.43	4.03	4.61	4.68
60 Knitted or crocheted fabrics.	9.55	7.63	8.83	8.64	3.84	8.12	7.89
61 Art of apparel & clothing access, knitted or croc	0.27	0.05	0.14	0.22	0.26	0.19	11.49
62 Art of apparel & clothing access, not knitted/cro	3.92	0.00	3.31	0.00	0.00	0.00	11.31
63 Other made up textile articles; sets; worn clothi	12.18	7.36	8.00	9.08	12.71	10.76	9.75
64 Footwear, gaiters and the like; parts of such art	3.76	0.24	2.63	0.65	1.98	0.56	10.00
65 Headgear and parts thereof.	19.14	7.39	18.48	9.14	4.52	9.42	10.00
66 Umbrellas, walking-sticks, seat-sticks, whips, et	19.53	12.43	17.22	12.86	8.86	13.44	10.00
67 Prepr feathers & down; arti flower; articles huma	18.90	6.12	16.47	7.31	9.17	8.80	10.00
68 Art of stone, plaster, cement, asbestos, mica/sim	12.85	11.35	13.04	12.99	8.33	12.40	5.72
69 Ceramic products.	16.78	12.81	15.48	15.09	8.34	15.14	7.70
70 Glass and glassware.	13.03	10.47	12.60	11.51	6.41	11.36	8.26
71 Natural/cultured pearls, prec stones & metals, co	2.92	1.15	.	.	4.79	15.90	5.60
72 Iron and steel.	4.24	4.70	3.23	4.14	2.78	4.60	0.37
73 Articles of iron or steel.	12.36	10.65	13.28	11.73	7.16	11.84	3.02
74 Copper and articles thereof.	4.55	4.24	4.15	4.29	4.11	4.32	0.00
75 Nickel and articles thereof.	8.06	7.10	8.15	5.98	4.05	6.85	0.00
76 Aluminium and articles thereof.	12.33	10.17	13.31	10.56	4.36	5.02	0.00
78 Lead and articles thereof.	4.26	3.68	3.33	3.79	3.54	3.71	0.00
79 Zinc and articles thereof.	4.68	4.10	3.79	4.09	3.87	3.81	0.00
80 Tin and articles thereof.	0.00	0.00	0.00	0.00	3.67	0.00	0.00
81 Other base metals; cermets; articles thereof.	12.09	9.70	9.83	9.28	3.09	8.85	0.01
82 Tool, implement, cutlery, spoon & fork, of base m	8.95	6.61	8.23	7.20	4.46	7.48	6.42
83 Miscellaneous articles of base metal.	16.74	11.93	17.59	13.29	8.82	13.61	7.63
84 Nuclear reactors, boilers, mchy & mech appliance;	3.22	2.04	3.97	2.34	0.69	2.08	1.88
85 Electrical mchy equip parts thereof; sound record	7.78	5.49	8.71	6.57	1.07	5.37	3.36
86 Railw/tramw locom, rolling-stock & parts thereof;	6.97	5.53	4.76	4.68	0.00	5.17	0.50
87 Vehicles o/t railw/tramw roll-stock, pts & access	7.59	5.36	7.66	5.26	0.76	6.06	5.96
88 Aircraft, spacecraft, and parts thereof.	.	.	.	.	0.00	5.42	1.67
89 Ships, boats and floating structures.	11.93	9.89	15.48	14.90	3.73	11.01	8.96
90 Optical, photo, cine, meas, checking, precision,	4.99	3.75	6.05	4.44	1.47	2.78	1.98
91 Clocks and watches and parts thereof.	17.38	7.99	15.22	9.62	8.70	8.90	7.78
92 Musical instruments; parts and access of such art	6.60	5.22	6.67	6.12	4.44	7.28	5.83
93 Arms and ammunition; parts and accessories thereo	20.00	16.67	.	.	18.25	.	.
94 Furniture; bedding, mattress, matt support, cushi	9.97	6.30	12.06	8.36	11.80	8.37	2.71
95 Toys, games & sports requisites; parts & access t	12.49	9.37	11.41	10.45	4.48	10.89	5.01
96 Miscellaneous manufactured articles.	17.66	11.17	17.68	13.04	4.39	12.89	8.78
97 Works of art, collectors' pieces and antiques.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Simple average over all products	**8.16**	**6.01**	**8.03**	**6.78**	**3.91**	**6.48**	**4.48**
Trade-weighted average	**5.92** [1]	**3.73**	**2.41**	**2.24**	**2.13**	**3.55** [2]	**2.78** [2]
Maximum tariff rate	**25.00**	**25.00**	**50.00**	**25.00**	**30.00**	**25.00**	**460.80**

Notes: * For Kazakhstan, 2008 is taken, since tariff data for 2009 are not available. - 1) Weighted with the trade flows of 2008. - 2) Weighted with the trade flows of 2009.

Source: UNCTAD TRAINS database.

For a wide range of agricultural and food products, the CET prescribes specific – rather than *ad valorem* – tariffs. In the case of specific import tariffs, they are imposed not on the value of the imported product but on its quantity or volume, and are independent of the product price.[37] In addition, for a number of imported products (especially food and tex-

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[37] They are therefore regressive in value terms.

tiles), the tariffs stipulated in the CET are mixed: the set tariff rate is *ad valorem*, but only starting from a specified price threshold; below this threshold it is specific. For sugar, the tariff regime specified by the CET is even more regressive, as the tariff rate (per tonne) declines with the growing sugar price. There are several considerations behind specific tariffs. For products with a high price elasticity of demand, they burden over-proportionately cheap products which are believed to be of inferior quality, and thus supposedly protect domestic consumers from low-quality imports. In instances of price-inelastic import products (such as sugar), they offset any increase in global prices – at least in relative terms – and thus benefit domestic consumers as well. Finally, they are also meant to counteract 'tax-optimizing' schemes involving under-pricing of imported goods – a highly relevant issue on the post-Soviet space.[38]

Tariffs apart, there are a number of other trade instruments applied by the CU. Thus, there is a list of 103 developing and 49 least developed countries which enjoy tariff preferences (i.e. import tariffs below the levels set by the CET) for a number of products. The CU is also applying a range of non-tariff trade measures, including quotas, tariff quotas, foreign trade licensing, and a total of 10 safeguard and anti-dumping measures. For instance, there is an export quota on scrap metal from Belarus, and until April 2010 there existed a quota for sugar imports into Kazakhstan. Tariff quotas are confined to meat imports, while anti-dumping duties are currently levied on selected metal products (such as steel pipes from China and Ukraine; screws, bolts, nuts, etc. from Ukraine, or flat-roll stainless steel products from Brazil, China, South Korea and South Africa) and textiles (synthetic filament yarn originating from Ukraine).

Box 3.1

Belarus-Russia-Kazakhstan Customs Union and the WTO

Generally, WTO rules do not forbid customs unions and other regional trade agreements as long as they do not entail losses for third countries because of the higher import barriers. Belarus, Russia and Kazakhstan are currently at very different stages of their WTO accession process. Russia's WTO application was finally – after 18 years of negotiations – approved in December 2011, and the country is expected to become a formal WTO member in autumn 2012 after ratification by the Russian parliament. In turn, Kazakhstan is still negotiating with the WTO, while Belarus' WTO accession is not in sight anytime soon, not least for political reasons.

CU membership may potentially complicate the WTO accession process of the countries involved, since they are no longer entirely free to decide what regime for imports from third countries they want to have. One solution which could avoid this problem would be of course simultaneous WTO accession, with the CU joining the WTO as a block. Back in 2009, the Russian (then) prime-minister Vladimir Putin announced exactly this. However, his initial announcement has been meanwhile reconsidered, largely because of the risen awareness within the Russian ruling elite that this would inevitably result in substantial further delays to Russia's WTO accession.

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[38] See e.g. ATF (2010).

Instead, the current CU legislation foresees that each member country can accede to the WTO independently. If WTO-related commitments of the acceding country are more liberal (e.g. the agreed 'bound' import tariffs are lower) than the CET of the CU, the CET will need to be adjusted to the level of WTO commitments of the acceding country. This implies that the CET of the CU has a potential to become more liberal vis-à-vis third countries in the future, once Kazakhstan or Belarus join the WTO. In case more than one CU member country is acceding to the WTO and there are discrepancies in their WTO accession terms, the acceding countries are required to harmonize them. In this case, the CET of the CU will have to be brought in line with these harmonized terms.

3.3 Common Economic Space

3.3.1 Institutional structure

In January 2012, the Customs Union of Belarus, Russia and Kazakhstan was further upgraded to the Common Economic Space (CES). Disregarding the special case of the Russia-Belarus Union State, the CES represents the most advanced re-integration project on the post-Soviet space. The underlying idea is that it should offer deep integration between the participating countries – deeper than e.g. the Deep and Comprehensive Free Trade Agreements (DCFTAs) initiated by the EU with respect to several CIS countries (Ukraine, Moldova and the republics of the Southern Caucasus). The CES is supposed to provide not only free movement of goods, services and capital, but also of labour (which is not covered by DCFTAs), and ensure common policies in a wide range of policy areas, with the ultimate goal of setting up the Eurasian Economic Union by 2015.

The administration system of the CES is presented in Figure 3.2. The chief regulatory body of the CES is the Eurasian Economic Commission (EEC), which is located in Moscow, started operating in February 2012 and replaced the Commission of the Customs Union, taking over its powers. The two main decision-making bodies within the EEC are the Council of the Commission and the Board of the Commission. In addition, the EEC may have representations in the CES member states, third countries, and international organizations. The Council of the Commission provides general guidance and is composed of three deputy prime-ministers representing three CES member states.[39] The main executive body of the EEC is the Board of the Commission, which is subordinate to the Council of the Commission and consists of a Chairman (currently Viktor Khristenko of Russia) and eight members (three from Belarus and Kazakhstan each, and two from Russia), who are also referred to as 'ministers'. The assigned areas of responsibility of the eight ministers are: integration dynamics and macroeconomics; technical regulation; trade; energy and infrastructure; industry and agriculture; competition; customs cooperation; and economics and financial policy. Each 'ministry' has two or three departments; in addition, there are five departments which are subordinate directly to the Board Chairman.

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[39] Currently, the members of the Council are Sergei Rumas of Belarus, Kairat Kelimbetov of Kazakhstan, and Igor Shuvalov of Russia.

Figure 3.2

The BRK Common Economic Space Administration System

Supreme Body of the CU and the CES
— defines the strategy and the objectives of further development of the CU and the CES

Supreme Eurasian Economic Council:
- level of Heads of States
- level of Heads of Government

EurAsEC Court

Dispute settlemnt body

The Common permanent regulatory body of the CU and the CES
- ensures functioning and development of the CU and the CES, carries out the initiatives on further economic integration

Eurasian Economic Commission (the Commission)

Council of the Commission:
3 Members of the Council

Board of the Commission:
Chairperson + 8 Members of the Board

Structural units of the Commission

Departments of the Commission

Consulting bodies of the Commission

Missions of the Commission in member countries, in third countries and at the international organizations
(established by the decision of the Supreme Eurasian Economic Commission)

- ensure the interaction with national authorities

Source: Eurasian Economic Commission (2012).

The Board of the Commission takes decisions either on a consensus basis or by two-third majority (depending on the issue), but the Council of the Commission takes decisions by consensus only. In case consensus cannot be reached, the issue is escalated to a higher level: the Supreme Eurasian Economic Council. The latter is the highest body of the CES and is composed of the presidents and prime-ministers of the CES member countries. The organizational structure of the CES is complemented by the Court of the Eurasian Economic Community, which is located in Minsk and deals with any disputes arising between the CES member countries.

3.3.2   Sector agreements

The CES framework encompasses 17 sector agreements, which were largely finalized by the end of 2010 and cover the following issues:

1. coordination of macroeconomic policies;
2. harmonization of 'natural monopolies' regulations;
3. harmonization of competition policies;
4. unified rules on granting industrial subsidies;

5. harmonization of state support to agriculture (including capping its scope at 10% of agricultural value-added)[40];

6. harmonization of public procurement rules and the implementation of the principle of 'national treatment' for public procurement by January 2014 at the latest;

7. provision of mutual access to the markets of services and harmonization of financial markets regulations (including setting up a supra-national supervisory body to be located in Kazakhstan);

8. common protection of intellectual property rights;

9. harmonization of legislative frameworks ensuring the free movement of capital between the CES member states;

10. coordinated principles of currency policy;

11. creation of a common market for oil and oil products;

12. agreement on electricity trade, including harmonization of prices and tariffs;

13. agreement on transportation of natural gas, including harmonization of prices and tariffs;

14. agreement on railway transportation, including unification of cargo transportation tariffs before January 2013;

15. cooperation in counteracting illegal labour migration from third countries, including signing readmission agreements with third countries;

16. the legal status of migrant workers and their family members; and

17. unified principles and rules of technical regulations.

Although formally the CES started operating in January 2012, some of the above agreements will enter into force only after transitory periods ranging up to 2015. Thus, the agreement *on transportation of natural gas* envisages the unification of gas prices by 2015 at the latest. According to the agreement, wholesale gas prices in individual CES member states should ensure 'equal profitability', meaning that no export duty on gas exports within the CES area will be charged and any price discrepancies between individual member states will only reflect the differences in transportation costs. In the wake of convergence to Russia's level, gas prices are expected to rise in Kazakhstan and to fall in Belarus.[41]

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[40] For Belarus, a six-year transitory period to comply with the latter requirement has been agreed: by 2016, Belarus will have to reduce its agricultural support to 10% of value-added (from 18% in 2010).

[41] In reality however Belarus has already secured a low gas price (USD 160 per thousand cubic metres for 2012) by selling its gas pipeline network Beltransgaz to Russia's Gazprom – see e.g. 'Skidka na integratsiyu', gazeta.ru, 15 August 2011.

Box 3.2

Energy prices in Belarus

Of the three CU member countries, only Belarus is a net energy importer and is virtually completely dependent on supplies from Russia. At the same time, Russia is dependent on Belarus as one of the two (along with Ukraine) major transportation routes for its energy exports to Europe. The arguments between the two countries over the level of energy prices and transit fees in the past few years have been recurrent and occasionally led to supply disruptions. A long-term solution with respect to prices and tariffs, such as the one envisaged in the CES documents, could – at least in theory – create more predictability with respect to the security of supplies and is therefore also in Europe's interest.

Until recently, there was a large discrepancy in gas prices between Belarus and Russia – the common Belarus-Russia Union State non-withstanding. The reason for that is that starting from 2008 the price charged to Belarus by Gazprom was calculated according to the so-called 'European' formula linking it to the price of oil products with a several-months lag – although for 2008, 2009 and 2010, Belarus secured temporary discounts of 33%, 20% and 10%, respectively. By 2011, after the discounts had been phased out, the price charged to Belarus increased to USD 250-300 per thousand cubic metres (th cm) – more than double the Russian domestic price. The unification of gas prices within the CES scheduled for 2015 should theoretically bring the gas price in Belarus to around USD 200 per th cm – taking into consideration that the Russian domestic gas price will gradually increase in line with the government's efforts to boost energy efficiency.

Oil trade has been historically also a contentious issue in Russian-Belarusian relations. The reason is that a substantial part of Russian crude oil imported to Belarus on beneficial terms (i.e. net of the Russian export duty) used to be refined in Belarus and exported to third countries at 'market' prices, thereby providing Belarus with an 'unfair' competitive advantage from Russia's point of view. The last compromise reached between the two countries envisaged a tariff quota, whereby Belarus received duty-free only some 6 million tons of oil (representing around 30% of its oil imports) intended for domestic consumption, whereas export duty was fully charged for the remainder. The newly signed CES agreement has abolished the export duties on Russian crude oil and oil products shipped to Belarus starting from 2012, thereby benefiting the Belarusian economy and particularly its petrochemical sector.

Similarly, the agreement on a *common market for crude oil and oil products* envisages the harmonization of prices and transportation tariffs. The harmonization of oil prices is to be achieved via the non-application of quotas and export duties on crude oil and oil products starting from 2012, and should particularly benefit the economy of Belarus – see Box 3.2. On the other hand, Kazakhstan is expected to benefit from the unification of pipeline and railway cargo tariffs (the latter starting from 2013), since this should facilitate the transportation of Kazakhstan's exports to third countries across the Russian territory. Also, lower electricity tariffs should benefit industrial enterprises in the western parts of Kazakhstan which often face electricity shortages. Apart from price harmonization, the agreements on oil, gas and railways also provide mutual access to the respective infrastructure of the CES partner countries.

The CES aims at creating a *common market for services* via a number of measures such as the principle of national treatment for providers of services from other CES member countries; mutual licence recognition; harmonization of relevant legislation (e.g. on the degree of openness of the banking sector to foreign investors and of prudential regulations); and joint regulation of trade in services with third countries.[42] The agreements on the *free movement of capital* and on the *coordination of exchange rate policies* also foresee the use of currencies of the CES member countries (realistically, of the Russian rouble) for mutual trade – as is e.g. already the case with the shipments of Russian natural gas to its neighbouring countries (including Ukraine). Finally, the CES also envisages a *common labour market*, including the rights to stay and work on the territory of each CES member state, and a further liberalization of citizenship rules for immigrants from other CES member countries.[43]

Theoretically, the CES agreement also envisages a *coordination of macroeconomic policies*. Starting from 2013, the economies of Belarus, Russia and Kazakhstan are to comply with specified quantitative criteria which highly resemble the 'Maastricht criteria' adopted in the EU. In particular, the CES member states are required to keep their budget deficits below 3% of GDP and their public debts below 50% of GDP, while consumer price inflation in any CES member country may not exceed the level observed in the most price-stable CES member country by more than 5 p.p. The wisdom of these criteria can however be questioned. In particular, there are good arguments why the Maastricht criteria adopted in the EU may not be a good guidance for emerging economies such as the CES member countries – particularly since the latter are not aiming at monetary integration (unlike countries of the eurozone).[44] For instance, both economic growth and the level of inflation in the CES member countries are much higher than in the EU, which means that they can afford *ceteris paribus* higher budget deficits than the EU countries.

Leaving aside the issue whether the prescribed macroeconomic criteria make sense, there are strong doubts whether they can be realistically observed by the CES participating countries. For instance, in Belarus the consumer price inflation in May 2012 stood at 80% on the annual basis, whereas in both Russia and Kazakhstan it is in single digits. Because of the high inflationary expectations and the unravelling price/wage spiral typical in such cases, it

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[42] Anecdotal evidence suggests however that in reality, the markets for services in the CES countries are still far from being unified. For instance, as can be derived from the proceedings of the 4th Vienna Process (Vienna Forum on EU-Russia Relations) held by ICEUR (International Center for Advanced and Comparative EU-Russia/NIS Research: www.iceur-vienna.at), the certification standards in construction remain country-specific and represent a serious obstacle for cross-border trade in construction services.

[43] See Glazyev and Mansurov (eds) (2011).

[44] In addition, there are serious doubts whether the Maastricht criteria make sense even when applied to the countries of the eurozone. For instance, the Maastricht legislative framework failed to prevent an excessive accumulation of private (and in some cases – such as in Greece – even public) debt and numerous asset bubbles, which have eventually fuelled the recent financial crisis. At the same time, sticking to the budget deficit targets made little sense under conditions when the governments were taking over sizeable private debt in the wake of banks' rescue operations.

is therefore highly questionable whether the Belarusian authorities will succeed in bringing down the inflation rate to the levels stipulated in the CES agreement in the medium term.

3.4 Role of Ukraine

The Belarus-Russia-Kazakhstan Customs Union (CU) project is potentially relevant for Ukraine, and its possible membership in the CU has been a subject of heated debates. On its part, Russia has been trying to lure Ukraine into the CU, *inter alia* by offering the prospects of cheaper gas – a particularly sensitive issue for Ukraine, given the extremely high energy intensity of its economy and the high price it is currently paying for the imported Russian gas. In case Ukraine opts to join the CU, Ukraine – according to Russia's pledges – would be able to buy gas from Russia at Russian domestic prices, implying that in the short run it could save some USD 9 billion per year on its gas import bill.[45] Russia has also threatened to reconsider its free trade regime with Ukraine if Ukraine opts to stay outside the CU.

However, despite the Russian advances and the arguably more 'pro-Russian' foreign policy course of Ukrainian president Yanukovych, Ukraine has so far declined a full-fledged CU membership. Instead, it has been advocating the so-called '3+1' formula of cooperation – meaning that Ukraine is ready to replace its existing bilateral free trade agreements with the CU members with one new agreement with the block as a whole.[46] Apart from tricky political issues, another important reason for Ukraine's reluctant position is Ukraine's WTO-related commitments: Ukraine has been WTO member since 2008. As a result, its average tariff level (4.5%) is lower than the CET of the Customs Union (above 6%) – see Table 3.1 above. If Ukraine raises its customs duties for imports from third countries to the CU level, these countries – most of which are WTO members – would surely demand compensations.[47] Of course, this problem would not arise if the CET of the Customs Union were adjusted to Ukraine's level (rather than the other way around) – but the latter is highly unlikely to happen due to the asymmetrical bargaining positions. According to the estimates of Movchan and Giucci (2011), Ukraine's membership in the CU would entail welfare losses of up to 4% in the long run. Last but not least, the CU membership is incompatible with Ukraine's forthcoming Deep and Comprehensive Free Trade Agreement (DCFTA) with the EU which is pending signature, since the latter would generally require *zero* duties on Ukraine's imports from the EU.[48]

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[45] The 'carrot' of lower gas prices offered by Russia should not be over-interpreted. Even if Ukraine's gas import price is indeed adjusted to the currently low Russian domestic level, this level is unlikely to be sustained, given that domestic gas tariffs in Russia are planned to be progressively raised in order to ensure in the medium term 'netback parity' between Russian domestic and export gas prices.

[46] See Shumylo-Tapiola (2011).

[47] See Astrov (2011).

[48] The DCFTA agreement between Ukraine and the EU was finally initialled on 19 July 2012. However, EU concerns over what it views as the selective use of Ukraine's judicial system to political ends (first and foremost, but not solely, the 'Tymoshenko case') have put the signing of the DCFTA agreement into question. Meanwhile, further criminal charges have been filed against Ms. Tymoshenko, making it highly unlikely that she will be released or any agreements signed with the

In these circumstances, a full-fledged membership of Ukraine in the CU is only realistic if: (1) the Common External Tariff of the CU does not exceed Ukraine's level, and (2) the CU members – and first of all Russia – advance their own integration with the EU at least to the stage of a free trade area. Although the prospects for the latter currently look bleak, EU-Russia integration is a potentially preferred option in the future which, if accompanied by a parallel EU integration of Ukraine (and potentially other CIS countries), would lay the foundation for a Pan-European Economic Space.[49]

As long as this is not the case, the EU often perceives Ukraine's integration steps with Russia as alternative rather than complimentary to EU integration. In this geopolitical rivalry, the EU is effectively discouraging any intra-regional integration on the post-Soviet space involving Russia (and – as mentioned above – there is hardly any integration in this region without Russia, given its economic size). Incidentally, this is the opposite of EU policies towards the Southern Mediterranean, where advancing 'South-South' integration is seen as highly instrumental towards bringing these countries closer to the EU single market,[50] and may ultimately undermine the success of the EU's own integration efforts.

EU before the forthcoming parliamentary elections in October 2012. Furthermore, recent Ukrainian opinion polls suggest a shift in public sentiment away from EU integration: it is now less popular than Ukraine's joining a Customs Union with Russia.

[49] This option is recommended e.g. in Havlik (2010) or Glinkina and Kulikova (2007).

[50] See Gligorov et al. (2012).

Quantitative estimation of integration effects

4. Trade liberalization of Belarus, Kazakhstan, Russia and Ukraine prior to the Customs Union formation: a gravity modelling approach

4.1 Model overview

As described in the previous section, the CIS countries, especially the three members of the CU and Ukraine – a possible future member – have been making numerous attempts to liberalize mutual trade practically since the disintegration of the USSR. Thus we would expect that trade barriers between these countries have decreased over time. In order to assess the effects of changes in trade barriers which occurred in the current and potential members of the Customs Union, we use a difference-in-difference gravity-based approach which has already been used in the panel data literature. For example, Frazer and Biese-broeckm (2007) use difference-in-difference estimation to conduct an analysis of the consequences of the African Growth and Opportunity Act (AGOA) on the imports of African products to the US. They show that this method allows solving the endogeneity issue. They differentiate trade flows with respect to the overall increase in imports from a given country, the overall increase of imports of a given product, and the base level of imports of AGOA products from the AGOA countries.

Egger and Pfaffermayr (2004) use the difference-in-difference approach to analyse the impact of European integration on bilateral FDI. Hornok (2009) also uses the difference-in-difference strategy to estimate the early effects of the 2004 EU enlargement.

We start with the general gravity framework and assume that import values depend on a mix of importer characteristics, exporter characteristics, and bilateral properties. We include the time dimension into the model, therefore properties of trade partners can be divided into time-invariant and time-varying. We specify total trade as follows:

$$
M_{jit} = \underbrace{\sum_{ij} \beta_{ij} DC_{ij}}_{\text{time-invariant pair-wise effects}} + \underbrace{\sum_{i} \beta_{i} DX_{i}}_{\text{time-invariant exporter effects}} + \underbrace{\sum_{j} \beta_{j} DM_{j}}_{\text{time-invariant importer effects}} +
$$

$$
\underbrace{\sum_{i} \gamma x_{it} DX_{it}}_{\text{time-varying exporter effects}} + \underbrace{\sum_{j} \gamma m_{jt} DM_{jt}}_{\text{time-varying importer effects}} + \underbrace{\sum_{h} \phi_{ht} X_{ijht}}_{\text{time-varying pair-wise effects}} + \underbrace{DT_{t}}_{\text{time trend}} + e_{ijt} \tag{1}
$$

where M_{jit} is import from country i to country j in period t. Index h denotes a country-pair. γx_{it}, γm_{jt}, and ϕ_{ht} are coefficients of time-varying exporter effects, time-varying importer effects, and time-varying pair-wise effects, respectively. Time trend is included to capture all time-specific influences common to all bilateral relations, such as the cycle effects.

Time-varying pair-wise effects reflect the changes in trade conditions which cannot be attributed to constant characteristics of individual countries or country-pairs (such as common language, common border, geographic size, distance between countries, etc.), to unilateral changes of countries characteristics (such as GDP, population, etc.), or to the common time trend. We can interpret the coefficient of time-varying pair-wise effects ϕ_{ht} as primarily an effect of regulatory change which affects bilateral costs of trade.

To obtain the estimates of ϕ_{ht}, we need to transform our model by demeaning equation (1) with respect to time, exporter and importer averages. First, we take an average of M_{ijt} *across time* for country pairs. This yields μ_{ij}. We then take the difference of M_{ijt} from this average. This yields $\psi 1_{ijt}$.

$$\psi 1_{ijt} = M_{ijt} - \mu_{ij} =$$

$$\underbrace{\sum x_i DX_{it} \left(\gamma x_{it} - (1/k) \sum_k \gamma x_{ik} \right)}_{\text{time-varying exporter effects}} + \underbrace{\sum m_j DM_{jt} \left(\gamma m_{jt} - (1/k) \sum_k \gamma m_{jk} \right)}_{\text{time-varying importer effects}} \tag{2}$$

$$+ \underbrace{\sum_h \phi_h \left(X_{ijht} - (1/k) \sum_k X_{ijhk} \right) X_{ijht}}_{\text{time-varying pair-wise effects}} + \underbrace{DT_t}_{\text{time trend}} - (1/k) \sum_k DT_k + e_{ijt} - (1/k) \sum_k e_{ijk}$$

Next we take an *exporter* average: the average of $\psi 1_{ijt}$ across importers for each exporter in each period. This yields μ_{it}. We then take the difference of $\psi 1_{ijt}$ from this average. This yields $\psi 2_{ijt}$. Note that at this stage, we have removed the average time difference, since for each observation in each period it is equal to the average effect for the period.

$$\psi 2_{ijt} = \psi 1_{ijt} - \mu_{it} =$$

$$\underbrace{\sum_j DM_{jt} \left(\left(\gamma m_{jt} - (1/k) \sum_k \gamma m_{jk} \right) - (1/y) \sum_y \left(\gamma m_{jt} - (1/k) \sum_k \gamma m_{yk} \right) \right)}_{\text{time-varying importer effects}}$$

$$+ \underbrace{\sum_h \phi_h \left(\left(X_{ijht} - (1/k) \sum_k X_{ijhk} \right) - (1/y) \sum_y \left(X_{iyht} - (1/k) \sum_k X_{iyhk} \right) \right)}_{\text{time-varying pair-wise effects}} \tag{3}$$

$$+ \left(e_{ijt} - (1/k) \sum_k e_{ijk} \right) - (1/y) \sum_y \left(e_{iyt} - (1/k) \sum_k e_{iyk} \right)$$

At this point, we have eliminated both time-invariant pair-wise effects and time-varying exporter effects. Next we take an *importer* average: the average of $\psi 2_{ijt}$ across exporters for each importer in each period. This yields μ_{jt}. We then take the difference of $\psi 2_{ijt}$ from this average. This yields $\psi 3_{ijt}$.

$$\psi 3_{ijt} = \psi 2_{ijt} - \mu_{jt}$$

$$= \underbrace{\sum_h \phi_h \left(\left(X_{ijht} - (1/k)\sum_k X_{ijhk} \right) - (1/y)\sum_y \left(X_{iyht} - (1/k)\sum_k X_{iyhk} \right) \right)}_{\text{A: time-varying pair-wise effects}}$$

$$\underbrace{- (1/z)\sum_z \sum_h \phi_h \left(\left(X_{zjht} - (1/k)\sum_k X_{zjhk} \right) - (1/y)\sum_y \left(X_{zyht} - (1/k)\sum_k X_{zyhk} \right) \right)}_{\text{B: period-average of time-varying pair-wise effects}} \qquad (4)$$

$$+ \left(e_{ijt} - (1/k)\sum_k e_{ijk} \right) - (1/y)\sum_y \left(e_{iyt} - (1/k)\sum_k e_{iyk} \right)$$

$$- (1/z)\sum_z \left(e_{zjt} - (1/k)\sum_k e_{zjk} \right) - (1/y)\sum_y \left(e_{zyt} - (1/k)\sum_k e_{zyk} \right)$$

Terms *A* and *B* can be calculated directly for our right-hand side variables. It involves the original variable and its difference from the pair-wise mean over time, how this differs from the same value for other partners *i* with the same exporter *j*. This is term *A* in the expression above. The second term *B* is the average of *A* for importer *j* across all exporters.

4.2 Setting up an estimating equation

Before proceeding with the estimation, we construct our explanatory variables, which will account for pair-wise time-varying effects. We are interested to see whether Belarus, Kazakhstan, Russia and Ukraine experienced a decline in mutual trade barriers already before the formation of the Customs Union as compared to their trade with the rest of the world. Therefore we introduce the following regional pair-wise dummies: *cu-cu* (trade between 4 current and potential customs union members), *cu-third* (exports of the 4 countries to the rest of the world), and *third-cu* (imports of the 4 countries from the rest of the world).

Next, in order to capture the time-varying aspect of the trade integration, we interact the regional dummies with the time trend.

We correct the selection bias in the presence of frequent zero flows using the Heckman selection model approach, which requires a two-stage estimation (Martin and Pharm, 2008). In the first stage we run a probit regression, estimating the probability of a zero flow based on a number of variables (5):

$$\Pr ob(z_{ijt}=0) = F(Nindex_{ij}, \; dist_{ij}, \; contig_{ij}, \; comlang\_off_{ij}, \; imp\_total_{ijt}, \; \exp\_total_{ijt},$$

$$tariff_{ijt}, Tcu\_cu_{ijt}, \; Tcu\_third_{ijt}, \; Tthird\_cu_{ijt} \;) \qquad (5)$$

Nindex is an overlapping trade partner index for each country pair – a count of the number of trading partners they have in common; *dist* denotes the distance between countries; *contig* stands for the common border dummy; *comlang_off* for official common language; *imp_total* and *exp_total* are total volumes of, respectively, imports and exports between two countries; *tariff* denotes bilateral tariffs (weighted average MFN; used only in the merchandise trade case); *T** stand for the time-region variables.

The outcome of the regression we are interested in is the inverse Mills ratio – the ratio of the probability density function to the cumulative distribution function of the distribution.

To proceed with our main regression, we transform the logarithm of imports by demeaning it with respect to time, exporter and importer. We similarly demean the time-region variables, tariff variable and inverse Mills ratio, which will serve as our exogenous variables. We estimate a pair-wise time trend relative to general baseline for intra-regional trade similar to Francois and Wörz (2009), who do a polynomial approximation of pair-wise trends in trade volumes/costs. We have to use a linear approximation of pair-wise time-region trends due to the limited data coverage.

The equation we estimate is the following:

$$D3\ln V_{ijt} = \beta_1 * XT1cu\_cu_{ijt} + \beta_2 * XT1cu\_third_{ijt} + \beta_3 * XT1third\_cu_{ijt} +$$
$$\gamma_1 * tariff_{ijt} + \psi_1 XTinvmills_{ijt} + u_{ijt}$$

(6)

$D3\ln V_{ijt}$ is a demeaned logarithm of imports from *i* to *j,* while XT*i* are demeaned time-region dummies and inverse Mills ratio. The coefficients of *cu-third* and *third-cu* variables will let us detect possible trade creation/diversion effects.

We use UN Comtrade data on merchandise trade and our own data set on trade in services TSD compiled from the OECD, Eurostat, UN, and IMF data.[51] We also use the CEPII data set, which contains the data on distance between countries, common border, and common language for country pairs.

Regressions are estimated using a generalized linear model with clustered errors. After estimation, based on the obtained coefficients, we can calculate the per cent change in bilateral trade relative to the global baseline for each type of trading partners' pair.

Regressions are run for each sector separately, as it makes little sense to talk about a services or manufacturing sector in general – different types of services and products play different roles in the economy, have different market structures, and rely on different modes of supply to foreign markets (Montalieu and Rabaud, 2010).

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[51]   See Section 2.3 above and Francois, Pindyuk and Wörz (2009) on the data set construction.

We estimate (6) for the period 1999-2009 and for the following merchandise trade sectors in the ISIC classification: Crude petroleum and natural gas (11), Food and beverages (15), Textiles (17), Apparel (18), Wood (20), Paper (21), Coke, refined petroleum, nuclear fuel (23), Chemicals (24), Metals (27), Metal products (28), Office machinery (30), Electrical machinery (31), Radio, TV, communication equipment (32), Medical, precision, optical instruments (33), Motor vehicles (34), Other transport equipment (35), and Furniture (36). Unfortunately, the bilateral data on tariffs have very bad time coverage for the CU countries, therefore we cannot include *tariff* variable into the estimation, and tariff changes effects will be absorbed in the coefficients of XT1* variables. Thus, changes of bilateral trade relative to the global baseline are explained not only by varying non-tariff barriers to trade, but also by tariffs modifications.

For services trade we run regressions for the following sectors: total trade (200), transport (205), travel (236), other commercial services (982), post and telecommunications (245), construction (249), insurance (253), financial services (260), computer and information services (262), and other business services (268).

4.3 Estimation results

The results of the estimations are presented in Tables 4.1-4.4.

In total, statistically significant coefficients of trade partners' pairs variables have been obtained for 12 manufacturing sectors out of 17. In the case of coke, refined petroleum and nuclear fuel, electrical machinery, motor vehicles, and furniture, the coefficients of *cu-cu* have negative signs, meaning that trade between the 4 countries in these sectors was on average increasing slower than it would be predicted based on the global baseline – most likely due to increasing bilateral barriers to trade. Only in the food and paper sectors the coefficients of *cu-cu* have a positive sign.

In contrast, the bilateral barriers to imports from third countries appear to have been decreasing in many sectors: crude petroleum and natural gas, food, coke, refined petroleum, and nuclear fuel, electrical machinery, and furniture. In turn, the 4 countries got relatively better access to the markets of third countries for apparel, wood, metal products, electrical machinery, medical, precision, optical instruments, and furniture.

Thus, liberalization of merchandise trade during 1999-2009 took place in trade of the 4 countries with the rest of the world, but not in the mutual trade, which was rather subject to increasing trade barriers. It is important to note that our results show just the total average changes over the 11-year span, so it might be possible that in the recent years liberalization attempts in the *cu* countries were more efficient. Still, on average the liberalization measures appear not to have brought positive results in most of the sectors.

Table 4.1

Results of estimation of equation (6) for merchandise trade

ISIC	11	15	17	18	20	21	23	24	27
	Crude petroleum and natural gas	Food and beverages	Textiles	Apparel	Wood	Paper	Coke, refined petroleum, nuclear fuel	Chemicals	Metals
XT1cu_cu	-0.00781	0.00151**	-0.028	0.0153	0.00808	0.0229**	-0.0725***	0.0188	-0.0262
	-0.0501	0.00074	-0.022	-0.0211	-0.00814	-0.0103	-0.0202	-0.0143	-0.0243
XT1cu_third	0.00888	0.000813	0.000366	0.00127*	0.00262*	0.000484	0.00195	-5.44E-05	0.000399
	-0.0123	-0.00125	-0.000544	-0.000672	-0.00156	-0.00111	-0.00158	-0.000961	-0.000575
XT1third_cu	0.118***	0.00151**	0.00143	-0.00049	-4.37E-05	-0.00103***	0.00613***	-0.000933	0.00165
	-0.0382	-0.000699	-0.000974	-0.000702	-0.000384	-0.000355	-0.00176	-0.000655	-0.0015
XTinvmills	1.197	0.0197	-0.00246	0.0149	0.150*	-0.0769*	-0.0837	0.618	-0.169
	-1.453	-0.0259	-0.0317	-0.0742	-0.0826	-0.0426	-0.0975	-0.991	-0.317
Constant	0.00445	0.000515	-0.000321	0.000227	0.000321	1.56E-06	0.0007	-0.00104	0.0004
	-0.00767	-0.000653	-0.000897	-0.000535	-0.000941	-0.00152	-0.0015	-0.00115	-0.000989

ISIC	28	30	31	32	33	34	35	36
	Metal products	Office machinery	Electrical machinery	Radio, TV, communication equipment	Medical, preci- sion, optical instruments	Motor vehicles	Other transport equipment	Furniture
XT1cu_cu	-0.00537	-0.038	-0.0293*		-0.0207	-0.0273***	-0.00518	-0.0136**
	-0.0149	-0.0321	-0.0153		-0.0141	-0.00997	-0.0149	-0.00632
XT1cu_third	0.00142***	6.20E-05	0.00213***	0.00181***	0.000517	-0.000789	0.00103	0.00111**
	-0.000428	-0.000642	-0.000806	-0.000355	-0.000561	-0.000805	-0.0012	-0.000548
XT1third_cu	0.000338	0.00169	0.00160*	0.000562	0.000828	0.00138**	0.000375	0.000655***
	-0.000773	-0.00153	-0.000819	-0.000944	-0.000673	-0.000561	-0.000935	-0.000251
XTinvmills	-0.0599	0.187	-0.135**	0.0587	0.0119	-0.0313	1.022***	0.208
	-0.0666	-0.17	-0.0621	-0.0963	-0.075	-0.12	-0.301	-0.264
Constant	-9.87E-06	-0.000353	-0.000323	0.000412	0.000838	-0.000453	-0.000917	0.000913

Robust standard errors below coefficients' estimates

*** p<0.01, ** p<0.05, * p<0.1

Table 4.2

Change in bilateral merchandise trade in 1999-2009 relative to global baseline

ISIC	11	15	17	18	20	21	23	24	27
	Crude petroleum and natural gas	Food and beverages	Textiles	Apparel	Wood	Paper	Coke, refined petroleum, nuclear fuel	Chemicals	Metals
log change									
cu-cu	-0.09	0.02	-0.31	0.17	0.09	0.25**	-0.80***	0.21	-0.29
cu-third	0.10	0.01	0.00	0.01*	0.03*	0.01	0.02	0.00	0.00
third-cu	1.30**	0.02**	0.02	-0.01	0.00	-0.01***	0.07***	-0.01	0.02
percent change									
cu-cu	-8.23%	**1.67%**	-26.51%	18.33%	9.29%	**28.65%**	**-54.95%**	22.97%	-25.04%
cu-third	10.26%	0.90%	0.40%	**1.41%**	**2.92%**	0.53%	2.17%	-0.06%	0.44%
third-cu	**266.20%**	**1.67%**	1.59%	-0.54%	-0.05%	**-1.13%**	**6.98%**	-1.02%	1.83%

ISIC	28	30	31	32	33	34	35	36
	Metal products	Office machinery	Electrical machinery	Radio, TV, communication equipment	Medical, precision, optical instruments	Motor vehicles	Other transport equipment	Furniture
log change								
cu-cu	-0.06	-0.42	-0.32*	0.00	-0.23	-0.30***	-0.06	-0.15**
cu-third	0.02**	0.00	0.02***	0.02***	0.01	-0.01	0.01	0.01**
third-cu	0.00	0.02	0.02*	0.01	0.01	0.02**	0.00	0.01***
percent change								
cu-cu	-5.74%	-34.16%	**-27.55%**	0.04%	-20.36%	**-25.94%**	-5.54%	**-13.89%**
cu-third	**1.57%**	0.07%	**2.37%**	**2.01%**	**0.57%**	-0.86%	1.14%	**1.23%**
third-cu	0.37%	1.88%	**1.78%**	0.62%	0.91%	**1.53%**	0.41%	**0.72%**

*** p<0.01, ** p<0.05, * p<0.1

Table 4.3

Results of estimation of equation (6) for services trade

BOPS	200 Total	205 Transport	236 Travel	245 Communications	249 Construction	253 Insurance	260 Financial	262 Computer	268 Other business
XT1cu_cu	-0.00286*	0.00545***	5.92E-05	0.000756	0.0158**	0.00808			0.00456
	-0.0015	-0.00116	-0.00178	-0.00312	-0.00652	-0.00884			-0.00419
XT1cu_third	0.00246***	0.00332***	-0.000679	0.00763***	0.00603	0.0134***	0.0116**	0.00417***	0.000876**
	-0.000406	-0.00106	-0.000628	-0.00111	-0.00614	-0.00157	-0.00503	-0.000952	-0.000428
XT1third_cu	0.000132**	-6.26E-05	1.19E-05	0.000161*	-0.000158	9.25E-05	0.000294	-9.07E-05	-7.63E-05
	-5.74E-05	-3.93E-05	-3.80E-05	-9.07E-05	-0.000121	-0.000395	-0.000533	-0.000244	-0.000116
XTinvmills	-0.145***	-0.0716	-0.434***	0.0478	-0.133*	0.126	-0.252	-1.341***	-0.927***
	-0.0292	-0.192	-0.0866	-0.155	-0.0756	-0.349	-0.498	-0.323	-0.234
Constant	0.00123***	0.00133***	0.000187	0.00209***	0.00159	0.00330***	0.0021	0.00212***	0.000917***
	-0.000391	-0.000475	-0.000416	-0.000621	-0.00158	-0.00107	-0.00131	-0.000292	-0.000255
Observations	**36,337**	**19,128**	**17,533**	**11,571**	**8,410**	**9,535**	**10,126**	**10,691**	**18,111**

Robust standard errors below coefficients' estimates

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 4.4

Change in bilateral services trade in 1999-2009 relative to global baseline

BOPS	200 Total	205 Transport	236 Travel	245 Communications	249 Construction	253 Insurance	260 Financial	262 Computer	268 Other business
log change									
cu-cu	-0.031*	0.060***	0.001	0.008	0.174***	0.089	0.000	0.000	0.050
cu-third	0.027***	0.037***	-0.007	0.084***	0.066	0.147***	0.128**	0.046***	0.010**
third-cu	0.001**	-0.001	0.000	0.002	-0.002	0.001	0.003	-0.001	-0.001
percent change									
cu-cu	**-3.10%**	**6.18%**	0.07%	0.84%	**18.98%**	9.29%	0.00%	0.00%	5.14%
cu-third	**2.74%**	**3.72%**	-0.74%	**8.76%**	6.86%	**15.88%**	**13.61%**	**4.69%**	**0.97%**
third-cu	**0.15%**	-0.07%	0.01%	0.18%	-0.17%	0.10%	0.32%	-0.10%	-0.08%

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

In the case of services trade, the situation was rather similar to the one in merchandise trade. Trade between *cu* countries increased faster than it would be predicted based on the global baseline only in transport and construction sectors, pointing to a likely decrease of the trade barriers in these sectors. On average, though, there was a slight increase in barriers to mutual trade.

On the other hand, the 4 countries seem to have liberalized access of third countries to most of their services markets – transport, communications, insurance, financial services, and other business services. There appears to have been no symmetrical response on the side of third countries: conditions of exports from *cu* countries to the rest of the world remained mostly unchanged.

5. Modelling the consequences of the Belarus-Russia-Kazakhstan Customs Union and the FTA between Ukraine and the EU (CGE-modelling)

5.1 Theory of regional trade arrangements

There has been an ongoing debate on the efficiency of regional trade agreements (RTAs) as compared with multilateral liberalization. WTO rules allow RTAs provided the latter reduce trade barriers for members of an RTA without raising them in trade with the outside world. Non-members should not find trade with the group any more restrictive than before the group was set up. In other words, regional integration should complement the multilateral trading system and not threaten it.

The Kemp-Wan theorem prescribes a set of conditions that ensure that a customs union is Pareto-improving for the world. According to the theorem, for any proposed customs union, there exists a set of common external tariffs that would leave the new trading block's trade with third countries unchanged, and thus would increase world welfare. This theorem is often considered to be of little practical value, since countries signing regional trade agreements usually do not lower their tariffs vis-à-vis non-RTA countries (Cernat et al., 2007). However, it can become relevant in the case of Doha negotiations, when envisaged tariff cuts can compensate for welfare losses caused by proliferating regional trade agreements and indirectly make RTAs Kemp-Wan-compatible.

Modern theory developments increase the scope of factors influencing the formation of RTAs. Yildiz (2010) analyses FDI as an important incentive behind the creation of customs unions. He shows that customs unions, by eliminating tariffs among members, increase incentives of non-member countries' firms to penetrate into the expanding market via FDI.

Facchini and Testa (2008) show that the creation of a common market is always welfare enhancing provided there is free factor mobility at the world level. In general, RTAs are a

second-best solution, implying the existence of winners and losers. In a common market, the bigger the demand of one country for factors supplied by its partner, the more likely are gains of factors moving between members. Factors that do not relocate are more likely to see their returns decrease. As a result, in a democracy setup, welfare-enhancing bilateral liberalization might well be not politically feasible. Ex-ante transfers between future common market members to reduce their asymmetries, or ex-post, transfers from winners to losers can be used to make the formation of common markets more plausible.

Another dimension of RTA theory is political economy. Grossman and Helpman (1995) show that welfare-reducing free trade areas are politically viable in economic settings where pressure groups are important determinants of the formation of free trade areas. They show that a government might endorse an FTA agreement in two types of situations: when the FTA would generate substantial welfare gains for the average voter and adversely affected interest groups fail to coordinate their efforts to counteract; or when the agreement would create profit gains for actual or potential exporters in excess of the losses that would be suffered by import-competing industries, plus the political cost of any welfare harm that might be inflicted on the average voter. If some industries can be excluded from an FTA, the prospects for an agreement improve. Each government would wish to exclude those sectors whose inclusion would impose on it the greatest political costs.

Krishna (1998) shows that when trade policy is determined by lobbying of interest groups, then trade-diverting preferential arrangements are more likely to be supported politically; and such preferential arrangements could critically change domestic incentives so multilateral liberalization that is initially politically feasible could be rendered infeasible by a preferential arrangement. The larger the trade diversion resulting from the preferential arrangement, the more likely this will be the case.

In their later work, Grossman and Helpman (2005) develop a model where they show that, as ex ante objectives of national party leaders differ from the ex post objectives of elected legislators, there is a protectionist bias to democratic politics (protection implies policies that favour quasi-fixed factors of production, this can be either the protection of import-competing industries, or export subsidies). When trade policy is chosen by the majority delegation and legislators in the minority have limited means to influence choices, the parties announce trade policies that favour specific factors and the expected tariff or export subsidy is positive.

Sulamaa and Widgren (2004) point to the importance of heterogeneity of productivity levels in FTA members for their welfare gains. In their study of EU and Russia integration carried out within the Global Trade Analysis Project (GTAP – see Annex III), they find that an increase in Russia's productivity is crucial for the country to benefit from free trade with the

EU. An increase in productivity can be reached via improvements of institutions' quality and/or increased FDI inflows.

5.2 Economic consequences of the Belarus-Russia-Kazakhstan Customs Union: initial assessments

The so far available estimates of the economic effects of the Belarus-Russia-Kazakhstan Customs Union (Common Economic Space) differ by a wide margin. According to Dyner (2010), it may boost the participating countries' GDPs by about 15% up until 2015, after the transitory provisions have been phased out. Belarus and Kazakhstan, which are situated on the outskirts of the CU and transit a large number of goods from third countries into Russia, should benefit from the expansion of logistics centres related to the CU customs clearance. Although 88% of revenues from customs duties imposed on imports from third countries will be transferred to the Russian budget (see Section 3.2.2 above), this does not apply to other customs-related payments (such as customs clearance fees, fees for customs escort and customs storage) which will stay with the national budgets. Glazyev and Mansurov (2011) come to similar conclusions: according to their estimates, the implementation of the CU and the CES should boost the participating countries' GDPs by at least 5% over the next five years and by around 15% over the next ten years.[52]

In contrast, Vinhas de Souza (2011) has found that the CU is a welfare-reducing arrangement. To assess the economic impact of the CU in quantitative terms, he applied a GTAP computable general equilibrium (CGE) model using 15 sectors of goods and services (aggregated from 57 sectors available from the GTAP database) and 10 countries/regions which are the most relevant trade partners for the CU member countries. Overall, three scenarios have been modelled, depending on the degree of harmonization of the crucial energy sector. For all scenarios modelled, the invariable conclusion is that the CU is a GDP-reducing arrangement, first of all in the case of Belarus, whose GDP may decline by up to 6% as a result of the CU formation. One limitation of the model, however, is that it is based on trade-weighted (and thus country-specific) tariffs available from the GTAP database, which in addition do not fully correspond to the CET tariff lines.

The World Bank (2012) came up with estimates of the Customs Union effects for Kazakhstan using a small, open economy computable general equilibrium model (CGE) of Kazakhstan's economy. The authors found that the implementation of the common external tariff of the customs union is a cost to Kazakhstan equivalent to a welfare loss of about 0.3%. The cost, however, could potentially be overcome, and the customs union could produce a net benefit, provided it results in trade facilitation and reductions in NTBs. It will require a serious commitment from the authorities in all member countries to improve the

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[52] See Glazyev and Mansurov (eds) (2011).

relevant institutions, which in some member countries and sectors are plagued by rent seeking. In comparison, WTO accession of Kazakhstan is estimated to bring a real income increase of 6.7% (Jensen and Tarr, 2008) – these gains are between four and five times larger than the most optimistic projections for the customs union.

Movchan and Giucci (2011) did a study on the consequences of Ukraine's integration into the CU as compared with an FTA with the EU. The authors use their own CGE model of the Ukrainian economy. A scenario of Ukraine signing a Deep and Comprehensive FTA (DCFTA) with the EU implies mutual elimination of import tariffs and 2.5% reduction in border dead-weight costs of exports to the EU and imports from the EU; a CU scenario means that Ukraine brings its import tariffs in line with the CU ones. According to the obtained estimates, Ukraine will experience net losses from entering the CU both in the short and long run[53] (welfare decreases by 0.5% and 3.7% respectively). Signing a DCFTA with the EU would bring Ukraine net gains in welfare by 4.3% in the short run and 11.8% in the long run.

The Institute of Economics and Forecasting of the National Academy of Sciences of Ukraine (2011) has also made assessments of changes in Ukraine's exports after the country joins the DCFTA with the EU or the Customs Union. The authors have calculated changes in exports using assumptions on import tariff elasticities of trade (general equilibrium or third-country effects were not taken into consideration). They find that in the case of the DCFTA with the EU, Ukraine will increase its exports to the EU by 5% per annum; if Ukraine joins the Customs Union, its exports to Russia are expected to increase by 1-5%.

The effects of the CU for Belarus have been analysed by Tochitskaya (2010) who estimated the likely changes to imports from non-CU countries on the basis of trade-weighted import tariffs (at 2-digit HS level) before and after CET adoption and using import demand elasticities taken from Kee, Nicita and Olarreaga (2004).[54] She found that the main effect would derive from the upward adjustment of customs duties on second-hand cars imported from third countries to Russia's (effectively prohibitive) level. Her findings suggest that as a result of the dramatic hike in import tariffs on second-hand cars (by 500 p.p.), their imports – which totalled some USD 1 billion (or 8% of total imports of Belarus from third countries) – would virtually stall.[55] This would result in the Belarusian state budget losing up to 22% of its revenues which are obtained from customs duties on second-hand cars.

The idea behind imposing this prohibitive tariff level has been to strengthen the competitive position of Russia-based carmakers also in the Belarusian market. Subsequent developments have confirmed that this prediction turned out to be only partially accurate. While the

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[53]   Long run is defined by allowing capital stock adjustment to the new equilibrium.

[54]   See Kee, Nicita and Olarreaga (2004).

[55]   Generally, the import tariffs on motor vehicles were hiked dramatically in Belarus: by 20 p.p. on new passenger vehicles, by 500 p.p. on second-hand passenger vehicles, and by 15-20 p.p. on trucks.

imports of second-hand cars to Belarus from third countries indeed ceased after July 2011 (when the import tariffs were effectively hiked), the previous months witnessed a remarkable surge of these imports, as people were trying to take advantage of the still liberal import regime. This surge in imports of second-hand cars has contributed – along with other factors such as the overly expansive policy mix in response to the global crisis – to the widening external imbalances and the resulting balance-of-payments crisis in Belarus.

Tochitskaya (2010) also found a similar effect of declining imports from third countries (albeit on a much smaller scale) due to the higher import duties for trucks and buses (chapter 87), which should particularly benefit the Russia-based assembling plants of e.g. Volvo, Daimler and Setra. Among other products whose imports from non-CU member are expected to decline are notably sugar (17), meat (02), and aluminium (76). In turn, the imports of so-called 'investment goods' – such as machinery and equipment (chapters 84, 85, 90) – from non-CU members should increase thanks to lower import duties, and contribute to the modernization of the Belarusian economy. In Kazakhstan, where import duties for many investment goods have increased and those on food products have declined, the effect of the CU is expected to be largely the opposite to the one in Belarus.[56]

5.3 Model overview

In order to model possible effects of the Customs Union creation and also of the free trade agreement (FTA) between Ukraine and the EU, we employ a multi-region computable general equilibrium (CGE) model based on an extended version of the Francois, van Meijl and van Tongeren (2005) model.[57] The most important aspects of the model can be summarized as follows:

- It covers global world trade and production.
- It allows for scale economies and imperfect competition.
- It includes intermediate linkages between sectors.
- It allows for trade to impact on capital stocks through investment effects.
- It allows for short-run and long-run adjustment in labour markets.

In the model there is a single representative composite household in each region, with expenditures allocated over personal consumption and savings. The composite household owns endowments of the factors of production and receives income by selling these factors to firms. It also receives income from tariff revenue and rents accruing from import/export quota licences. Part of the income is distributed as subsidy payments to some sectors, primarily in agriculture.

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[56]   See ATF Bank (2010).

[57]   For a more technical description of the model, see Appendix III.

Taxes are included at several levels. Production taxes are placed on intermediate or primary inputs, or on output. Tariffs are levied at the border. Additional internal taxes are placed on domestic or imported intermediate inputs, and may be applied at differential rates that discriminate against imports. Where relevant, taxes are also placed on exports, and on primary factor income. Finally, where relevant (as indicated by social accounting data), taxes are placed on final consumption, and can be applied differentially to consumption of domestic and imported goods.

On the production side, in all sectors firms employ domestic production factors (capital, labour and land) and intermediate inputs from domestic and foreign sources to produce outputs in the most cost-efficient way that technology allows. Perfect competition is assumed in the agricultural sectors (but the processed food products sector is characterized by increasing returns to scale). In these sectors, products from different regions are assumed to be imperfect substitutes.

Short-run (SR) effects differ from the long-run (LR) ones in the following way: The former report only static effects, while in the long run prospective savings (and capital accumulation) become endogenous, which yields induced dynamic gains in addition to the purely static ones (see Francois and McDonald, 1996). Besides, in the long run we let capital move globally.

The model runs on the GTAP database, version 8. This database provides the data for the empirical implementation of the model and it is currently the best and most up-to-date source of internally consistent data on production, consumption and international trade by country and sector.[58] The database for the model is benchmarked for 2007.

The GTAP data on protection incorporate the MacMaps data set, which includes a set of *ad valorem equivalents* (AVEs) of border protection across the world. The source information concerns various instruments, such as specific tariffs, mixed tariffs and quotas, which cannot be directly compared or summed. In order to be of use in a CGE model, these have been converted into an AVE per sector, per country and per trading partner.[59]

For the purpose of this study, we aggregated the GTAP database into 19 sectors. The sector structure is shown in Table 5.1. The GTAP agricultural and food processing sectors are classified according to the Central Product Classification (CPC). The other GTAP sectors are defined by reference to the International Standard Industry Classification (ISIC rev. 3 as defined by the United Nations Statistic Division). Services and utility classifications predate the GATS and are based on IMF balance of payments statistics (BOP) and UN definitions.

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[58] For more information, please refer to Dimaran and McDougall (2006).

[59] The MacMaps database is the result of a joint effort by the International Trade Center (governed by UNCTAD and WTO) and CEPII.

We work with the following regional aggregation of the data (see Table 5.2).

Table 5.1

Model Sectoring Scheme

Sector	Acronym used	Share in the global exports, %
Agriculture, forestry, fish	1 aff	2.5
Coal	2 col	0.3
Oil	3 oil	3.9
Gas	4 gas	0.7
Other minerals	5 min	1.5
Petrochemicals	6 pcc	2.0
Processed food	7 prf	4.7
Textiles and clothing	8 txc	4.2
Chemicals and plastics	9 crp	12.8
Other light manufacturing	10 lmf	10.3
Metals	11 met	9.1
Motor vehicles	12 mvh	8.9
Other machinery	13 omc	25.1
Utilities	14 uti	0.4
Construction	15 cns	0.4
Trade	16 dis	1.7
Transport	17 tsp	3.4
Communications	18 com	0.5
Financial services	19 fin	0.9
Insurance	20 ins	0.7
Other business services	21 bus	4.1
Recreational and consumer services	22 ros	0.9
Other Services	23 pub	1.2
Total		100.0

Source: GTAP.

Table 5.2

Regional Aggregation Scheme

	Acronym used	Share in the global GDP	Share in the global exports
Old EU Members	1 E15	28.3	35.9
New EU Members	2 E12	2.1	3.9
Russia	3 RUS	2.3	1.9
Kazakhstan	4 KAZ	0.2	0.2
Belarus	5 BLR	0.1	0.2
Ukraine	6 UKR	0.3	0.4
Rest of the CIS	7 FSU	0.3	0.4
China	8 CHN	6.3	9.0
South-East Asia	9 EAS	13.2	17.3
South Asia	10 SAS	2.7	1.6
USA	11 USA	25.2	9.6
Canada	12 CAN	2.6	2.8
Turkey	13 TUR	1.2	0.9
Rest of World	14 ROW	15.3	15.9
Total		100.0	100.0

Source: GTAP.

5.4 Simulation scenarios

Table 5.3 provides an overview of the changes in import tariffs which occurred in the Customs Union members and which would need to occur in Ukraine provided it becomes a member of the Customs Union. The tariff rates were calculated in the GTAP classification (we took trade-weighted averages of trade-weighted data reported in 2-digit GTAP classification in UN TRAINS). The table shows that in Belarus and Russia tariffs fell in most of the sectors (apart from petrochemicals in Belarus and Russia, and other minerals in Russia). In Kazakhstan, by contrast, trade-weighted import tariffs increased in all sectors apart from other minerals and processed foods. The highest increase in tariffs occurred in motor vehicles and other machinery (such a high increase is explained by the next to zero initial values of tariffs). Ukraine, if it opts for joining the Customs Union, will also have to increase import tariffs in all the sectors, with the exception of processed foods and motor vehicles which currently are relatively more protected as compared with the Customs Union.

Table 5.3

Import tariffs before and after the Customs Union creation

		Belarus		Kazakhstan		Russia		Ukraine	
			Change to		Change to		Change to		Change required to
		CU tariffs	2008, %	CU tariffs	2008, %	CU tariffs	2008, %	2010	match CU tariffs,%
1	Agriculture, forests, fisheries	5.5	-8.9	4.9	6.2	6.5	-4.2	2.7	111.5
5	Other minerals	5.0	-1.4	2.2	-53.5	3.4	3.4	1.5	117.5
6	Petrochemicals	5.0	0.0	5.0	8.5	4.9	5.4	2.7	83.1
7	Processed foods	10.5	-5.0	13.5	-2.6	10.1	21.1	11.5	-12.1
8	Textiles and clothing	9.8	-7.9	10.1	48.8	10.9	-11.6	6.3	53.1
9	Chemicals rubber plastics	8.1	-9.0	6.0	22.1	8.6	-5.9	2.4	252.9
10	Light manufacturing	10.3	-14.5	11.9	44.3	8.1	-17.2	3.3	193.1
11	Metals	7.3	-10.8	12.4	87.5	8.8	0.7	1.7	378.3
12	Motor vehicles	6.5	-14.8	5.2	450.0	2.8	-54.0	7.3	-61.3
13	Other machinery	3.8	-32.4	3.6	231.1	3.8	-13.8	2.0	81.8

Note: trade-weighted averages of trade weighted data reported in 2 digits GTAP classification.

Source: UN TRAINS, authors' calculations.

Based on the import tariff changes, we formulate the following scenarios for our simulations (see Table 5.4). Each scenario is estimated both in the short and long run, in the latter case we account for endogenous capital accumulation.

We did not model changes in non-tariff barriers, which would require estimation of the current NTBs levels and their possible changes under the different regional integration scenarios. It is likely that inclusion of NTBs into the analysis would significantly strengthen the effects of the integration initiatives on the four economies. We would expect the effects of the NTBs decrease being the strongest for Ukraine if it implements the Deep and Compre-

hensive Free Trade Agreement (DCFTA)[60] with the EU, while in the CU adjusting the legislations to standardize trade procedures is likely to be protracted and less efficient.

Table 5.4

Simulation scenarios

	Scenario	Short-run	Long-run
1	Creation of Customs Union, Ukraine joins neither CU, nor FTA with EU (**CU**)	Members of the CU harmonize their external import tariff structures –CU-short	Endogenous capital accumulation allowed (scenarios - *-long)
2	Creation of Customs Union, Ukraine joins CU (**CU+**)	Scenario 1 + Ukraine harmonizes external import tariff structures with the CU – CU+-short	
3	Creation of Customs Union, Ukraine implements FTA with EU and does not join CU (**CU-FTA**)	Scenario 1 + Ukraine implements FTA with the EU: • Zero EU import tariffs for Ukraine's industrial goods (but not in agriculture) • Increase in quotas for agricultural and metals exports from Ukraine to the EU by 50% • Zero Ukraine's import tariffs on imports from the EU – CU-FTA-short	

5.5 Estimation results

The results of modelling are presented in Table 5.5. According to our estimates, Kazakhstan experiences net output losses (negative GDP changes of up to 2.6%) under all the scenarios, losses being smaller if Ukraine joins the CU – obviously due to the market size increase. Belarus appears to benefit the most in all the scenarios, with the GDP increase being the highest if Ukraine joins the CU. Still, the benefits appear to be relatively small – at most around 1% of GDP in the long run. The effects of the CU on Russia are similar to the Belarusian case, with possible benefits being even smaller – at most 0.6% of GDP. It is worth noting that the results for Russia practically do not depend on Ukraine's trade integration decisions.

Ukraine is better off being outside the CU: if the country does not enter any of the two RTAs, its GDP is practically not affected. However, in case of entering the CU the country experiences a negative change of GDP – up to 0.9% in the long run. Signing the FTA with the EU, in contrast, yields significant benefits to the country – at a level of up to 6.3% of GDP in the long run.

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[60] Unlike a simple free trade agreement, a 'deep and comprehensive' free trade agreement goes beyond the mere elimination of import tariffs and includes the harmonization of a wide range of trade-related policies, such as technical, sanitary and phytosanitary standards, competition policy, public procurement, etc. At the same time, a number of EU norms and standards represent in fact non-tariff barriers as well (Eurochambres, 2011).

The main results are in line with the findings of the World Bank (2012) estimating the welfare loss for Kazakhstan, and also with the findings of Movchan and Giucci (2011) who find that Ukraine experiences a net loss from joining the CU and net gains from the DCFTA with the EU.

Table 5.5

Simulation results

Real GDP change, %

	CU-short	CU-long	CU+-short	CU+-long	CU-FTA-short	CU-FTA-long
BLR	0.10	0.65	0.06	0.96	0.11	0.61
KAZ	-0.97	-2.55	-0.87	-2.21	-0.97	-2.60
RUS	0.03	0.62	0.04	0.61	0.02	0.53
UKR	-0.01	-0.03	-0.28	-0.61	0.28	6.32

Real exports change, %

	CU-short	CU-long	CU+-short	CU+-long	CU-FTA-short	CU-FTA-long
BLR	0.80	0.05	1.93	0.87	0.72	0.01
KAZ	-3.32	1.16	-1.73	1.59	-3.28	1.27
RUS	1.36	-0.29	1.38	-0.11	1.19	-0.17
UKR	-0.30	-0.65	-5.00	0.88	7.20	-6.52

Real imports change, %

	CU-short	CU-long	CU+-short	CU+-long	CU-FTA-short	CU-FTA-long
BLR	0.61	0.85	1.51	2.15	0.46	0.60
KAZ	-2.97	-11.41	-1.75	-7.94	-2.91	-11.66
RUS	1.36	3.54	1.34	3.54	1.18	2.73
UKR	-0.39	-0.20	-2.11	-4.75	5.36	18.95

Real change in income of skilled labour, %

	CU-short	CU-long	CU+-short	CU+-long	CU-FTA-short	CU-FTA-long
BLR	0.01	0.33	0.31	0.91	-0.11	0.12
KAZ	-0.49	-3.48	-0.40	-2.73	-0.48	-3.58
RUS	0.00	0.88	0.02	0.87	-0.02	0.68
UKR	-0.09	0.00	-0.06	-1.77	0.51	9.07

Real change in income of unskilled labour, %

	CU-short	CU-long	CU+-short	CU+-long	CU-FTA-short	CU-FTA-long
BLR	-0.02	-0.01	0.28	0.36	-0.14	-0.15
KAZ	-0.38	-2.57	-0.29	-2.05	-0.38	-2.64
RUS	0.04	0.58	0.07	0.59	0.01	0.47
UKR	-0.09	-0.07	0.02	-0.56	1.21	6.68

Change in capital, %

	CU-short	CU-long	CU+-short	CU+-long	CU-FTA-short	CU-FTA-long
BLR	0.16	0.53	0.24	0.89	0.19	0.56
KAZ	-1.40	-6.15	-1.31	-4.96	-1.40	-6.30
RUS	0.16	1.38	0.15	1.33	0.15	1.12
UKR	-0.11	0.04	0.88	-2.11	1.93	16.75

* Short refers to the short-run, long to the long-run.

Source: Authors' estimations.

Russia and Belarus receive a boost to their exports due to the CU – but only in the short run, while in the long run there are positive changes in exports only in the case of Belarus under the CU+ scenario. Kazakhstan, on the other hand, can increase its exports in the

long run after the initial drop, most of the increase coming from agriculture and services sectors. Ukraine experiences a 5% exports fall in the short run after joining the CU, but in the long run the trend changes and there is a slight positive change in exports – primarily on the back of food, other machinery and utilities sectors. Being a part of the FTA with the EU causes strong growth of exports in the short run (more than 7%), but in the long run there is a 6.5% drop in exports. It appears that the country benefits from the FTA through the channel of capital inflow and develops more the domestic market potential rather than exports.

Kazakhstan decreases imports in all the scenarios, apparently because of the higher import tariffs after joining the CU. The decline in imports is particularly strong in the long run. The biggest import drop takes place in other machinery, light manufacturing, textiles, and metals (in the latter sector imports drop only if Ukraine does not join the CU – obviously due to the insufficient supply of metals by Belarus and Russia).

Ukraine also decreases its imports if it joins the CU, in particular in light manufacturing and agricultural produce. But if the country signs the FTA with the EU, there is strong growth of imports in practically all the sectors, including services, especially in the long run.

Both skilled and unskilled labour in Russia would experience positive changes in real incomes under all the scenarios. In Belarus, in contrast, skilled labour benefits in all scenarios, while unskilled labour increases its real income only if Ukraine joins the CU. Kazakhstani labour has real losses of income in all scenarios, with the skilled labour being hit relatively harder. Ukraine's labour experiences long-run income losses if the country joins the CU; in case of the FTA with the EU, high real income growth takes place in the long run, especially for the skilled labour. With regard to capital accumulation, the main estimation results suggest that Kazakhstan suffers a decrease in its capital stock. Ukraine increases its capital stock dramatically if it signs an FTA with the EU.

Tables 5.6-5.9 show the changes in the production structures of the four countries that occur under the three scenarios. Belarus and Russia do not experience much of restructuring after joining the CU: Belarus somewhat increases its output of processed food and other machinery and decreases output of textiles and clothing, and motor vehicles. Similarly, Russia also decreases its output of textiles and clothing and motor vehicles, while there is a small boost to its processed food and construction sectors.

Kazakhstan has to deal with much larger changes in the production structure: there is a noticeable upsurge in the output of the country's other machinery, textiles and clothing, and motor vehicles, which comes at the cost of the economy becoming less services-intensive.

Ukraine undergoes quite different production structure changes under the CU and FTA scenarios. In the former case, the country increases its output of light manufacturing and other machinery, and decreases output of textiles and clothing, and all the services. In contrast, in case of the FTA, the services sectors and textiles and clothing show positive dynamics, while light manufacturing and other machinery suffer a setback. The motor vehicles sector experiences an output drop in both scenarios – apparently pointing to low competitiveness of the sector in Ukraine.

Table 5.6

Real changes in output of Belarus by sectors, %

	CU1-short	CU1-long	CU+ -short	CU+ -long	CU-FTA-short	CU-FTA-long
agric, forests, fisheries	0.18	0.50	-0.24	0.16	0.26	-1.43
Coal	0.07	0.07	-0.01	0.09	0.20	-2.84
Oil	0.04	0.00	0.02	0.02	0.12	-0.50
Gas	0.09	0.10	0.19	0.26	0.18	-0.97
other minerals	0.05	-0.34	0.40	0.12	0.29	-0.13
Petrochemicals	0.16	0.01	0.25	0.32	0.53	0.41
processed foods	0.59	1.06	-0.23	0.21	0.69	2.75
textiles and clothing	-1.77	-2.42	-0.78	-1.67	-1.71	-3.87
chemicals rubber plastics	0.01	-0.65	1.12	0.37	0.21	-0.58
light manufacturing	-0.73	-0.72	-0.73	-0.93	-0.64	-1.03
Metals	0.48	0.11	1.31	0.76	1.14	0.99
motor vehicles	-0.68	-0.93	-1.69	-1.98	-1.58	-5.66
other machinery	1.26	0.29	2.49	0.82	1.06	2.13
Utilities	0.08	0.44	-0.15	0.35	0.24	0.21
Construction	0.14	0.51	0.20	0.84	0.17	-0.33
distribution services	-0.12	0.58	-0.09	1.15	-0.17	-0.44
Transport	0.11	0.32	0.09	0.56	0.24	0.03
Communications	0.01	0.83	-0.10	1.32	-0.03	-0.46
Finance	-0.10	0.07	-0.08	0.22	-0.16	-0.51
Insurance	-0.11	-0.11	-0.06	-0.04	-0.18	-0.51
business and ict services	0.23	-0.11	0.09	-0.16	0.59	-0.67
recreational, consumer services	0.02	0.22	0.01	0.36	-0.11	-0.76
public and other services	-0.01	1.27	-0.25	1.90	-0.06	-0.60

Source: Authors' estimations.

Table 5.7

Real changes in output of Kazakhstan by sectors, %

	CU1-short	CU1-long	CU+ -short	CU+ -long	CU-FTA-short	CU-FTA-long
agric, forests, fisheries	-1.27	-2.80	-1.14	-2.33	-1.26	-2.83
Coal	-0.56	0.27	-0.35	0.29	-0.47	0.52
Oil	-0.28	0.39	-0.12	0.33	-0.27	0.40
Gas	-0.33	0.44	-0.13	0.47	-0.28	0.46
other minerals	-0.67	2.43	-0.47	1.62	-0.63	2.65
petrochemicals	-1.20	-1.35	-0.98	-1.22	-1.14	-1.25
processed foods	-2.18	-4.43	-3.11	-5.01	-2.18	-4.32
textiles and clothing	9.14	11.44	9.90	11.27	9.08	11.32
chemicals rubber plastics	-2.71	2.04	-1.39	1.85	-2.79	1.98
light manufacturing	0.53	3.43	0.66	2.53	0.43	3.52
Metals	-0.21	4.91	-0.23	3.31	-0.21	5.14
motor vehicles	10.91	9.64	11.27	10.18	10.83	9.44
other machinery	27.27	34.08	25.50	30.00	27.07	34.04
Utilities	0.25	-1.47	0.42	-1.11	0.23	-1.57
construction	-1.18	-5.59	-1.06	-4.48	-1.17	-5.72
distribution services	-0.81	-8.57	-0.82	-6.77	-0.80	-8.78
transport	-0.80	-3.20	-0.76	-2.70	-0.80	-3.24
communications	-0.67	-4.32	-0.61	-3.50	-0.66	-4.41
Finance	-0.53	-4.27	-0.50	-3.49	-0.52	-4.35
insurance	-0.58	-5.79	-0.49	-4.59	-0.57	-5.93
business and ict services	-0.64	-1.70	-0.43	-1.44	-0.63	-1.72
recreational, consumer services	-0.68	-6.73	-0.67	-5.31	-0.67	-6.89
public and other services	-0.27	-7.46	-0.30	-5.93	-0.27	-7.64

Source: Authors' estimations.

Table 5.8

Real changes in exports of Russia by sectors, %

	CU1-short	CU1-long	CU+ -short	CU+ -long	CU-FTA-short	CU-FTA-long
agric, forests, fisheries	0.32	0.38	0.26	0.32	0.34	0.41
Coal	0.06	-0.14	0.04	-0.11	0.12	0.01
Oil	0.01	-0.05	0.00	-0.04	0.05	-0.04
Gas	-0.03	-0.04	0.00	0.05	0.03	-0.02
other minerals	-0.06	-0.74	0.05	-0.61	0.11	-0.34
petrochemicals	-0.02	0.13	0.08	0.22	0.00	0.12
processed foods	2.38	2.75	2.02	2.33	2.40	2.90
textiles and clothing	-4.12	-4.97	-3.93	-4.65	-4.14	-5.02
chemicals rubber plastics	-0.48	-1.50	0.31	-0.67	-0.58	-1.39
light manufacturing	-2.08	-2.56	-1.63	-2.18	-2.14	-2.27
metals	0.34	-0.79	0.58	-0.60	0.50	-0.13
motor vehicles	-1.95	-2.73	-3.79	-4.41	-3.59	-4.16
other machinery	0.17	-1.09	0.04	-1.11	0.02	-1.02
utilities	-0.03	0.33	0.00	0.33	-0.03	0.27
construction	0.12	1.25	0.11	1.20	0.11	1.01
distribution services	0.03	1.08	0.02	1.04	0.02	0.87
transport	0.03	0.68	0.03	0.66	0.04	0.55
communications	0.00	0.92	-0.02	0.88	0.01	0.73
finance	-0.02	0.72	-0.04	0.67	-0.03	0.57
insurance	-0.03	0.95	-0.04	0.91	0.00	0.74
business and ict services	-0.01	0.99	-0.03	0.94	-0.01	0.77
recreational, consumer services	-0.04	1.23	-0.04	1.19	-0.03	0.95
public and other services	-0.07	1.42	-0.08	1.36	-0.06	1.13

Source: Authors' estimations.

Table 5.9

Real changes in exports of Ukraine by sectors, %

	CU1-short	CU1-long	CU+ -short	CU+ -long	CU-FTA-short	CU-FTA-long
agric, forests, fisheries	0.09	0.06	0.29	0.42	0.56	1.32
Coal	0.13	0.02	-0.73	0.15	0.19	-1.99
Oil	0.10	0.02	-0.86	0.01	0.02	-1.80
Gas	0.07	0.03	-0.90	0.08	0.00	-1.91
other minerals	0.14	-0.12	-1.30	1.05	2.34	-1.41
petrochemicals	0.12	-0.03	-0.87	0.66	0.90	0.01
processed foods	0.10	0.08	0.85	1.80	-1.81	-2.01
textiles and clothing	0.14	-0.33	-4.17	-1.08	23.22	14.56
chemicals rubber plastics	0.42	-0.06	-0.79	3.87	-0.14	-10.55
light manufacturing	-0.27	-0.32	6.75	10.04	-2.92	-8.58
metals	0.19	-0.33	-3.12	3.16	8.20	-3.76
motor vehicles	-2.89	-2.98	-20.03	-16.62	-17.34	-22.53
other machinery	-0.91	-1.05	2.61	8.47	0.69	-9.87
utilities	0.06	-0.06	-0.29	0.79	1.05	2.52
construction	-0.08	0.05	0.58	-2.31	1.33	16.20
distribution services	-0.04	0.03	0.10	-1.73	0.04	11.83
transport	0.16	0.00	-1.32	-0.35	0.13	1.56
communications	0.00	0.05	-0.10	-1.86	-0.24	10.81
finance	-0.03	-0.03	-0.20	-1.03	-0.02	8.98
insurance	0.12	-0.02	-1.35	-0.98	-0.12	5.84
business and ict services	0.04	0.02	-0.49	-1.53	0.00	9.87
recreational, consumer services	0.10	0.11	-0.88	-2.72	-0.52	11.61
public and other services	0.00	0.12	0.11	-2.90	-0.68	16.08

Source: Authors' estimations.

Conclusions

The republics of the former Soviet Union (FSU) provide a unique opportunity to examine the impact of alternative economic integration agreements. Even more than twenty years after the collapse of the Soviet Union there still remain significant – albeit diminishing and varying in individual cases – economic, trade and cultural linkages among the FSU republics. At the same time, there is a substantial variation in the institutional arrangements governing trade between FSU republics, both across the region and over time.

The Belarus-Russia-Kazakhstan Customs Union (BRK-CU) has been in preparation for several years (the respective agreement was signed in 2007) but it was de facto launched in January 2010. The BRK-CU accounts for more than 85% of the CIS' GDP and exports, for 78% of imports and 60% of population. A functioning BRK Customs Union would comprise the bulk of the FSU economy and represent a significant step towards an attempted re-integration of the FSU – the more so if Ukraine were also to join. Generally, integration attempts on the post-Soviet space have been complicated by the remarkable diversity in the economic performance and economic structures of the countries concerned, the dominance of Russia being an important factor as well. The processes of de-industrialization, de-agrarization and structural shifts towards services in Belarus, Russia, Kazakhstan and Ukraine have been broadly similar to those observed earlier in other transition countries. Within industry, Belarus and Ukraine have the highest shares of manufacturing whereas Russia and especially Kazakhstan have a large extraction sector. Within manufacturing, the biggest sector is food and beverages (in Belarus) and basic metals (Ukraine, Kazakhstan and Russia) respectively. From the perspective of their diverse industrial specialization, a joint import tariff structure of the Customs Union should affect the individual member countries differently.

Trade disintegration has been one of the consequences of the collapse of the Soviet Union. Various integration attempts notwithstanding, further trade disintegration could not be averted and the shares of mutual (intra-CIS) trade have markedly declined in the past two decades. Simultaneously with the process of regional disintegration there has been a process of integration of post-Soviet states in the global economy. Our difference-in-difference gravity-based estimation results indicate that during the period 1999-2009 liberalization took place primarily in the trade of Belarus, Russia, Kazakhstan and Ukraine with third countries, whereas in their mutual trade barriers in many manufacturing and services sectors actually increased.

There are still important structural differences in intra-CIS compared to extra-CIS trade of these countries, especially regarding exports. These differences have important implications for growth and development patterns in the countries concerned. The existing specialization patterns and comparative advantages may – apart from purely political consid-

erations – provide some economic rationale for closer trade integration. Besides, trade exchanges within the CIS, especially imports, still remain rather important – in particular for the smaller countries such as Belarus but also Kazakhstan. For Russia, the CIS shares in both exports and imports are rather low (about 15%), they are now close to the results of earlier gravity model estimates. Russia's interest in CIS integration (Customs Union, EurAsEC, etc.) is probably more political than economic.

Mutual trade exchanges (intra-BRK-CU plus Ukraine) have been rather heterogeneous and the analysis is plagued by serious data problems. In Belarus and Ukraine, intra-regional exports have recovered slightly faster than total exports since the 2008/2009 crisis. Russian and Kazakh exports to their regional partners suffered particularly strongly during the recent crisis, suggesting temporary regional trade disintegration. The preliminary data for 2011 suggest a robust recovery of intra-regional trade. Belarus and Ukraine have a fairly diversified commodity export structure whereas Russian and Kazakh exports are strongly concentrated on mineral fuels and metals. There is an important structural and regional dichotomy in the commodity trade composition – mostly with respect to Belarus and Ukraine. With the important exception of Russia, the intra-CIS trade structure is more 'advanced', still reflecting the inherited links from the Soviet period and limited progress in restructuring. There is a considerable differentiation in trade specialization both across individual countries and in revealed comparative advantage (RCA) patterns in their bilateral and total trade. Positive RCAs in mineral fuels (Russia and Kazakhstan) are mirrored by negative RCA values (= comparative disadvantage) in their trade with most other commodity groups. Ukraine has positive RCAs in most commodity groups (except mineral fuels) in trade with both BRK-CU partners and the world.

The BRK-CU largely eliminated the remaining non-tariff barriers in mutual trade and, upon the adoption of a Common External Tariff (CET), unified the participating countries' trade policies vis-à-vis third countries (although Kazakhstan has secured duty-free imports of 409 products up until 2015). The current CET set-up is in line with Russia's WTO commitments; however, should Kazakhstan or Belarus accede to the WTO in the future on more liberal terms, the CET will need to be adjusted accordingly. The BRK-CU has also implemented a common Customs Code which set common rules for goods' declaration, customs procedures, the methodology of estimating the customs value, customs control, and assessment and collection of customs duties. In January 2012, the BRK-CU was further upgraded to the Common Economic Space (CES) which is supposed not only to provide free movement of goods, services, capital and labour, but also to ensure common policies in a wide range of policy areas, with the ultimate goal of setting up the Eurasian Economic Union by 2015. The CES framework encompasses 17 sector agreements covering a coordination of macroeconomic, competition and public procurement policies, joint regulation of 'natural monopolies', harmonization of subsidies to industry and agriculture, and unification of technical regulations. Probably most importantly, the CES agreements also envisage

unification of energy (oil and, ultimately, gas) prices (arguably the main 'carrot' for Belarus' participation in the project) and transportation tariffs across member countries (the latter is particularly in the interest of Kazakhstan). Both Belarus and Kazakhstan may also benefit from the relocation of customs clearance services to the external borders of BRK-CU.

The adoption of the CET required at least some tariff adjustment from each participating country, with the adjustments being the greatest in the case of Kazakhstan. As a result of CET adoption, the average (un-weighted) level of protection declined by about 2 p.p. in Russia and 1.3 p.p. in Belarus, but increased by around 2.5 p.p. in Kazakhstan. The changes in *trade-weighted* import tariffs have been broadly similar. This suggests that in Russia and (to a lesser extent) Belarus, the 'trade creation' effect of the BRK-CU formation is likely to dominate the 'trade diversion' effect. In both countries, tariff barriers with the outside world have been on average reduced, thus providing more import competition to both domestic products and imports from other BRK-CU countries. In contrast, in Kazakhstan – where the level of protection has gone up – the issue of 'trade diversion' is potentially more of a concern. Such 'diversion' might result from the crowding-out of Kazakhstan's imports from third countries by imports from Russia and Belarus, which may be more costly or technologically inferior – a potential source of inefficiency.

The BRK-CU is potentially relevant for Ukraine, and this country's possible membership has recently been a subject of heated debates. However, despite Russian advances and the arguably 'pro-Russian' foreign policy course of Ukrainian president Yanukovych, Ukraine has so far declined a full-fledged BRK-CU membership. Apart from tricky political issues, an important reason for Ukraine's reluctant position is its WTO-related commitments: its import tariffs (4.5% on un-weighted average basis) are lower than the CET of the BRK-CU (above 6%). If Ukraine raises its customs duties for imports from third countries to the BRK-CU level, these countries – most of which are WTO members – would surely demand compensations. Besides, membership in the BRK-CU is incompatible with Ukraine's forthcoming DCFTA with the EU.

Available estimates of the economic effects of the Belarus-Russia-Kazakhstan Customs Union differ by a wide margin: it may boost the participating countries' GDPs by about 15% up until 2015. Other authors argue that the BRK-CU is a welfare-reducing arrangement. Our CGE-modelling estimates suggest that BRK-CU membership appears to bring net GDP and welfare losses to Kazakhstan. By contrast, Belarus and Russia benefit from the BRK-CU in terms of GDP and labour income growth. However, these benefits prove relatively small, given that the economies of these two countries were already highly integrated prior to the BRK-CU formation. Our estimates also suggest that joining the BRK-CU might potentially bring net GDP losses to Ukraine. There also seems to be little (economic) justification for Russia prompting Ukraine to join the BRK-CU. Ukraine, on the other hand, is likely to have a significant increase in GDP and real labour income after implementing the

DCFTA with the EU. The benefits are expected to accumulate in the long run – they come with a significant restructuring of the economy, with the country's economy becoming more services-oriented. This becomes possible owing to a strong capital inflow to the country and growth in domestic consumption.

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ANNEX I: Main Economic Indicators

Table A.I.1

Belarus: Main Economic Indicators (as % of the previous year)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Gross domestic product	89.6	102.8	111.4	108.4	103.4	105.8	104.7	105	107	111.4	109.4	110	108.6	110	100.2	107.6	105.3
Industrial production	88	104	119	112	110	108	106	105	107	116	111	111	109	111	97.2	111.3	109.1
Agricultural production	95	102	95	99.3	92	109	102	100.7	107	113	102	106	104	109	101.3	102	106.6
Capital investments	69	95	120	125	92	102	97	106	121	121	120	132	116	123	108.6	116.6	113.3
Freight carried	75	87	109	105	95	91	98	109	110	107	109	109	106	111	95.1	111.5	104.9
Retail trade turnover	77.1	132.2	118.1	128.3	110.8	111.9	129.1	111.9	110.4	111.6	120.4	117.5	115	119.7	103.4	117.5	107.1
Industrial producers price index	561	134	188	172	456	286	172	140	138	124	112	108	116.3	114	114.5	113.6	171.4
Consumer price indices	809	153	164	173	394	269	161	143	128	118	110	107	108	115	113	107.8	153
Export to CIS countries	205	124	143	96	70	121	102	98	124	135	96	122	130	128	65.01	144.9	143
Export to other countries	172	106	102	99.3	120	128	101	123	124	143	138	125	118	142	65.6	97.8	178.5
Import from CIS countries	176	124	127	95	77	142	95	109	128	148	94	130	131	137	70.2	112.5	136.8
Import from other countries	194	126	121	104	80	108	97	112	125	131	121	141	123	139	77.03	138.8	123.1

Source: CIS Database (http://www.cisstat.com/eng/frame_macro.htm).

Table A.I.2

Russia: Main Economic Indicators

	2000	2005	2006	2007	2008	2009	2010	2011 [1]	2012	2013	2014
										Forecast	
Population, th pers., average [2]	146597	143114	142487	142115	141956	141902	142938	142500	142000	141500	141000
Gross domestic product, RUB bn, nom. [3]	7306	21610	26917	33248	41277	38807	45173	54586	62600	70000	78000
annual change in % (real) [3]	10.0	6.4	8.2	8.5	5.2	-7.8	4.3	4.3	3.8	4.0	4.2
GDP/capita (EUR at exchange rate)	1900	4300	5500	6700	8000	6200	7800	9400	.	.	.
GDP/capita (EUR at PPP - wiiw)	6600	10000	11100	12500	13100	11900	12600	13400	.	.	.
Consumption of households, RUB bn, nom. [3]	3295	10653	12975	16032	19967	20986	23482	27229	.	.	.
annual change in % (real) [3]	7.3	12.2	12.2	14.3	10.6	-5.1	5.2	6.8	5	5	5
Gross fixed capital form., RUB bn, nom. [3]	1232	3837	4981	6980	9201	8536	9829	11620	.	.	.
annual change in % (real) [3]	18.1	10.6	18.0	21.0	10.6	-14.4	5.8	8.0	5	6	6
Gross industrial production [4]											
annual change in % (real)	11.9	5.1	6.3	6.3	2.1	-9.3	8.2	4.7	6	5	6
Gross agricultural production											
annual change in % (real)	7.7	2.3	3.6	3.4	10.8	1.4	-11.3	22.1	.	.	.
Construction output											
annual change in % (real)	17.0	10.5	18.1	18.2	12.8	-13.2	3.5	5.1	6	5	6
Employed persons - LFS, th, average	65070.4	68169.0	68855.0	70570.5	70965.1	69284.9	69804.0	70732.0	70500	70000	70000
annual change in %	3.4	1.3	1.0	2.5	0.6	-2.4	0.7	1.3	-0.3	-0.7	0.0
Unemployed persons - LFS, th, average	7699.5	5262.8	5312.0	4589.0	4791.5	6372.8	5636.0	5020.0	5000	5000	5000.0
Unemployment rate - LFS, in %, average	10.6	7.2	7.2	6.1	6.3	8.4	7.5	6.6	6.6	6.7	6.7
Unemployment rate, reg., in %, end of period	1.4	2.5	2.3	2.0	2.0	2.9	2.1	1.7	.	.	.
Average gross monthly wages, RUB	2223.4	8554.9	10633.9	13593.4	17290.1	18637.5	20952.0	23532.0	.	.	.
annual change in % (real, gross)	20.9	12.6	13.3	17.0	11.0	-3.0	5.2	3.5	.	.	.
Consumer prices, % p.a.	20.8	12.5	9.8	9.1	14.1	11.8	6.9	8.5	6	5	5
Producer prices in industry, % p.a. [5]	46.6	20.7	12.4	14.1	21.4	-7.2	12.2	19.0	10	9	8
General governm.budget, nat.def., % GDP											
Revenues	28.7	39.7	39.5	40.2	38.8	35.0	35.5	38.4	.	.	.
Expenditures	26.8	31.6	31.1	34.2	33.9	41.4	39.0	36.8	.	.	.
Deficit (-) / surplus (+), % GDP	1.9	8.1	8.4	6.0	4.9	-6.3	-3.5	1.6	0	0	0
Public debt, nat.def., in % of GDP [6]	56.9	14.9	8.6	6.7	5.7	8.3	8.6	9.2	8	7	6
Current account, EUR mn [8]	50619	67858	75474	56818	70642	34961	53861	70976	60000	50000	40000
Current account in % of GDP	18.0	11.1	9.6	6.0	6.2	4.0	4.8	5.3	3.9	3.0	2.2
Exports of goods, BOP, EUR mn [8]	113510	195545	241960	258930	321792	218221	303580	374872	410000	445000	480000
annual growth rate in %	60.1	32.7	23.7	7.0	24.3	-32.2	39.1	23.5	9	9	8
Imports of goods, BOP, EUR mn [8]	48483	100608	130948	163282	199148	137960	188404	232553	280000	320000	360000
annual growth rate in %	30.7	28.4	30.2	24.7	22.0	-30.7	36.6	23.4	20	14	13
Exports of services, BOP, EUR mn [8]	10337	20028	24791	28681	34921	29918	34085	38797	45000	49000	53000
annual growth rate in %	21.5	20.9	23.8	15.7	21.8	-14.3	13.9	13.8	16	9	8
Imports of services, BOP, EUR mn [8]	17540	31077	35643	42481	51495	44185	55834	64612	80000	95000	100000
annual growth rate in %	40.0	16.1	14.7	19.2	21.2	-14.2	26.4	15.7	24	19	5
FDI inflow, EUR mn [8]	2933	10336	23675	40237	51177	26254	32802	37973	45000	50000	55000
FDI outflow, EUR mn [8]	3433	10240	18454	33547	37934	31407	39800	48318	45000	40000	35000
Gross reserves of CB, excl. gold, EUR mn	26139	148094	224305	318840	291916	290432	335191	350786	.	.	.
Gross external debt, EUR mn	172364	216516	237669	316903	340688	325697	369458	421258	.	.	.
Gross external debt in % of GDP	61.4	35.3	30.1	33.4	30.1	37.0	33.0	31.5	.	.	.
Exchange rate RUB/EUR, average	26.03	35.26	34.11	35.01	36.43	44.14	40.30	40.87	41	42	43
Purchasing power parity RUB/EUR, wiiw [9]	7.51	15.06	16.95	18.79	22.13	22.91	25.00	28.54	.	.	.

1) Preliminary. - 2) Resident population. From 2010 according to census October 2010. - 3) FISIM reallocated to industries, real growth rates based on previous year prices etc. - 4) Excluding small enterprises. - 5) Domestic output prices. - 6) wiiw estimate. - 7) Refinancing rate of Central Bank. - 8) Converted from USD with the average exchange rate. - 9) wiiw estimates based on the 2005 International Comparison Project benchmark.

Source: wiiw Database incorporating national statistics. Forecasts by wiiw.

Table A.I.3

Kazakhstan: Main Economic Indicators

	2005	2006	2007	2008	2009	2010	2011 [1]	2012	2013 Forecast	2014
Population, th pers., average [2]	15147	15308	15484	15674	16093	16323	16558	16700	16800	16900
Population, th pers., end of period	15219.3	15396.9	15571.5	15776.5	16205	16442	16674	16760	16840	16920
GDP, USD bn, nom	57.1	81.0	104.9	133.4	115.3	148.1	186.2	210.7	238.5	270.5
GDP, EUR bn, nom	45.9	64.5	76.6	90.7	82.7	111.5	133.8	160.9	178.0	194.6
GDP deflator	17.9	21.5	15.5	21	4.7	19.6	16.5	8.5	7	6
Gross domestic product, KZT bn, nom.	7591	10214	12850	16053	17008	21816	27301	31400	35300	39500
annual change in % (real)	9.7	10.7	8.9	3.3	1.2	7.3	7.5	6	5	5.5
GDP/capita (EUR at exchange rate)	3000	4200	4900	5800	5100	6800	8100	9600	10600	11500
GDP/capita (EUR at PPP - wiiw)	7300	8000	8800	8900	8500	9300	10000	.	.	.
Consumption of households, KZT bn, nom.	3686	4547	5641	6871	7913	9721	11390	12620	13910	15330
annual change in % (real)	10.9	12.7	10.9	6.3	0.7	10.0	8	5	4	4
Gross fixed capital form., EUR bn, nom.	12.8	19.5	23.0	24.3	23.0	27.1	32.3			
Gross fixed capital form., KZT bn, nom.	2123	3084	3857	4309	4727	5307	6590	7830	9130	10650
annual change in % (real)	28.1	29.7	17.3	1.0	-0.8	3.8	3.5	8	9	10
Investment into fixed capital, KZT bn, nom	2421.0	2824.5	3234.2	3836.1			[1]			
annual change in % (real)	34.1	11.1	8.2	4.6			[1]			
Gross industrial production										
annual change in % (real)	4.8	7.0	5.0	2.1	2.7	10.0	3.5	4	5	7
Mining	2.7	7.0	2.6	5.5	7.2	5.3	1.3			
Manufacturing	7.6	8.1	7.8	-2.9	-2.9	18.4	6.2			
Electricity, gas and water production and distribution	4.4	2.8	9.2	6.4	-1.9		7.4			
Gross agricultural production										
annual change in % (real)	7.3	7.0	8.9	-6.4	13.9	-11.7	26.7	2	8	5
Construction industry										
annual change in % (real)	47.4	28.6	5.7	1.9	-3.2	1.0	2.7	5	8	8
Employed persons - LFS, th, average	7261.0	7403.5	7631.8	7857.2	7903.4	8114.2	8302.8	8390	8470	8550
annual change in %	1.1	2.0	3.1	3.0	0.6	2.7	2.3	1	1	1
Unemployed persons - LFS, th, average	640.7	625.4	578.8	557.8	554.5	496.5	473.1	.	.	.
Unemployment rate - LFS, in %, average	8.1	7.8	7.3	6.6	6.6	5.8	5.4	5.2	5	5
Reg. unemployed persons, th, end of period	94.0	75.1	62.5	57	53.4			.		
Reg. unemployment rate, in %, end of period	1.3	1.1	0.8	0.7	0.6	.	.	.	.	.
Average gross monthly wages, KZT	34060	40790	53238	60734	67639	77565	89887	.	.	.
annual change in % (real, gross)	11.7	10.3	17.8	-2.6	3.8	7.0	7.2	.	.	.
Consumer prices, % p.a.	7.6	8.6	10.8	17.1	7.3	7.1	8.5	5.5	6	6
Producer prices in industry, % p.a.	23.7	18.4	12.4	36.8	-22.0	25.2	20	10	7	6
General governm.budget, nat.def., % GDP										
Revenues and grants	28.1	27.9	22.5	25.1	20.6	19.7	19.7	.	.	.
Of which: oil revenues	10.6	10.2		.				.	.	.
Expenditures and net lending	22.3	20.4	24.1	27.2	23.5	22.1	21.8	.	.	.
Deficit (-) / surplus (+), % GDP	5.8	7.5	-1.7	-2.1	-2.9	-2.4	-2.1	-2.5	-1.5	-1.0
Non-oil deficit (-) / surplus (+), % GDP	-4.8	-2.8								
Public debt, nat. def., in % of GDP	9.3	11.3	7.1	8.3	12.2	14.7	16	16	16	15
Public debt, nat. def., in % of GDP, calc.			10.7	7.8	10.7	12.0	13.8	16	16	15
Central bank policy rate % p.a., end of period [3]	8.0	9.0	9.0	10.5	7.0	7.0	7.5	.	.	.
Current account, EUR mn [4]	-848	-1592	-6080	4298	-2950	1814	10136	12300	10600	9200
Current account in % of GDP	-1.8	-2.5	-7.9	4.7	-3.6	1.6	7.6	7.6	6.0	4.7
Exports of goods, BOP, EUR mn [4]	22734	30881	35323	48905	31504	46376	63551	76300	83600	88600
annual growth rate in %	37.1	35.8	14.4	38.5	-35.6	47.2	37.0	20.1	9.6	6.0
Imports of goods, BOP, EUR mn [4]	14442	19216	24298	26128	20769	24786	29601	37700	43200	47900
annual growth rate in %	29.9	33.1	26.4	7.5	-20.5	19.3	19.4	27.4	14.6	10.9
Exports of services, BOP, EUR mn [4]	1790	2246	2604	3007	3038	3203	3239	3790	4000	4080
annual growth rate in %	10.7	25.4	16.0	15.5	1.0	5.4	1.1	17.0	5.5	2.0
Imports of services, BOP, EUR mn [4]	6021	6979	8569	7556	7200	8534	7845	10000	10760	11410
annual growth rate in %	46.5	15.9	22.8	-11.8	-4.7	18.5	-8.1	27.5	7.6	6.0
Net FDI, EUR mn [4]	1701	5308	5820	8914	7231	2207	6020	6623	7045	6483
FDI inflow, EUR mn [4]	1583	5002	8123	9732	9497	8109	9274	10600	11400	10800
FDI outflow, EUR mn [4]	-117	-306	2304	818	2266	5902	3254	3977	4355	4317
Current account, USD mn	-1055.8	-1998.6	-8321.9	6325.5	-4114.0	2408.5	14110.0	16152	14211	12850
Gross reserves of NB excl. gold, EUR mn	5126	13490	10756	12630	14352	19044	19474	.	.	.
Assets of the National Oil Fund, EUR mn	6804	10709	14321	19425	16986	23390	33802	.	.	.
Gross external debt, EUR mn	36597	56246	66058	76278	78674	89261	95811	.	.	.
Gross external debt in % of GDP	79.8	87.2	86.2	84.1	95.1	80.1	71.6	.	.	.
Average exchange rate KZT/USD	132.88	126.09	122.55	120.30	147.50	147.35	146.62	149	148	146
Average exchange rate KZT/EUR	165.42	158.27	167.75	177.04	205.68	195.67	204.11	195	198	203
Purchasing power parity KZT/EUR, wiiw [5]	68.82	83.35	93.87	115.30	123.85	143.49	164.71	.	.	.

1) Preliminary. - 2) From 2009 according to census 2009. - 3) Refinancing rate of NB. - 4) Converted from USD with the average exchange rate. - 5) wiiw estimates based on the 2005 International Comparison Project benchmark.

Source: National statistics (National Bank, Agency of Statistics etc). Forecasts by wiiw.

Table A.I.4

Ukraine: Main Economic Indicators

	2000	2005	2006	2007	2008	2009	2010	2011 [1]	2012	2013	2014
										Forecast	
Population, th pers., average	49177	47105	46788	46509	46258	46053	45871	45706	45600	45500	45400
Gross domestic product, UAH bn, nom.	170.1	441.5	544.2	720.7	948.1	913.3	1082.6	1316.6	1390	1530	1690
annual change in % (real)	5.9	2.7	7.3	7.9	2.3	-14.8	4.1	5.2	3.2	4	5
GDP/capita (EUR at exchange rate)	700	1500	1800	2200	2700	1800	2200	2600	.	.	.
GDP/capita (EUR at PPP - wiiw)	2800	4700	5200	5800	6000	5100	5400	5800	.	.	.
Consumption of households, UAH bn, nom.	92.4	252.6	319.4	423.2	582.5	581.7	686.1	857.3	.	.	.
annual change in % (real)	2.5	20.6	15.9	17.2	13.1	-14.9	7.1	15.0	8	6	6
Gross fixed capital form., UAH bn, nom.	33.4	97.0	133.9	198.3	250.2	167.6	195.9	247.9	.	.	.
annual change in % (real)	12.4	3.9	21.2	23.9	-1.2	-50.5	3.9	10.1	5	8	8
Gross industrial production											
annual change in % (real)	13.2	3.1	6.2	7.6	-5.2	-21.9	11.2	7.3	2	4	6
Gross agricultural production											
annual change in % (real)	9.8	0.1	2.5	-6.5	17.1	-1.8	-1.5	17.5	.	.	.
Construction output											
annual change in % (real)	0.4	-6.6	9.9	15.6	-15.8	-48.2	-5.4	11.1	.	.	.
Employed persons - LFS, th, average	20175.0	20680.0	20730.4	20904.7	20972.3	20191.5	20266.0	20324.2	20300	20350	20400
annual change in %	1.1	1.9	0.2	0.8	0.3	-3.7	0.4	0.3	0	0.2	0.2
Unemployed persons - LFS, th, average	2655.8	1600.8	1515.0	1417.6	1425.1	1958.8	1785.6	1732.7	.	.	.
Unemployment rate - LFS, in %, average	11.6	7.2	6.8	6.4	6.4	8.8	8.1	7.9	7.9	7.7	7.5
Reg. unemployed persons, th, end of period	1155.2	881.5	759.5	642.3	844.9	531.6	544.9	482.8			
Unemployment rate, reg., in %, end of period [2]	4.2	3.1	2.7	2.3	3.0	1.9	2.0	1.8	.	.	.
Average gross monthly wages, UAH [3]	230.1	806.2	1041.5	1351.1	1806.3	1905.9	2239.2	2633.0	.	.	.
annual change in % (real, gross)	1.1	20.5	18.4	15.0	6.8	-9.0	9.7	8.9	.	.	.
Consumer prices, % p.a.	28.2	13.5	9.1	12.8	25.2	15.9	9.4	8.0	2	6	5
Producer prices in industry, % p.a. [4]	20.8	16.7	9.6	19.5	35.5	6.5	20.9	19.0	.	.	.
Deflator growth rate, in %	23.1	24.5	14.8	22.7	28.6	13.0	13.8	15.7			
General governm. budget, nat.def., % GDP											
Revenues	28.9	30.4	31.6	30.5	31.4	29.9	29.1	30.3	.	.	.
Expenditures	28.3	32.2	32.3	31.6	32.8	34.0	35.0	32.1	.	.	.
Deficit (-) / surplus (+) [5]	0.6	-1.8	-0.7	-1.1	-1.5	-4.1	-6.0	-1.8	-3.5	-3	-2.5
Public debt, nat.def., in % of GDP	45.3	17.7	14.8	12.3	20.0	34.8	39.1	35.9	35	34	33
Central bank policy rate, % p.a., end of period [6]	27.00	9.50	8.50	8.00	12.00	10.25	7.75	7.75	.	.	.
Current account, EUR mn [7]	1602	2030	-1289	-3849	-8721	-1242	-2274	-6469	-6000	-6500	-7000
Current account in % of GDP	4.7	2.9	-1.5	-3.7	-7.1	-1.5	-2.2	-5.5	-4.7	-4.9	-4.8
Exports of goods, BOP, EUR mn [7]	17008	28093	31048	36383	46274	28958	39321	49865	54900	63100	72600
annual growth rate in %	37.2	4.4	10.5	17.2	27.2	-37.4	35.8	26.8	10	15	15
Imports of goods, BOP, EUR mn [7]	16165	29004	35188	44100	57270	32046	45641	59782	65800	75700	87100
annual growth rate in %	32.8	21.4	21.3	25.3	29.9	-44.0	42.4	31.0	10	15	15
Exports of services, BOP, EUR mn [7]	4111	7503	9000	10337	12228	9936	12856	13954	14700	16200	17500
annual growth rate in %	13.0	18.6	19.9	14.9	18.3	-18.8	29.4	8.5	5	10	8
Imports of services, BOP, EUR mn [7]	3433	6054	7305	8571	11039	8248	9538	10444	11000	12500	14500
annual growth rate in %	59.3	13.6	20.7	17.3	28.8	-25.3	15.6	9.5	5	14	16
FDI inflow, EUR mn [7][8]	644	6263	4467	7220	7457	3453	4893	5177	5000	6000	7000
FDI outflow, EUR mn [7]	1	221	-106	491	690	116	555	138	.	.	.
Gross reserves of NB excl. gold, EUR mn	1453	16058	16587	21635	21847	17825	25096	23593	.	.	.
Gross external debt, EUR mn	12759	33504	41391	54421	72109	72113	88363	97940	.	.	.
Gross external debt in % of GDP	37.7	48.5	48.2	52.2	58.6	85.8	86.0	82.5	.	.	.
Average exchange rate UAH/USD	5.440	5.125	5.050	5.050	5.267	7.791	7.936	7.968			.
Exchange rate UAH/EUR, average	5.029	6.389	6.335	6.918	7.708	10.868	10.533	11.092	11	11.5	11.5
Purchasing power parity UAH/EUR, wiiw [9]	1.217	1.986	2.229	2.663	3.417	3.921	4.361	4.972	.	.	.

1) Preliminary. - 2) In % of working age population. - 3) Excluding small enterprises. - 4) Domestic output prices. - 5) wiiw projections include transfers to Naftohaz. - 6) Discount rate of NB. - 7) Converted from USD with the average exchange rate. - 8) In first quarter 2012 FDI net. - 9) wiiw estimates based on the 2005 International Comparison Project benchmark.

Source: wiiw Database incorporating national statistics. Forecasts by wiiw.

ANNEX II: Foreign Trade Data: CISSTAT and UN COMTRADE

Table A.II.1

CIS Exports and Imports: an overview

(million US dollars)

	2000			2008			2010			
	Total	*CIS countries*	*other countries*	*Total*	*CIS countries*	*other countries*	*Total*	*CIS countries*	*Other countries*	
					Exports					
	1745	235	1510	47756	1619	46137	21324,8	1983,9	19340,9	**Azerbaijan**
	300	73	227	1057	331	726	1011,4	199,2	812,2	**Armenia**
	7326	4399	2927	32902	14406	18496	25225,9	13499,3	11726,6	**Belarus**
	323	129	194	1498	543	955				**Georgia**
	8812	2337	6475	71183	11078	60105	59216,6	7941,1	51275,5	**Kazakhstan**
	511	214	297	1642	781	861	1759,8	788,1	971,1	**Kyrgyzstan**
	472	276	196	1597	628	969	1582,1	624,2	957,9	**Moldova**
	103,1	13,8	89,3	467,9	69,8	398,1	396,4	59,6	336,8	**Russia**[1]
	784	374	410	1409	228	1181	1195,2	161,5	1033,7	**Tajikistan**
	14573	4498	10075	66954	23809	43145	51,4	18,7	32,7	**Ukraine**[1]
	138,0	**26,4**	**111,6**	**693,9**	**123,2**	**570,7**	**559,2**	**103,6**	**455,6**	Total for CIS countries[3]
					Imports					
	1172	375	797	7167	2341	4826	6599,4	2051,0	4548,4	**Azerbaijan**
	885	174	711	4426	1312	3114	3782,9	1142,0	2640,9	**Armenia**
	8646	6070	2576	39483	26054	13429	34868,2	20510,2	14358,0	**Belarus**
	709	229	480	6058	2000	4058				**Georgia**
	5040	2732	2308	37889	17497	20392	29760,0	13622,2	16137,8	**Kazakhstan**
	558	302	256	4072	2187	1885	3223,1	1711,6	1511,5	**Kyrgyzstan**
	776	260	516	4899	1737	3162	3855,3	1256,9	2598,4	**Moldova**
	33,9	11,6	22,3	267,0	36,6	230,4	229,0	31,6	197,4	**Russia**[1]
	675	560	115	3272	1836	1436	2657,8	1563,9	1093,9	**Tajikistan**
	13956	8040	5916	85535	33569	51966	60,7	26,7	34,0	**Ukraine**[1]
	66,3	**30,3**	**36,0**	**459,8**	**125,1**	**334,7**	**374,4**	**100,1**	**274,3**	Total for CIS countries[3]
					Balance					
	573	-140	713	40589	-722	41311	14725,4	-67,1	14792,5	**Azerbaijan**
	-585	-101	-484	-3369	-981	-2388	-2771,5	-942,8	-1828,7	**Armenia**
	-1320	-1671	351	-6581	-11648	5067	-9642,3	-7010,9	-2631,4	**Belarus**
	-386	-100	-286	-4560	-1457	-3103				**Georgia**
	3772	-395	4167	33294	-6419	39713	29456,6	-5681,1	35137,7	**Kazakhstan**
	-47	-88	41	-2430	-1406	-1024	-1463,3	-923,5	-539,8	**Kyrgyzstan**
	-304	16	-320	-3302	-1109	-2193	-2273,2	-632,7	-1640,5	**Moldova**
	69,2	2,2	67,0	200,9	33,2	167,7	167,4	28,0	139,4	**Russia**[1]
	109	-186	295	-1863	-1608	-255	-1462,6	-1402,4	-60,2	**Tajikistan**
	617	-3542	4159	-18581	-9760	-8821	-9,3	-8,0	-1,3	**Ukraine**[1]
	71,7	**-3,9**	**75,6**	**234,1**	**-1,9**	**236,0**	**184,8**	**3,5**	**181,3**	Total for CIS countries[3]

1) Bln. US dollars; for Ukraine in 2010 only.

Source: CISSTAT

Table A.II.2

Belarus: Commodity structure of external trade

2000	2005	2006	2007	2008	2010	
						External Trade
						Exports, mln. US dollars
4399	7060	8609	11221	14406	13499,3	to CIS countries
2927	8919	11125	13054	18496	11726,6	to other countries of the world
						Imports, mln. US dollars
6070	11142	14512	19016	26054	20510,2	from CIS countries
2576	5566	7839	9677	13429	14358,0	from other countries of the world
						Balance, mln. US dollars
-1671	-4082	-5903	-7795	-11648	-7010,9	with CIS countries
351	3353	3286	3377	5067	-2631,4	with other countries of the world

2000	2005	2006	2007	2008	2010	
			Exports to CIS countries			
						Commodity structure of exports (percent)
100	100	100	100	100	100	Total
4,8	10,3	11,1	10,6	11,0	17,3	Live animals; vegetable products
0,2	0,1	0,1	0,1	0,1	0,1	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
4,6	6,6	4,2	3,5	3,5	5,2	non- alcoholic beverages and tobacco
10,7	5,0	7,0	5,7	11,5	13,5	Mineral products
						Products of the chemical industry; plastics;
11,4	9,3	9,9	9,8	9,6	11,1	rubber and articles thereof
4,1	3,8	3,4	3,4	3,2	2,6	Wood and articles of wood; pulp of wood
10,8	7,8	7,3	6,5	5,7	6,6	Textiles and textilearticles
						Non-precious metals and articles
6,2	8,9	8,6	9,4	9,1	7,3	of non-precious metal
15,5	17,9	17,8	18,6	17,0	14,5	Machinery and mechanical appliances
18,8	19,0	19,9	21,7	19,2	12,8	Means of transportation
						Instruments and apparatus; clocks
1,3	0,9	0,9	0,9	0,9	0,9	and watches; musical instruments
11,7	10,4	9,8	9,8	9,3	8,1	Other

2000	2005	2006	2007	2008	2010	
			Exports to other countries of the world			
100	100	100	100	100	100	Total
1,7	0,4	0,5	1,1	0,4	0,8	Live animals; vegetable products
0,0	0,1	0,2	0,1	0,1	0,4	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
1,1	0,9	0,8	0,6	0,2	0,6	non- alcoholic beverages and tobacco
34,5	59,4	63,4	61,3	58,5	46,0	Mineral products
						Products of the chemical industry; plastics;
22,2	15,8	14,8	16,0	24,0	25,8	rubber and articles thereof
4,6	3,2	2,3	2,8	1,7	2,6	Wood and articles of wood; pulp of wood
10,2	4,3	3,3	3,0	2,1	3,2	Textiles and textile articles
						Non-precious metals and articles
8,8	6,4	6,8	6,9	6,8	8,0	of non-precious metal
3,7	1,9	1,6	1,7	1,2	2,2	Machinery and mechanical appliances
4,5	3,6	3,1	3,5	2,4	4,0	Means of transportation
						Instruments and apparatus; clocks
2,0	1,0	0,8	0,8	0,7	1,1	and watches; musical instruments
6,7	2,9	2,4	2,2	1,9	5,3	Other

Belarus (continued)

2000	2005	2006	2007	2008	2010	
						Imports from CIS countries
						Commodity structure of imports (percent)
100	100	100	100	100	100	Total
4,5	2,5	2,4	2,0	1,7	1,3	Live animals; vegetable products
0,9	0,9	0,7	0,8	0,7	0,7	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and non-
3,6	4,2	3,9	3,7	3,4	3,8	alcoholic beverages and tobacco
43,2	50,0	50,8	53,4	54,5	53,9	Mineral products
						Products of the chemical industry; plastics;
10,8	8,1	8,3	7,5	7,7	8,9	rubber and articles thereof
3,1	2,0	2,1	2,0	1,9	2,1	Wood and articles of wood; pulp of wood
2,7	1,7	1,6	1,3	1,0	1,1	Textiles and textile articles
						Non-precious metals and articles
14,3	14,4	14,9	14,8	15,2	14,7	of non-precious metal
8,2	8,8	8,3	8,2	7,9	7,3	Machinery and mechanical appliances
3,0	2,7	2,6	2,5	2,5	2,2	Means of transportation
						Instruments and apparatus; clocks
0,9	0,6	0,6	0,6	0,5	0,5	and watches; musical instruments
4,8	4,1	3,9	3,2	3,0	3,4	Other

2000	2005	2006	2007	2008	2010	
						Imports from other countries of the world
100	100	100	100	100	100	Total
12,7	8,4	7,2	5,7	6,5	5,7	Live animals; vegetable products
0,9	0,3	0,2	0,2	0,2	0,1	Animal or vegetable, fats and oils
						Prepared foodstuffs; alcoholic and
8,5	7,4	6,3	4,8	5,1	5,8	non- alcoholic beverages and tobacco
1,1	0,9	1,0	1,1	1,2	8,9	Mineral products
						Products of the chemical industry; plastics;
21,5	19,1	19,1	18,6	18,1	18,3	rubber and articles thereof
3,2	3,0	2,8	3,0	2,8	2,2	Wood and articles of wood; pulp of wood
8,1	5,2	4,0	3,9	3,7	3,4	Textiles and textile articles
						Non-precious metals and articles
3,9	5,5	5,9	6,4	6,7	6,1	of non-precious metal
24,4	28,9	30,4	32,0	31,4	30,1	Machinery and mechanical appliances
7,5	12,0	13,7	15,3	15,5	12,1	Means of transportation
						Instruments and apparatus; clocks
3,4	3,5	3,4	3,8	3,5	2,6	and watches; musical instruments
4,8	5,7	6,1	5,1	5,3	4,7	Other

Source: CISSTAT

Table A.II.3

Kazakhstan: Commodity structure of external trade

2000	2005	2006	2007	2008	2010	
						External Trade
						Exports, mln. US dollars
2337	4067	5574	7965	11078	7941,1	to CIS countries
6475	23782	32676	39790	60105	51275,5	to other countries of the world
						Imports, mln. US dollars
2732	8134	11064	14599	17497	13622,2	from CIS countries
2308	9218	12613	18157	20392	16137,8	from other countries of the world
						Balance, mln. US dollars
-395	-4067	-5490	-6634	-6419	-5681,1	with CIS countries
4167	14564	20063	21633	39713	35137,7	with other countries of the world

2000	2005	2006	2007	2008	2010	
		Exports to CIS countries				
						Commodity structure of exports (percent)
100	100	100	100	100	100	Total
18,8	8,6	10,0	12,1	11,3	11,1	Live animals; vegetable products
0,1	0,3	0,3	0,3	0,2	0,6	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
1,1	2,8	2,1	1,2	1,1	1,9	non-alcoholic beverages and tobacco
55,0	52,3	49,7	47,1	52,5	48,9	Mineral products
						Products of the chemical industry; plastics;
10,8	13,8	14,3	15,2	10,1	11,0	rubber and articles thereof
0,3	0,3	0,3	0,3	0,2	0,3	Wood and articles of wood; pulp of wood
0,5	1,8	1,8	1,3	0,6	0,9	Textiles and textile articles
						Non-precious metals and articles
7,8	13,5	14,3	17,0	18,6	21,7	of non-precious metal
2,9	4,3	3,5	3,5	3,0	2,6	Machinery and mechanical appliances
1,3	1,5	2,5	1,6	2,0	0,4	Means of transportation
						Instruments and appara-
1,0	0,2	0,1	0,1	0,1	0,1	tus; clocks and watches; musical instruments
0,5	0,6	1,1	0,4	0,4	0,4	Other

2000	2005	2006	2007	2008	2010	
		Exports to other countries of the world				
100	100	100	100	100	100	Total
2,0	0,7	1,1	2,3	2,5	1,7	Live animals; vegetable products
-	0,0	0,0	0,0	0,0	0,0	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
0,1	0,1	0,1	0,1	0,1	0,1	non-alcoholic beverages and tobacco
54,1	77,5	75,7	74,2	76,8	78,9	Mineral products
						Products of the chemical industry; plastics;
2,0	1,5	2,4	1,7	2,3	4,2	rubber and articles thereof
0,1	0,0	0,0	0,0	0,0	0,0	Wood and articles of wood; pulp of wood
1,3	0,6	0,5	0,5	0,3	0,1	Textiles and textile articles
						Non-precious metals and articles
32,3	16,3	16,4	17,2	14,6	12,0	of non-precious metal
1,2	0,3	0,3	0,2	0,2	0,2	Machinery and mechanical appliances
0,4	0,1	0,7	1,1	1,0	0,2	Means of transportation
						Instruments and apparatus; clocks
0,1	0,1	0,0	0,0	0,0	0,0	and watches; musical instruments
6,4	2,7	2,8	2,7	2,2	2,5	Other

Kazakhstan (continued)

2000	2005	2006	2007	2008	2010	
Imports from CIS countries						
						Commodity structure
						of imports (percent)
100	100	100	100	100	100	Total
2,6	1,8	2,0	2,5	2,7	4,1	Live animals; vegetable products
1,2	0,7	0,7	0,7	1,3	1,1	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
5,8	5,5	5,7	6,6	6,5	8,1	non-alcoholic beverages and tobacco
20,7	26,1	28,6	27,1	32,3	28,0	Mineral products
						Products of the chemical industry; plastics;
15,7	10,0	9,4	9,2	8,5	11,6	rubber and articles thereof
4,1	4,3	4,2	4,5	3,5	4,6	Wood and articles of wood; pulp of wood
1,0	1,2	1,2	1,1	0,7	0,9	Textiles and textile articles
						Non-precious me-tals and articles
13,0	17,6	16,9	17,1	17,4	14,0	of non-precious metal
15,6	14,4	13,4	13,7	13,7	12,6	Machinery and mechanical appliances
14,8	12,8	12,3	11,2	8,7	7,7	Means of transportation
						Instruments and apparatus; clocks
1,6	1,0	1,0	1,0	0,9	1,0	and watches; musical instruments
4,1	4,5	4,7	5,4	3,8	5,5	Other

2000	2005	2006	2007	2008	2010	
Imports from other countries of the world						
100	100	100	100	100	100	Total
2,6	2,3	2,1	1,9	2,3	3,5	Live animals; vegetable products
0,5	0,4	0,2	0,1	0,2	0,2	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
5,7	4,1	3,6	2,6	3,1	3,7	non-alcoholic beverages and tobacco
4,0	2,2	1,7	1,8	1,6	1,4	Mineral products
						Products of the chemical industry; plastics;
13,5	12,9	12,1	11,8	12,2	16,3	rubber and articles thereof
3,2	2,7	2,7	2,5	2,3	2,8	Wood and articles of wood; pulp of wood
1,7	1,4	1,2	1,1	1,2	1,6	Textiles and textile articles
						Non-precious metals and articles
9,0	12,1	10,2	10,2	16,2	10,1	of non-precious metal
42,3	40,5	39,6	37,5	37,6	36,6	Machinery and mechanical appliances
6,9	14,1	18,7	22,4	15,0	12,9	Means of transportation
						Instruments and apparatus; clocks
4,0	2,9	3,2	3,3	3,4	4,4	and watches; musical instruments
6,6	4,5	4,7	4,8	4,9	6,5	Other

Source: CISSTAT

Table A.II.4

Russia: Commodity structure of external trade

2000	2005	2006	2007	2008	2010	
						External Trade
						Exports, bln. US dollars
13,8	32,6	42,3	52,7	69,8	59,6	to CIS countries
89,3	208,9	258,9	299,3	398,1	336,8	to other countries of the world
						Imports, bln. US dollars
11,6	19,0	22,4	29,9	36,6	31,6	from CIS countries
22,3	79,7	115,4	169,9	230,4	197,4	from other countries of the world
						Balance, bln. US dollars
2,2	13,6	19,9	22,8	33,2	28,0	with CIS countries
67,0	129,2	143,5	129,4	167,7	139,4	with other countries of the world

2000	2005	2006	2007	2008	2010	
		Exports to CIS countries				
						Commodity structure of exports (percent)
100	100	100	100	100	100	Total
2,3	2,0	1,9	2,3	1,9	1,2	Live animals; vegetable products
0,5	0,4	0,4	0,5	0,6	0,6	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
2,6	4,3	4,0	4,2	3,8	3,8	non-alcoholic beverages and tobacco
49,0	46,0	47,0	44,1	48,2	53,1	Mineral products
						Products of the chemical industry; plastics;
10,2	9,0	8,8	9,0	9,4	9,3	rubber and articles thereof
3,0	3,6	3,6	4,0	3,4	3,5	Wood and articles of wood; pulp of wood
1,8	1,0	0,9	0,8	0,6	0,6	Textiles and textile articles
						Non-precious metals and articles
10,0	12,3	12,6	13,8	13,0	10,9	of non-precious metal
10,9	10,2	9,7	10,4	9,5	8,6	Machinery and mechanical appliances
5,2	6,9	6,9	6,7	6,0	4,2	Means of transportation
						Instruments and apparatus; clocks
1,0	0,8	0,8	0,8	0,7	0,7	and watches; musical instruments
3,6	3,5	3,5	3,3	2,8	3,4	Other

2000	2005	2006	2007	2008	2010	
		Exports to other countries of the world				
100	100	100	100	100	100	Total
						Live animals; vegetable
0,8	0,9	0,8	1,5	0,9	1,4	products
0,1	0,1	0,1	0,1	0,2	0,1	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
0,2	0,1	0,1	0,2	0,2	0,2	non-alcoholic beverages and tobacco
54,5	67,7	69,0	68,6	73,5	71,5	Mineral products
						Products of the chemical industry; plastics;
6,7	5,5	5,0	5,4	6,0	5,8	rubber and articles thereof
4,5	3,4	3,1	3,4	2,3	2,3	Wood and articles of wood; pulp of wood
0,6	0,2	0,1	0,1	0,1	0,1	Textiles and textile articles
						Non-precious metals and articles
18,0	14,3	13,8	14,0	11,5	10,8	of non-precious metal
3,4	1,7	1,6	1,5	1,4	1,6	Machinery and mechanical appliances
3,5	1,7	2,0	1,7	1,3	2,4	Means of transportation
						Instruments and apparatus; clocks
0,7	0,2	0,2	0,2	0,2	0,3	and watches; musical instruments
7,1	4,2	3,9	3,4	2,7	3,4	Other

Russia (continued)

2000	2005	2006	2007	2008	2010	
						Imports from the CIS countries
						Commodity structure of imports (percent)
100	100	100	100	100	100	Total
9,8	11,1	10,1	9,0	9,4	13,0	Live animals; vegetable products
0,7	0,7	0,5	0,9	1,1	0,9	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and non-alcoholic beverages
7,4	8,7	5,4	4,6	4,3	5,7	and tobacco
15,1	12,1	10,6	10,4	14,2	12,7	Mineral products
						Products of the chemical industry; plastics;
12,6	10,7	11,9	10,2	9,0	9,7	rubber and articles thereof
2,5	3,0	3,0	3,0	2,7	3,2	Wood and articles of wood; pulp of wood
8,7	4,9	4,9	4,3	4,0	5,3	Textiles and textile articles
						Non-precious metals and articles
14,6	17,4	19,9	20,6	18,1	16,2	of non-precious metal
12,3	13,5	14,2	14,9	15,1	14,2	Machinery and me-chanical appliances
9,1	12,1	13,9	16,2	16,5	13,8	Means of transportation
						Instruments and apparatus; clocks
0,8	0,7	0,7	0,7	0,7	0,8	and watches; musical instruments
6,4	5,1	5,0	5,2	4,9	4,7	Other

2000	2005	2006	2007	2008	2010	
						Imports from other countries of the world
100	100	100	100	100	100	Total
11,7	9,8	9,7	8,4	8,1	9,9	Live animals; vegetable products
1,5	0,7	0,5	0,4	0,5	0,5	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
10,7	6,4	5,5	4,9	4,2	4,9	non-alcoholic beverages and tobacco
1,7	0,9	0,8	0,9	1,3	1,0	Mineral products
						Products of the chemical industry; plastics;
20,7	17,9	16,6	14,4	13,8	17,3	rubber and articles thereof
4,5	3,4	2,9	2,6	2,4	2,5	Wood and articles of wood; pulp of wood
3,4	2,5	2,7	2,9	3,0	4,2	Textiles and textile articles
						Non-precious metals and articles
4,7	5,1	5,1	5,6	5,2	6,0	of non-precious metal
24,3	30,3	30,2	30,6	30,6	30,4	Machinery and mechanical appliances
7,5	15,2	17,8	20,3	21,9	13,6	Means of transportation
						Instruments and apparatus; clocks
4,6	2,9	3,5	3,6	3,6	3,1	and watches; musical instruments
4,7	4,9	4,9	5,3	5,2	6,6	Other

Source: CISSTAT

Table A.II.5

Ukraine: Commodity structure of external trade

2000	2005	2006	2007	2008	2010(bn$)	
						External Trade
						Exports, mln. US dollars
4498	10730	12664	18615	23809	18,7	to CIS countries
10075	23498	25704	30681	43145	32,7	to other countries of the world
						Imports, mln. US dollars
8040	17029	20185	25569	33569	26,7	from CIS countries
5916	19107	24854	35049	51966	34,0	from other countries of the world
						Balance, mln. US dollars
-3542	-6299	-7521	-6954	-9760	-8,0	with CIS countries
4159	4391	850	-4368	-8821	-1,3	with other countries of the world

2000	2005	2006	2007	2008	2010	
		Exports to CIS countries				
						Commodity structure of exports (percent)
100	100	100	100	100	100	Total
7,9	6,6	3,1	3,7	4,6	5,0	Live animals; vegetable products
1,9	1,5	1,4	2,1	2,4	2,6	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
7,4	9,6	8,6	8,3	8,5	9,7	non-alcoholic beverages and tobacco
3,5	6,1	5,3	4,8	7,6	9,9	Mineral products
						Products of the chemical industry; plas-
16,9	10,1	10,5	8,8	7,8	8,8	tics; rubber and articles thereof
3,5	4,0	4,6	4,1	3,7	5,0	Wood and articles of wood; pulp of wood
1,1	0,9	1,1	1,0	0,8	0,7	Textiles and textile articles
						Non-precious metals and articles
30,2	28,5	31,1	30,3	28,2	21,7	of non-precious metal
18,0	18,0	17,3	17,2	17,5	16,8	Machinery and mechanical appliances
4,7	9,9	12,6	14,5	15,0	15,0	Means of transportation
						Instruments and apparatus; clocks and
1,0	1,0	0,8	0,7	0,6	0,8	watches; musical instruments
4,0	3,9	3,8	4,4	3,4	4,0	Other

2000	2005	2006	2007	2008	2010	
		Exports to other countries of the world				
						Commodity structure of exports (percent)
100	100	100	100	100	100	Total
3,8	7,3	7,6	5,8	12,2	11,7	Live animals; vegetable products
1,5	1,8	3,1	4,3	3,2	6,5	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
0,7	1,1	1,2	1,8	1,2	2,3	non-alcoholic beverages and tobacco
12,4	17,3	12,4	11,0	12,1	14,9	Mineral products
						Products of the chemical industry; plas-
10,2	10,6	11,1	11,1	9,7	7,7	tics; rubber and articles thereof
2,6	2,4	2,4	2,7	1,8	2,5	Wood and articles of wood; pulp of wood
4,8	3,5	3,0	2,6	1,9	1,8	Textiles and textile articles
						Non-precious metals and articles
50,7	46,6	48,6	49,3	48,4	40,6	of non-precious metal
5,4	3,9	4,4	5,8	5,1	7,7	Machinery and mechanical appliances
2,2	2,5	1,9	2,0	1,7	1,4	Means of transportation
						Instruments and apparatus; clocks
0,2	0,2	0,2	0,2	0,2	0,3	and watches; musical instruments
5,4	3,0	3,9	3,3	2,5	2,5	Other

Ukraine (continued)

2000	2005	2006	2007	2008	2010	
		Imports from CIS countries				
						Commodity structure of imports (percent)
100	100	100	100	100	100	Total
1,1	0,7	0,8	0,9	0,8	0,7	Live animals; vegetable products
0,0	0,1	0,1	0,1	0,1	0,1	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
1,0	2,9	2,5	2,3	2,3	2,2	non-alcoholic beverages and tobacco
72,7	62,2	60,2	58,9	61,5	68,4	Mineral products
						Products of the chemical industry; plastics;
4,9	6,9	6,9	7,4	7,4	7,8	rubber and articles thereof
1,9	2,1	2,0	2,1	1,6	1,7	Wood and articles of wood; pulp of wood
1,2	1,1	0,9	0,8	0,6	0,7	Textiles and textile articles
						Non-precious metals and articles
4,1	8,0	9,1	10,0	9,9	7,2	of non-precious metal
8,1	7,7	7,7	7,6	6,9	6,8	Machinery and mechanical appliances
3,0	5,7	7,0	7,3	6,8	2,9	Means of transportation
						Instruments and apparatus; clocks
0,7	0,5	0,6	0,6	0,4	0,4	and watches; musical instruments
1,3	2,0	2,2	2,0	1,7	1,3	Other

2000	2005	2006	2007	2008	2010	
		Imports from other countries of the world				
100	100	100	100	100	100	Total
5,5	4,7	4,7	4,0	5,6	7,7	Live animals; vegetable products
1,0	0,1	0,7	1,0	1,1	1,3	Animal or vegetable fats and oils
						Prepared foodstuffs; alcoholic and
6,1	5,0	4,7	4,3	3,6	5,7	non-alcoholic beverages and tobacco
11,7	5,1	5,4	6,2	9,3	8,4	Mineral products
						Products of the chemical industry; plastics;
19,1	20,2	20,2	19,5	17,2	23,6	rubber and articles thereof
4,8	4,4	4,2	3,9	3,5	4,6	Wood and articles of wood; pulp of wood
7,8	6,4	4,7	3,6	3,6	5,2	Textiles and textile articles
						Non-precious metals and articles
5,9	5,8	6,0	6,2	5,9	6,5	of non-precious metal
21,8	26,3	25,5	24,6	21,3	18,7	Machinery and mechanical appliances
4,5	11,7	15,0	18,2	18,8	8,5	Means of transportation
						Instruments and apparatus; clocks
2,2	2,2	2,3	2,4	2,1	2,3	and watches; musical instruments
9,7	7,2	6,7	6,0	7,8	7,6	Other

Source: CISSTAT

Table A.II.6

Bilateral trade by SITC commodity groups

Exports

				Growth rates in %			
Reporter	**Partner**			**2010/2000**	**2009/2008**	**2010/2009**	**2010/2008**
Belarus	**Kazakhstan**	**Total**		2,264.4	-14.2	47.6	26.7
		0	Food and live animals	51,583.9	11.2	57.6	75.3
		1	Beverages and tobacco	4,342.0	-12.0	383.0	325.2
		2	Crude materials, inedible, except fuels	187.0	-3.5	25.4	20.9
		3	Mineral fuels, lubricants and related materials	.	-89.4	-84.9	-98.4
		4	Animal and vegetable oils, fats and waxes	.	410.6	52.8	680.1
		5	Chemicals and related products, n.e.s.	960.8	2.0	20.7	23.1
		6	Manufactured goods classified chiefly by material	2,416.0	-4.5	44.8	38.2
		7	Machinery and transport equipment	1,557.7	-32.4	48.8	0.5
		8	Miscellaneous manufactured articles	1,763.7	-11.9	44.3	27.1
		9	Commodities and transactions not classified elsewhere in the SITC		-2.0	961.4	940.0
	Russian Federation	**Total**		161.1	-36.6	44.5	-8.3
		0	Food and live animals	10.2	-4.9	51.7	19.2
		1	Beverages and tobacco	0.5	41.5	66.6	0.3
		2	Crude materials, inedible, except fuels	3.9	-21.5	29.7	2.2
		3	Mineral fuels, lubricants and related materials	1.8	-39.7	129.3	0.4
		4	Animal and vegetable oils, fats and waxes	0.1	-4.9	10.9	0.1
		5	Chemicals and related products, n.e.s.	8.1	-19.2	46.8	5.1
		6	Manufactured goods classified chiefly by material	24.1	-40.9	39.2	22.7
		7	Machinery and transport equipment	37.3	-52.7	50.9	34.7
		8	Miscellaneous manufactured articles	12.4	-31.7	34.1	11.0
		9	Commodities and transactions not classified elsewhere in the SITC	1.8	-33.4	9.7	4.2
	Ukraine	**Total**		357.4	-39.3	51.2	-8.2
		0	Food and live animals	2.9	11.9	3.1	6.2
		1	Beverages and tobacco	0.0	12.5	1,337.7	0.0
		2	Crude materials, inedible, except fuels	1.7	-22.0	62.8	2.5
		3	Mineral fuels, lubricants and related materials	66.5	-24.0	54.6	24.7
		4	Animal and vegetable oils, fats and waxes	0.0	1,035.1	-1.3	0.0
		5	Chemicals and related products, n.e.s.	3.0	-55.8	53.3	11.9
		6	Manufactured goods classified chiefly by material	10.3	-48.6	58.6	17.7
		7	Machinery and transport equipment	12.6	-69.8	68.0	34.2
		8	Miscellaneous manufactured articles	2.2	-14.8	3.6	2.7
		9	Commodities and transactions not classified elsewhere in the SITC	0.7	-89.7	-100.0	0.1

Table A.II.6 (continued)

Exports

Reporter	Partner			2010/2000	2009/2008	2010/2009	2010/2008
Kazakhstan	**Belarus**	**Total**		156.8	-68.0	-24.2	-75.7
		0	Food and live animals	68.6	-94.4	-47.6	18.2
		1	Beverages and tobacco	4.5			.
		2	Crude materials, inedible, except fuels	0.9	-69.7	-26.3	15.2
		3	Mineral fuels, lubricants and related materials	.			
		4	Animal and vegetable oils, fats and waxes	.			.
		5	Chemicals and related products, n.e.s.	13.6	-55.2	-57.7	9.6
		6	Manufactured goods classified chiefly by material	4.7	-57.6	-49.5	37.8
		7	Machinery and transport equipment	7.7	-89.3	-56.0	19.0
		8	Miscellaneous manufactured articles	0.0	-46.0	73.1	0.3
		9	Commodities and transactions not classified elsewhere in the SITC	.			.
	Russian Federation	**Total**		75.8	-43.0	-15.2	-51.7
		0	Food and live animals	-78.9	-48.7	-61.2	-80.1
		1	Beverages and tobacco	-81.4	35.2	-71.6	-61.7
		2	Crude materials, inedible, except fuels	235.6	-43.7	-7.6	-48.0
		3	Mineral fuels, lubricants and related materials	3.0	-43.4	-13.9	-51.3
		4	Animal and vegetable oils, fats and waxes	-4.7	-49.8	172.5	36.7
		5	Chemicals and related products, n.e.s.	620.0	-25.2	-24.9	-43.9
		6	Manufactured goods classified chiefly by material	296.9	-40.7	-12.1	-47.8
		7	Machinery and transport equipment	11.3	-61.5	-36.8	-75.7
		8	Miscellaneous manufactured articles	-72.9	-17.2	-46.7	-55.9
		9	Commodities and transactions not classified elsewhere in the SITC	-100.0	-98.6	-100.0	-100.0
	Ukraine	**Total**		161.8	-35.6	-48.4	-66.8
		0	Food and live animals	-77.1	-49.6	20.7	-39.2
		1	Beverages and tobacco	-74.0	-65.7	-0.6	-65.9
		2	Crude materials, inedible, except fuels	659.4	-85.9	56.8	-77.8
		3	Mineral fuels, lubricants and related materials	137.0	-27.1	-56.7	-68.4
		4	Animal and vegetable oils, fats and waxes	.	-70.8	-47.1	-84.5
		5	Chemicals and related products, n.e.s.	299.9	-56.5	25.1	-45.6
		6	Manufactured goods classified chiefly by material	1,171.4	-60.1	25.4	-50.0
		7	Machinery and transport equipment	50.2	-93.5	136.2	-84.7
		8	Miscellaneous manufactured articles	155.9	-51.4	-40.5	-71.1
		9	Commodities and transactions not classified elsewhere in the SITC	-100.0			-99.9

Table A.II.6 (continued)

Exports

					Growth rates in %			
Reporter	**Partner**				**2010/2000**	**2009/2008**	**2010/2009**	**2010/2008**
Russian Federation	**Belarus**	**Total**			224.1	-29.5	8.0	-23.8
					.			.
	Kazakhstan	**Total**			125.8	-31.2	-44.5	-61.8
		0	Food and live animals		114.1	-15.3	-50.3	-57.8
		1	Beverages and tobacco		336.0	-23.0	-60.8	-69.8
		2	Crude materials, inedible, except fuels		227.8	-59.0	-0.6	-59.3
		3	Mineral fuels, lubricants and related materials		280.5	-45.1	-31.8	-62.6
		4	Animal and vegetable oils, fats and waxes		45.6	-39.8	-51.0	-70.5
		5	Chemicals and related products, n.e.s.		47.7	-12.6	-42.2	-49.5
		6	Manufactured goods classified chiefly by material		150.5	-15.0	-46.7	-54.7
		7	Machinery and transport equipment		44.9	-39.0	-47.0	-67.7
		8	Miscellaneous manufactured articles		125.6	-18.0	-48.1	-57.5
		9	Commodities and transactions not classified elsewhere in the SITC		.	-37.3	-30.4	-56.4
	Ukraine	**Total**			170.7	-41.5	-1.3	-42.3
		0	Food and live animals		469.3	-39.9	18.6	-28.7
		1	Beverages and tobacco		1,028.5	2.4	-18.7	-16.7
		2	Crude materials, inedible, except fuels		69.2	-45.2	35.5	-25.8
		3	Mineral fuels, lubricants and related materials		426.8	-58.0	23.3	-48.2
		4	Animal and vegetable oils, fats and waxes		428.9	79.5	24.6	123.7
		5	Chemicals and related products, n.e.s.		806.4	-44.4	31.4	-27.0
		6	Manufactured goods classified chiefly by material		487.9	-63.0	67.1	-38.2
		7	Machinery and transport equipment		213.1	-63.2	71.5	-36.8
		8	Miscellaneous manufactured articles		231.3	-43.9	31.8	-26.1
		9	Commodities and transactions not classified elsewhere in the SITC		.	-60.5	4,481.5	1,707.8
Ukraine	**Belarus**	**Total**			598.8	-40.2	50.9	-9.8
		0	Food and live animals		596.9	-42.2	65.3	-4.5
		1	Beverages and tobacco		127.4	-26.1	-9.9	-33.4
		2	Crude materials, inedible, except fuels		202.1	-29.6	50.4	5.8
		3	Mineral fuels, lubricants and related materials		2,424.1	263.5	184.1	932.9
		4	Animal and vegetable oils, fats and waxes		913.7	-2.7	73.5	68.9
		5	Chemicals and related products, n.e.s.		439.3	-29.1	38.7	-1.6
		6	Manufactured goods classified chiefly by material		652.6	-52.8	60.9	-24.1
		7	Machinery and transport equipment		631.5	-41.0	28.7	-24.1
		8	Miscellaneous manufactured articles		2,279.1	-25.0	32.9	-0.4
		9	Commodities and transactions not classified elsewhere in the SITC		9,283.4	1,343.3	-82.8	148.1

Table A.II.6 (continued)

Exports

Reporter	Partner			2010/2000	2009/2008	2010/2009	2010/2008
Ukraine	**Kazakhstan**	**Total**		1,602.8	-22.6	-8.3	-29.0
		0	Food and live animals	17,206.2	-30.4	25.1	-13.0
		1	Beverages and tobacco	37,047.1	11.2	61.1	79.1
		2	Crude materials, inedible, except fuels	1,258.2	-31.7	-57.3	-70.8
		3	Mineral fuels, lubricants and related materials	17,210.6	-25.1	-40.6	-55.5
		4	Animal and vegetable oils, fats and waxes	986.9	-64.6	127.1	-19.6
		5	Chemicals and related products, n.e.s.	917.4	-5.0	9.3	3.8
		6	Manufactured goods classified chiefly by material	1,330.1	-16.9	-56.8	-64.1
		7	Machinery and transport equipment	1,183.2	-26.3	28.6	-5.2
		8	Miscellaneous manufactured articles	4,229.7	-20.0	59.6	27.6
		9	Commodities and transactions not classified elsewhere in the SITC	25,507.7	872.3	-75.1	141.7
	Russian Federation	**Total**		284.7	-46.0	58.1	-14.6
		0	Food and live animals	186.5	-18.9	37.1	11.2
		1	Beverages and tobacco	348.0	-16.1	-5.7	-20.9
		2	Crude materials, inedible, except fuels	94.6	-44.7	21.9	-32.6
		3	Mineral fuels, lubricants and related materials	4,867.7	-29.7	129.2	61.2
		4	Animal and vegetable oils, fats and waxes	246.6	-67.5	96.1	-36.2
		5	Chemicals and related products, n.e.s.	180.5	-24.1	42.1	7.8
		6	Manufactured goods classified chiefly by material	157.3	-52.2	55.3	-25.7
		7	Machinery and transport equipment	502.2	-54.2	73.7	-20.4
		8	Miscellaneous manufactured articles	444.6	-27.0	41.7	3.5
		9	Commodities and transactions not classified elsewhere in the SITC	6,346.3	68.0	-37.8	4.4

Source: UN COMTRADE, wiiw calculations.

Table A.II.7

Bilateral trade by SITC commodity groups

Imports

<table>
<tr><td></td><td></td><td></td><td></td><td colspan="4">Growth rates
in %</td></tr>
<tr><td>**Reporter**</td><td>**Partner**</td><td></td><td></td><td>**2010/2000**</td><td>**2009/2008**</td><td>**2010/2009**</td><td>**2010/2008**</td></tr>
<tr><td>**Belarus**</td><td>**Kazakhstan**</td><td>Total</td><td>**Import**</td><td>797.4</td><td>-56.4</td><td>438.6</td><td>134.7</td></tr>
<tr><td></td><td></td><td>0</td><td>Food and live animals</td><td>-93.7</td><td>-93.6</td><td>40.6</td><td>-91.0</td></tr>
<tr><td></td><td></td><td>1</td><td>Beverages and tobacco</td><td>-99.9</td><td></td><td>.</td><td></td></tr>
<tr><td></td><td></td><td>2</td><td>Crude materials, inedible, except fuels</td><td>29.5</td><td>-81.4</td><td>53.6</td><td>-71.4</td></tr>
<tr><td></td><td></td><td>3</td><td>Mineral fuels, lubricants and related materials</td><td></td><td></td><td>.</td><td></td></tr>
<tr><td></td><td></td><td>4</td><td>Animal and vegetable oils, fats and waxes</td><td>.</td><td></td><td></td><td>.</td></tr>
<tr><td></td><td></td><td>5</td><td>Chemicals and related products, n.e.s.</td><td>205.2</td><td>-51.4</td><td>-14.4</td><td>-58.4</td></tr>
<tr><td></td><td></td><td>6</td><td>Manufactured goods classified chiefly by material</td><td>3,261.2</td><td>-47.3</td><td>21.7</td><td>-35.9</td></tr>
<tr><td></td><td></td><td>7</td><td>Machinery and transport equipment</td><td>4,067.1</td><td>-62.7</td><td>41.1</td><td>-47.3</td></tr>
<tr><td></td><td></td><td>8</td><td>Miscellaneous manufactured articles</td><td>.</td><td>-90.6</td><td>2,142.1</td><td>110.6</td></tr>
<tr><td></td><td></td><td>9</td><td>Commodities and transactions not classified elsewhere in the SITC</td><td>.</td><td>48.6</td><td></td><td>.</td></tr>
<tr><td></td><td>**Russian Federation**</td><td>Total</td><td>**Import**</td><td>222.2</td><td>-29.2</td><td>6.9</td><td>-24.3</td></tr>
<tr><td></td><td></td><td>0</td><td>Food and live animals</td><td>106.8</td><td>-22.8</td><td>2.9</td><td>-20.5</td></tr>
<tr><td></td><td></td><td>1</td><td>Beverages and tobacco</td><td>329.5</td><td>-0.1</td><td>-4.2</td><td>-4.3</td></tr>
<tr><td></td><td></td><td>2</td><td>Crude materials, inedible, except fuels</td><td>247.4</td><td>-49.1</td><td>58.7</td><td>-19.2</td></tr>
<tr><td></td><td></td><td>3</td><td>Mineral fuels, lubricants and related materials</td><td>304.8</td><td>-19.5</td><td>-7.3</td><td>-25.4</td></tr>
<tr><td></td><td></td><td>4</td><td>Animal and vegetable oils, fats and waxes</td><td>48.2</td><td>-51.8</td><td>-12.3</td><td>-57.7</td></tr>
<tr><td></td><td></td><td>5</td><td>Chemicals and related products, n.e.s.</td><td>160.2</td><td>-35.5</td><td>40.9</td><td>-9.1</td></tr>
<tr><td></td><td></td><td>6</td><td>Manufactured goods classified chiefly by material</td><td>142.7</td><td>-47.8</td><td>50.6</td><td>-21.4</td></tr>
<tr><td></td><td></td><td>7</td><td>Machinery and transport equipment</td><td>149.1</td><td>-48.8</td><td>43.3</td><td>-26.7</td></tr>
<tr><td></td><td></td><td>8</td><td>Miscellaneous manufactured articles</td><td>133.1</td><td>-30.5</td><td>20.3</td><td>-16.5</td></tr>
<tr><td></td><td></td><td>9</td><td>Commodities and transactions not classified elsewhere in the SITC</td><td>99.4</td><td>-38.5</td><td>-33.0</td><td>-58.8</td></tr>
<tr><td></td><td>**Ukraine**</td><td>Total</td><td>**Import**</td><td>450.0</td><td>-39.0</td><td>45.3</td><td>-11.4</td></tr>
<tr><td></td><td></td><td>0</td><td>Food and live animals</td><td>345.8</td><td>-39.0</td><td>57.7</td><td>-3.9</td></tr>
<tr><td></td><td></td><td>1</td><td>Beverages and tobacco</td><td>108.0</td><td>-35.3</td><td>-1.7</td><td>-36.4</td></tr>
<tr><td></td><td></td><td>2</td><td>Crude materials, inedible, except fuels</td><td>319.4</td><td>-27.4</td><td>31.2</td><td>-4.8</td></tr>
<tr><td></td><td></td><td>3</td><td>Mineral fuels, lubricants and related materials</td><td>5,545.3</td><td>286.1</td><td>156.8</td><td>891.4</td></tr>
<tr><td></td><td></td><td>4</td><td>Animal and vegetable oils, fats and waxes</td><td>384.1</td><td>-7.4</td><td>84.1</td><td>70.4</td></tr>
<tr><td></td><td></td><td>5</td><td>Chemicals and related products, n.e.s.</td><td>267.2</td><td>-32.3</td><td>39.8</td><td>-5.3</td></tr>
<tr><td></td><td></td><td>6</td><td>Manufactured goods classified chiefly by material</td><td>529.9</td><td>-50.9</td><td>56.4</td><td>-23.2</td></tr>
<tr><td></td><td></td><td>7</td><td>Machinery and transport equipment</td><td>474.3</td><td>-38.0</td><td>9.6</td><td>-32.0</td></tr>
<tr><td></td><td></td><td>8</td><td>Miscellaneous manufactured articles</td><td>1,923.0</td><td>-24.0</td><td>35.8</td><td>3.2</td></tr>
<tr><td></td><td></td><td>9</td><td>Commodities and transactions not classified elsewhere in the SITC</td><td>-99.5</td><td>163.0</td><td>-99.6</td><td>-99.0</td></tr>
</table>

Table A.II.7 (continued)

				Growth rates in %			
Imports							
Reporter	**Partner**			**2010/2000**	**2009/2008**	**2010/2009**	**2010/2008**
Kazakhstan	**Belarus**	Total	**Import**	535.4	-7.4	-31.6	-36.6
		0	Food and live animals	11,813.3	22.5	-17.2	1.5
		1	Beverages and tobacco		-50.6	140.2	18.6
		2	Crude materials, inedible, except fuels	10.4	-1.4	-60.1	-60.7
		3	Mineral fuels, lubricants and related materials	1,586.1	221.4	442.9	1,644.9
		4	Animal and vegetable oils, fats and waxes	15,344.7	320.8	-41.3	147.1
		5	Chemicals and related products, n.e.s.	374.6	0.1	-41.9	-41.8
		6	Manufactured goods classified chiefly by material	632.2	2.9	-30.5	-28.4
		7	Machinery and transport equipment	249.6	-22.0	-35.8	-50.0
		8	Miscellaneous manufactured articles	599.9	-3.6	-42.2	-44.3
		9	Commodities and transactions not classified elsewhere in the SITC	-98.7	-99.9	-92.8	-100.0
	Russian Federation	Total	**Import**	134.2	-35.3	-38.5	-60.2
		0	Food and live animals	109.1	-13.8	-47.9	-55.1
		1	Beverages and tobacco	364.8	-27.1	-59.8	-70.7
		2	Crude materials, inedible, except fuels	245.7	-51.3	-0.4	-51.5
		3	Mineral fuels, lubricants and related materials	346.8	-49.1	-20.2	-59.4
		4	Animal and vegetable oils, fats and waxes	62.1	-40.3	-44.7	-67.0
		5	Chemicals and related products, n.e.s.	105.5	-19.4	-40.4	-51.9
		6	Manufactured goods classified chiefly by material	146.6	-18.3	-45.1	-55.1
		7	Machinery and transport equipment	14.9	-41.2	-48.7	-69.8
		8	Miscellaneous manufactured articles	120.8	-17.4	-46.9	-56.1
		9	Commodities and transactions not classified elsewhere in the SITC	-98.6	-80.8	-99.0	-99.8
	Ukraine	Total	**Import**	1,573.2	1.3	-36.3	-35.5
		0	Food and live animals	14,963.8	-29.0	21.5	-13.8
		1	Beverages and tobacco	40,237.9	-4.3	78.8	71.1
		2	Crude materials, inedible, except fuels	573.7	-20.3	-67.0	-73.7
		3	Mineral fuels, lubricants and related materials	4,633.3	-7.3	-47.0	-50.8
		4	Animal and vegetable oils, fats and waxes	547.3	-67.4	91.4	-37.5
		5	Chemicals and related products, n.e.s.	840.6	0.7	26.1	27.0
		6	Manufactured goods classified chiefly by material	1,380.0	47.3	-76.1	-64.8
		7	Machinery and transport equipment	1,288.5	-28.5	7.0	-23.4
		8	Miscellaneous manufactured articles	2,316.7	0.8	37.6	38.7
		9	Commodities and transactions not classified elsewhere in the SITC	-91.0	-90.1	-99.4	-99.9

Table A.II.7 (continued)

Imports

					Growth rates in %			
Reporter	**Partner**				**2010/2000**	**2009/2008**	**2010/2009**	**2010/2008**
Russian Federation	**Belarus**	Total	**Import**		164.6	-36.7	46.2	-7.4
					.			.
	Kazakhstan	Total	**Import**		17.2	-42.2	-30.0	-59.5
		0	Food and live animals		-75.5	-46.0	-58.3	-77.4
		1	Beverages and tobacco		-85.1	24.6	-69.8	-62.4
		2	Crude materials, inedible, except fuels		54.7	-41.4	-23.8	-55.3
		3	Mineral fuels, lubricants and related materials		-9.9	-48.1	-23.7	-60.5
		4	Animal and vegetable oils, fats and waxes		.	-56.7		
		5	Chemicals and related products, n.e.s.		4.4	1.1	-29.8	-29.0
		6	Manufactured goods classified chiefly by material		224.2	-40.2	-27.0	-56.4
		7	Machinery and transport equipment		0.0	-56.5	-41.9	-74.7
		8	Miscellaneous manufactured articles		22.0	-5.5	-41.0	-44.3
		9	Commodities and transactions not classified elsewhere in the SITC	.		-93.6	5,062.2	229.2
	Ukraine	Total	**Import**		283.4	-43.9	53.5	-13.8
		0	Food and live animals		188.8	-16.8	38.0	14.7
		1	Beverages and tobacco		401.6	-15.1	3.4	-12.2
		2	Crude materials, inedible, except fuels		134.5	-44.6	31.2	-27.3
		3	Mineral fuels, lubricants and related materials		4,372.2	-27.9	128.1	64.5
		4	Animal and vegetable oils, fats and waxes		244.2	-67.8	97.3	-36.5
		5	Chemicals and related products, n.e.s.		174.8	-24.7	47.2	10.8
		6	Manufactured goods classified chiefly by material		169.4	-48.6	45.7	-25.1
		7	Machinery and transport equipment		485.4	-52.5	67.6	-20.5
		8	Miscellaneous manufactured articles		207.4	-26.5	45.0	6.6
		9	Commodities and transactions not classified elsewhere in the SITC	.		49.5	250.8	424.5
Ukraine	**Belarus**	Total	**Import**		326.7	-39.7	51.7	-8.6
		0	Food and live animals		564.9	9.3	-5.2	3.6
		1	Beverages and tobacco		.	-51.4	921.3	396.6
		2	Crude materials, inedible, except fuels		143.8	-21.1	56.2	23.3
		3	Mineral fuels, lubricants and related materials		271.6	-23.8	52.3	16.1
		4	Animal and vegetable oils, fats and waxes		.	1,034.8	2.6	1,064.7
		5	Chemicals and related products, n.e.s.		692.9	-54.8	57.7	-28.7
		6	Manufactured goods classified chiefly by material		380.0	-49.0	59.9	-18.5
		7	Machinery and transport equipment		417.5	-71.8	86.7	-47.4
		8	Miscellaneous manufactured articles		593.6	-16.5	4.4	-12.9
		9	Commodities and transactions not classified elsewhere in the SITC	1,844.2		-60.0	176.0	10.4

Table A.II.7 (continued)

Imports				**Growth rates in %**			
Reporter	**Partner**			**2010/2000**	**2009/2008**	**2010/2009**	**2010/2008**
	Kazakhstan	Total	**Import**	85.7	-34.8	-62.3	-75.4
		0	Food and live animals	-65.6	-48.3	71.7	-11.2
		1	Beverages and tobacco	-67.0	-57.7	-2.0	-58.5
		2	Crude materials, inedible, except fuels	577.8	-87.6	76.3	-78.1
		3	Mineral fuels, lubricants and related materials	56.5	-27.4	-70.3	-78.4
		4	Animal and vegetable oils, fats and waxes	.		-3.7	.
		5	Chemicals and related products, n.e.s.	629.9	-45.0	9.6	-39.8
		6	Manufactured goods classified chiefly by material	513.0	-63.6	33.6	-51.4
		7	Machinery and transport equipment	328.2	-90.6	139.6	-77.4
		8	Miscellaneous manufactured articles	51.7	-46.8	-61.5	-79.5
		9	Commodities and transactions not classified elsewhere in the SITC	22,563.5	12.5	113.0	139.6
	Russian Federation	Total	**Import**	281.9	-31.8	67.7	14.3
		0	Food and live animals	424.6	-38.1	22.3	-24.3
		1	Beverages and tobacco	1,283.6	-3.5	-10.0	-13.2
		2	Crude materials, inedible, except fuels	37.8	-40.9	43.1	-15.4
		3	Mineral fuels, lubricants and related materials	299.6	-5.6	80.6	70.5
		4	Animal and vegetable oils, fats and waxes	911.8	224.6	46.0	373.9
		5	Chemicals and related products, n.e.s.	501.5	-26.8	20.3	-11.9
		6	Manufactured goods classified chiefly by material	345.3	-58.6	63.8	-32.2
		7	Machinery and transport equipment	170.0	-65.3	69.3	-41.2
		8	Miscellaneous manufactured articles	197.2	-46.0	29.7	-30.0
		9	Commodities and transactions not classified elsewhere in the SITC	1,017.9	-65.4	8.8	-62.4

Source: UN COMTRADE, wiiw calculations.

Table A.II.8   **BY-KZ-RU-UA: Commodity structure of total exports**

in 1000 USD

Reporter	Partner	SITC- 3		2000	2008	2009	2010	2000	2005	2008	2009	2010
Belarus	**World**	**Total**		**7,331,059**	**32,902,159**	**21,282,228**	**25,225,864**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	444,923	2,146,855	2,128,295	3,074,106	6.1	7.6	6.5	10.0	12.2
		1	Beverages and tobacco	46,578	33,134	26,540	49,775	0.6	0.5	0.1	0.1	0.2
		2	Crude materials, inedible, except fuels	307,075	528,449	463,273	633,256	4.2	3.0	1.6	2.2	2.5
		3	Mineral fuels, lubricants and related materials	1,452,440	12,336,859	7,970,853	7,098,229	19.8	34.8	37.5	37.5	28.1
		4	Animal and vegetable oils, fats and waxes	2,447	28,733	62,914	54,703	0.0	0.1	0.1	0.3	0.2
		5	Chemicals and related products, n.e.s.	845,536	5,013,276	2,949,914	3,730,885	11.5	11.1	15.2	13.9	14.8
		6	Manufactured goods classified chiefly by material	1,430,164	4,706,455	2,869,723	3,781,976	19.5	15.6	14.3	13.5	15.0
		7	Machinery and transport equipment	1,755,252	5,774,188	3,086,644	4,330,989	23.9	18.7	17.5	14.5	17.2
		8	Miscellaneous manufactured articles	756,363	1,770,776	1,279,038	1,585,721	10.3	6.7	5.4	6.0	6.3
		9	Commodities and transactions not classified elsewhere in the SITC	290,281	563,434	445,034	886,226	4.0	2.0	1.7	2.1	3.5
Kazakhstan	**World**	**Total**		**8,652,481**	**71,171,956**	**43,195,762**	**57,244,064**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	577,876	2,871,668	1,520,093	1,797,611	6.7	2.2	4.0	3.5	3.1
		1	Beverages and tobacco	19,680	63,384	53,049	63,920	0.2	0.2	0.1	0.1	0.1
		2	Crude materials, inedible, except fuels	651,994	4,414,738	2,580,599	3,084,722	7.5	6.7	6.2	6.0	5.4
		3	Mineral fuels, lubricants and related materials	4,567,329	48,910,890	30,027,170	41,032,905	52.8	70.1	68.7	69.5	71.7
		4	Animal and vegetable oils, fats and waxes	933	9,597	27,042	40,795	0.0	0.0	0.0	0.1	0.1
		5	Chemicals and related products, n.e.s.	99,223	1,939,837	1,948,596	2,510,044	1.1	1.9	2.7	4.5	4.4
		6	Manufactured goods classified chiefly by material	2,331,719	11,058,590	5,938,830	7,430,227	26.9	16.7	15.5	13.7	13.0
		7	Machinery and transport equipment	186,711	1,244,329	377,676	345,766	2.2	1.2	1.7	0.9	0.6
		8	Miscellaneous manufactured articles	45,572	55,825	54,368	55,935	0.5	0.2	0.1	0.1	0.1
		9	Commodities and transactions not classified elsewhere in the SITC	171,444	603,099	668,339	882,139	2.0	0.7	0.8	1.5	1.5
Russian Federation	**World**	**Total**		**103,092,748**	**467,993,955**	**301,796,059**	**373,055,645**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	935,645	6,546,161	7,540,330	6,620,290	0.9	1.3	1.4	2.5	1.8
		1	Beverages and tobacco	80,360	880,022	800,038	683,223	0.1	0.2	0.2	0.3	0.2
		2	Crude materials, inedible, except fuels	4,672,839	16,728,141	9,228,402	12,648,228	4.5	4.4	3.6	3.1	3.4
		3	Mineral fuels, lubricants and related materials	52,166,042	307,370,950	190,170,839	257,616,205	50.6	61.8	65.7	63.0	69.1
		4	Animal and vegetable oils, fats and waxes	78,929	808,763	780,896	625,503	0.1	0.1	0.2	0.3	0.2
		5	Chemicals and related products, n.e.s.	6,180,628	22,358,917	12,481,546	16,451,071	6.0	4.2	4.8	4.1	4.4
		6	Manufactured goods classified chiefly by material	18,348,613	56,293,069	37,126,810	45,821,526	17.8	14.8	12.0	12.3	12.3
		7	Machinery and transport equipment	6,421,563	15,771,760	10,864,190	11,814,803	6.2	4.1	3.4	3.6	3.2
		8	Miscellaneous manufactured articles	2,063,305	2,905,518	2,292,669	2,560,660	2.0	0.8	0.6	0.8	0.7
		9	Commodities and transactions not classified elsewhere in the SITC	12,144,823	38,330,653	30,510,339	18,214,135	11.8	8.4	8.2	10.1	4.9
Ukraine	**World**	**Total**		**14,572,536**	**66,952,306**	**39,695,648**	**51,430,286**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	811,233	6,702,614	6,048,819	5,653,128	5.6	9.0	10.0	15.2	11.0
		1	Beverages and tobacco	104,449	736,663	639,039	636,812	0.7	1.4	1.1	1.6	1.2
		2	Crude materials, inedible, except fuels	1,849,757	5,658,624	3,800,660	5,338,776	12.7	7.3	8.5	9.6	10.4
		3	Mineral fuels, lubricants and related materials	807,726	4,109,201	2,130,781	3,661,425	5.5	9.8	6.1	5.4	7.1
		4	Animal and vegetable oils, fats and waxes	239,463	1,917,810	1,764,997	2,555,208	1.6	1.7	2.9	4.4	5.0
		5	Chemicals and related products, n.e.s.	1,312,777	5,089,150	2,460,778	3,423,456	9.0	9.1	7.6	6.2	6.7
		6	Manufactured goods classified chiefly by material	6,644,770	29,804,160	14,341,505	19,104,415	45.6	44.2	44.5	36.1	37.1
		7	Machinery and transport equipment	1,794,646	10,625,317	6,586,099	8,900,443	12.3	13.1	15.9	16.6	17.3
		8	Miscellaneous manufactured articles	660,339	1,981,230	1,581,840	1,790,240	4.5	3.8	3.0	4.0	3.5
		9	Commodities and transactions not classified elsewhere in the SITC	347,378	327,537	341,131	366,382	2.4	0.8	0.5	0.9	0.7

Source: UN COMTRADE

Table A.II.9   **BY-KZ-RU-UA: Commodity structure of total imports**

Reporter	Partner			in 1000 USD					Shares in %				
				2000	2005	2008	2009	2010	2000	2005	2008	2009	2010
Belarus	**World**	**Total**		**8,646,200**	**16,698,737**	**39,482,892**	**28,563,576**	**34,868,204**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	815,733	1,215,747	2,328,774	1,776,050	2,241,860	9.4	7.3	5.9	6.2	6.4
		1	Beverages and tobacco	125,631	234,645	334,870	307,424	323,725	1.5	1.4	0.8	1.1	0.9
		2	Crude materials, inedible, except fuels	359,442	589,104	1,459,844	836,768	1,271,567	4.2	3.5	3.7	2.9	3.6
		3	Mineral fuels, lubricants and related materials	2,585,347	5,518,573	13,982,225	11,293,318	12,033,225	29.9	33.0	35.4	39.5	34.5
		4	Animal and vegetable oils, fats and waxes	75,288	103,156	204,118	128,888	166,032	0.9	0.6	0.5	0.5	0.5
		5	Chemicals and related products, n.e.s.	906,078	1,586,121	3,553,574	2,789,261	3,608,353	10.5	9.5	9.0	9.8	10.3
		6	Manufactured goods classified chiefly by material	1,587,576	2,722,992	6,370,189	3,699,239	5,270,792	18.4	16.3	16.1	13.0	15.1
		7	Machinery and transport equipment	1,429,780	3,035,144	8,319,424	5,590,159	6,753,729	16.5	18.2	21.1	19.6	19.4
		8	Miscellaneous manufactured articles	361,535	616,694	1,539,169	1,150,223	1,411,817	4.2	3.7	3.9	4.0	4.0
		9	Commodities and transactions not classified elsewhere in the SITC	399,791	1,076,561	1,390,706	992,247	1,787,104	4.6	6.4	3.5	3.5	5.1
Kazakhstan	**World**	**Total**		**4,926,559**	**17,333,159**	**37,815,372**	**28,408,680**	**24,023,626**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	350,130	987,865	2,266,248	1,918,820	1,914,812	7.1	5.7	6.0	6.8	8.0
		1	Beverages and tobacco	65,166	191,383	431,369	337,378	241,683	1.3	1.1	1.1	1.2	1.0
		2	Crude materials, inedible, except fuels	140,398	339,358	557,123	329,463	316,609	2.8	2.0	1.5	1.2	1.3
		3	Mineral fuels, lubricants and related materials	563,724	2,062,070	5,431,006	2,834,785	2,379,608	11.4	11.9	14.4	10.0	9.9
		4	Animal and vegetable oils, fats and waxes	39,073	67,047	224,693	128,519	107,191	0.8	0.4	0.6	0.5	0.4
		5	Chemicals and related products, n.e.s.	504,122	1,615,838	3,207,345	2,838,555	2,857,685	10.2	9.3	8.5	10.0	11.9
		6	Manufactured goods classified chiefly by material	925,482	3,743,638	8,619,288	7,525,081	4,345,866	18.8	21.6	22.8	26.5	18.1
		7	Machinery and transport equipment	1,955,591	7,192,440	14,172,834	10,523,546	9,726,560	39.7	41.5	37.5	37.0	40.5
		8	Miscellaneous manufactured articles	312,915	1,124,750	2,121,059	1,926,439	2,084,270	6.4	6.5	5.6	6.8	8.7
		9	Commodities and transactions not classified elsewhere in the SITC	69,959	8,769	784,407	46,094	49,341	1.4	0.1	2.1	0.2	0.2
Russian Federation	**World**	**Total**		**33,880,092**	**98,707,256**	**267,051,244**	**170,826,590**	**217,415,099**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	5,288,129	12,596,190	25,850,615	22,384,247	26,732,494	15.6	12.8	9.7	13.1	12.3
		1	Beverages and tobacco	1,130,152	2,397,914	3,805,721	2,986,011	3,441,290	3.3	2.4	1.4	1.7	1.6
		2	Crude materials, inedible, except fuels	2,453,378	3,660,912	7,956,232	5,144,283	6,054,299	7.2	3.7	3.0	3.0	2.8
		3	Mineral fuels, lubricants and related materials	1,383,820	1,598,391	4,079,930	2,378,534	3,379,915	4.1	1.6	1.5	1.4	1.6
		4	Animal and vegetable oils, fats and waxes	385,956	779,075	1,945,448	1,248,155	1,571,903	1.1	0.8	0.7	0.7	0.7
		5	Chemicals and related products, n.e.s.	3,985,076	12,489,806	27,008,586	22,448,080	29,418,337	11.8	12.7	10.1	13.1	13.5
		6	Manufactured goods classified chiefly by material	4,708,000	12,801,427	31,174,020	19,723,399	27,703,705	13.9	13.0	11.7	11.5	12.7
		7	Machinery and transport equipment	8,315,785	39,337,730	127,742,405	63,342,790	89,297,239	24.5	39.9	47.8	37.1	41.1
		8	Miscellaneous manufactured articles	2,431,321	6,920,707	24,033,432	17,497,680	25,298,782	7.2	7.0	9.0	10.2	11.6
		9	Commodities and transactions not classified elsewhere in the SITC	3,798,477	6,125,105	13,454,855	13,673,412	4,517,136	11.2	6.2	5.0	8.0	2.1
Ukraine	**World**	**Total**		**13,955,999**	**36,121,997**	**85,448,381**	**45,412,944**	**60,737,135**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	641,919	1,908,796	4,741,604	3,710,579	4,320,334	4.6	5.3	5.5	8.2	7.1
		1	Beverages and tobacco	182,216	468,616	785,564	643,481	740,930	1.3	1.3	0.9	1.4	1.2
		2	Crude materials, inedible, except fuels	767,006	1,434,760	3,605,222	1,536,882	2,215,675	5.5	4.0	4.2	3.4	3.6
		3	Mineral fuels, lubricants and related materials	5,997,276	10,661,119	22,831,877	14,638,726	19,602,688	43.0	29.5	26.7	32.2	32.3
		4	Animal and vegetable oils, fats and waxes	42,663	169,323	539,462	331,737	398,863	0.3	0.5	0.6	0.7	0.7
		5	Chemicals and related products, n.e.s.	1,222,274	4,274,256	9,641,137	6,936,123	8,628,945	8.8	11.8	11.3	15.3	14.2
		6	Manufactured goods classified chiefly by material	1,782,520	5,308,794	11,637,106	6,205,663	8,728,530	12.8	14.7	13.6	13.7	14.4
		7	Machinery and transport equipment	2,444,133	9,550,670	25,554,387	8,395,967	11,867,099	17.5	26.4	29.9	18.5	19.5
		8	Miscellaneous manufactured articles	496,379	1,967,150	4,677,580	2,652,400	3,632,230	3.6	5.4	5.5	5.8	6.0
		9	Commodities and transactions not classified elsewhere in the SITC	379,613	378,515	1,434,442	361,385	601,840	2.7	1.0	1.7	0.8	1.0

Source: UN COMTRADE

BY-KZ-RU-UA: Commodity structure of bilateral and total exports

Shares in %

Reporter	Partner	Exports		Bilateral					Total				
				2000	2005	2008	2009	2010	2000	2005	2008	2009	2010
Belarus	Kazakhstan	Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		0	Food and live animals	1.2	4.1	19.2	24.9	26.6	6.1	7.6	6.5	10.0	12.2
		1	Beverages and tobacco	0.1	0.1	0.0	0.0	0.2	0.6	0.5	0.1	0.1	0.2
		2	Crude materials, inedible, except fuels	3.1	0.5	0.4	0.4	0.4	4.2	3.0	1.6	2.2	2.5
		3	Mineral fuels, lubricants and related materials	0.0	0.4	1.6	0.2	0.0	19.8	34.8	37.5	37.5	28.1
		4	Animal and vegetable oils, fats and waxes	0.0	0.0	0.1	0.4	0.4	0.0	0.1	0.1	0.3	0.2
		5	Chemicals and related products, n.e.s.	14.7	4.7	6.8	8.1	6.6	11.5	11.1	15.2	13.9	14.8
		6	Manufactured goods classified chiefly by material	20.6	20.5	20.1	22.4	21.9	19.5	15.6	14.3	13.5	15.0
		7	Machinery and transport equipment	45.5	56.1	40.2	31.7	31.9	23.9	18.7	17.5	14.5	17.2
		8	Miscellaneous manufactured articles	14.7	12.8	11.6	11.9	11.6	10.3	6.7	5.4	6.0	6.3
		9	Commodities and transactions not classified elsewhere in the SITC	0.0	0.8	0.1	0.1	0.4	4.0	2.0	1.7	2.1	3.5
	Russian Federation	Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		0	Food and live animals	10.2	19.2	17.0	25.4	26.7	6.1	7.6	6.5	10.0	12.2
		1	Beverages and tobacco	0.5	0.3	0.1	0.2	0.3	0.6	0.5	0.1	0.1	0.2
		2	Crude materials, inedible, except fuels	3.9	2.2	1.6	2.0	1.8	4.2	3.0	1.6	2.2	2.5
		3	Mineral fuels, lubricants and related materials	1.8	0.4	0.4	0.3	0.5	19.8	34.8	37.5	37.5	28.1
		4	Animal and vegetable oils, fats and waxes	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.3	0.2
		5	Chemicals and related products, n.e.s.	8.1	5.1	4.5	5.8	5.9	11.5	11.1	15.2	13.9	14.8
		6	Manufactured goods classified chiefly by material	24.1	22.7	22.6	21.1	20.3	19.5	15.6	14.3	13.5	15.0
		7	Machinery and transport equipment	37.3	34.7	38.5	28.8	30.0	23.9	18.7	17.5	14.5	17.2
		8	Miscellaneous manufactured articles	12.4	11.0	11.4	12.3	11.4	10.3	6.7	5.4	6.0	6.3
		9	Commodities and transactions not classified elsewhere in the SITC	1.8	4.2	3.8	4.0	3.0	4.0	2.0	1.7	2.1	3.5
	Ukraine	Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		0	Food and live animals	2.9	6.2	3.5	6.4	4.3	6.1	7.6	6.5	10.0	12.2
		1	Beverages and tobacco	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.1	0.1	1.1.1
		2	Crude materials, inedible, except fuels	1.7	2.5	0.8	1.0	1.1	4.2	3.0	1.6	2.2	2.5
		3	Mineral fuels, lubricants and related materials	66.5	24.7	47.7	59.7	61.1	19.8	34.8	37.5	37.5	28.1
		4	Animal and vegetable oils, fats and waxes	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.2
		5	Chemicals and related products, n.e.s.	3.0	11.9	9.3	6.8	6.9	11.5	11.1	15.2	13.9	14.8
		6	Manufactured goods classified chiefly by material	10.3	17.7	12.1	10.2	10.7	19.5	15.6	14.3	13.5	15.0
		7	Machinery and transport equipment	12.6	34.2	23.6	11.7	13.0	23.9	18.7	17.5	14.5	17.2
		8	Miscellaneous manufactured articles	2.2	2.7	2.9	4.1	2.8	10.3	6.7	5.4	6.0	6.3
		9	Commodities and transactions not classified elsewhere in the SITC	0.7	0.1	0.1	0.0	0.0	4.0	2.0	1.7	2.1	3.5

Table A.II.10a-10d (continued)

			Shares in %												
Reporter	Partner	Exports		Bilateral					Total					
			2000	2005	2008	2009	2010	2000	2005	2008	2009	2010
Kazakhstan	Belarus	Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		0 Food and live animals	68.6	18.2	11.8	2.1	1.4	6.7	2.2	4.0	3.5	3.1
		1 Beverages and tobacco	4.5	.	.	.	.	0.2	0.2	0.1	0.1	0.1
		2 Crude materials, inedible, except fuels	0.9	15.2	1.8	1.7	1.6	7.5	6.7	6.2	6.0	5.4
		3 Mineral fuels, lubricants and related materials	.	.	.	0.4	34.4	52.8	70.1	68.7	69.5	71.7
		4 Animal and vegetable oils, fats and waxes	.	.	.	.	.	0.0	0.0	0.0	0.1	0.1
		5 Chemicals and related products, n.e.s.	13.6	9.6	5.6	7.9	4.4	1.1	1.9	2.7	4.5	4.4
		6 Manufactured goods classified chiefly by material	4.7	37.8	61.5	81.5	54.3	26.9	16.7	15.5	13.7	13.0
		7 Machinery and transport equipment	7.7	19.0	19.2	6.4	3.7	2.2	1.2	1.7	0.9	0.6
		8 Miscellaneous manufactured articles	0.0	0.3	0.1	0.1	0.2	0.5	0.2	0.1	0.1	0.1
		9 Commodities and transactions not classified elsewhere in the SITC	.	.	0.01	.	.	2.0	0.7	0.8	1.5	1.5
	Russian Federation	Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		0 Food and live animals	14.3	5.7	4.1	3.7	1.7	6.7	2.2	4.0	3.5	3.1
		1 Beverages and tobacco	0.5	0.3	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1
		2 Crude materials, inedible, except fuels	20.1	38.5	35.7	35.3	38.4	7.5	6.7	6.2	6.0	5.4
		3 Mineral fuels, lubricants and related materials	48.2	29.3	28.0	27.8	28.3	52.8	70.1	68.7	69.5	71.7
		4 Animal and vegetable oils, fats and waxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
		5 Chemicals and related products, n.e.s.	2.1	6.3	7.4	9.7	8.6	1.1	1.9	2.7	4.5	4.4
		6 Manufactured goods classified chiefly by material	8.8	13.4	18.4	19.2	19.9	26.9	16.7	15.5	13.7	13.0
		7 Machinery and transport equipment	4.5	6.3	5.6	3.8	2.8	2.2	1.2	1.7	0.9	0.6
		8 Miscellaneous manufactured articles	1.4	0.2	0.2	0.3	0.2	0.5	0.2	0.1	0.1	0.1
		9 Commodities and transactions not classified elsewhere in the SITC	0.1	.	0.4	0.0	0.0	2.0	0.7	0.8	1.5	1.5
	Ukraine	Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		0 Food and live animals	8.2	7.8	0.4	0.3	0.7	6.7	2.2	4.0	3.5	3.1
		1 Beverages and tobacco	0.6	1.7	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1
		2 Crude materials, inedible, except fuels	1.2	11.1	5.4	1.2	3.6	7.5	6.7	6.2	6.0	5.4
		3 Mineral fuels, lubricants and related materials	83.8	24.6	79.9	90.5	75.9	52.8	70.1	68.7	69.5	71.7
		4 Animal and vegetable oils, fats and waxes	.	.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
		5 Chemicals and related products, n.e.s.	1.3	2.4	1.2	0.8	1.9	1.1	1.9	2.7	4.5	4.4
		6 Manufactured goods classified chiefly by material	3.5	47.3	11.3	7.0	17.0	26.9	16.7	15.5	13.7	13.0
		7 Machinery and transport equipment	1.4	4.9	1.7	0.2	0.8	2.2	1.2	1.7	0.9	0.6
		8 Miscellaneous manufactured articles	0.0	0.1	0.1	0.0	0.0	0.5	0.2	0.1	0.1	0.1
		9 Commodities and transactions not classified elsewhere in the SITC	0.0	.	0.0	.	0.0	2.0	0.7	0.8	1.5	1.5

Table A.II.10a-10d (continued)

Shares in %

Reporter	Partner	Exports		Bilateral					Total				
				2000	2005	2008	2009	2010	2000	2005	2008	2009	2010
Russian Federation	Belarus	**Total**		**100.0**	**100.0**	**100.0**	**100.0**	**100.0**					
							.	.					
	Kazakhstan	**Total**		**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	8.1	6.3	6.9	8.6	7.7	0.9	1.3	1.4	2.5	1.8
		1	Beverages and tobacco	0.8	1.3	1.9	2.2	1.5	0.1	0.2	0.2	0.3	0.2
		2	Crude materials, inedible, except fuels	2.2	2.4	3.0	1.8	3.2	4.5	4.4	3.6	3.1	3.4
		3	Mineral fuels, lubricants and related materials	18.6	23.9	31.9	25.5	31.3	50.6	61.8	65.7	63.0	69.1
		4	Animal and vegetable oils, fats and waxes	1.1	0.3	0.9	0.8	0.7	0.1	0.1	0.2	0.3	0.2
		5	Chemicals and related products, n.e.s.	13.7	7.3	6.8	8.6	8.9	6.0	4.2	4.8	4.1	4.4
		6	Manufactured goods classified chiefly by material	22.2	25.8	20.8	25.6	24.6	17.8	14.8	12.0	12.3	12.3
		7	Machinery and transport equipment	26.6	26.2	20.2	17.9	17.1	6.2	4.1	3.4	3.6	3.2
		8	Miscellaneous manufactured articles	4.6	4.8	4.1	4.9	4.5	2.0	0.8	0.6	0.8	0.7
		9	Commodities and transactions not classified elsewhere in the SITC	.	.	0.3	0.3	0.3	11.8	8.4	8.2	10.1	4.9
	Ukraine	**Total**		**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	1.5	2.7	2.6	2.6	3.2	0.9	1.3	1.4	2.5	1.8
		1	Beverages and tobacco	0.2	0.9	0.7	1.2	1.0	0.1	0.2	0.2	0.3	0.2
		2	Crude materials, inedible, except fuels	4.4	2.7	2.1	2.0	2.7	4.5	4.4	3.6	3.1	3.4
		3	Mineral fuels, lubricants and related materials	22.2	46.7	48.2	34.6	43.2	50.6	61.8	65.7	63.0	69.1
		4	Animal and vegetable oils, fats and waxes	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.2
		5	Chemicals and related products, n.e.s.	3.6	5.7	9.5	9.0	12.0	6.0	4.2	4.8	4.1	4.4
		6	Manufactured goods classified chiefly by material	7.7	12.8	15.5	9.8	16.6	17.8	14.8	12.0	12.3	12.3
		7	Machinery and transport equipment	14.5	15.8	15.4	9.7	16.8	6.2	4.1	3.4	3.6	3.2
		8	Miscellaneous manufactured articles	1.7	1.5	1.6	1.5	2.1	2.0	0.8	0.6	0.8	0.7
		9	Commodities and transactions not classified elsewhere in the SITC	.	0.0	0.1	0.0	2.3	11.8	8.4	8.2	10.1	4.9
Ukraine	Belarus	**Total**		**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
		0	Food and live animals	13.1	10.4	12.3	11.9	13.0	5.6	9.0	10.0	15.2	11.0
		1	Beverages and tobacco	8.3	3.4	3.7	4.5	2.7	0.7	1.4	1.1	1.6	1.2
		2	Crude materials, inedible, except fuels	8.4	2.1	3.1	3.6	3.6	12.7	7.3	8.5	9.6	10.4
		3	Mineral fuels, lubricants and related materials	2.0	0.2	0.6	3.8	7.2	5.5	9.8	6.1	5.4	7.1
		4	Animal and vegetable oils, fats and waxes	3.3	2.7	2.5	4.1	4.8	1.6	1.7	2.9	4.4	5.0
		5	Chemicals and related products, n.e.s.	12.1	11.2	8.5	10.1	9.3	9.0	9.1	7.6	6.2	6.7
		6	Manufactured goods classified chiefly by material	33.6	38.1	43.0	33.9	36.2	45.6	44.2	44.5	36.1	37.1
		7	Machinery and transport equipment	18.1	28.5	22.5	22.1	18.9	12.3	13.1	15.9	16.6	17.3
		8	Miscellaneous manufactured articles	1.2	3.4	3.7	4.7	4.1	4.5	3.8	3.0	4.0	3.5
		9	Commodities and transactions not classified elsewhere in the SITC	0.0	0.0	0.0	1.1	0.1	2.4	0.8	0.5	0.9	0.7

Table A.II.10a-10d (continued)

<div align="right">Shares in %</div>

Reporter	Partner			Bilateral					Total				
				2000	2005	2008	2009	2010	2000	2005	2008	2009	2010
Ukraine	Kazakhstan	Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		0	Food and live animals	2.0	11.6	16.5	14.8	20.3	5.6	9.0	10.0	15.2	11.0
		1	Beverages and tobacco	0.1	0.8	0.4	0.6	1.1	0.7	1.4	1.1	1.6	1.2
		2	Crude materials, inedible, except fuels	0.8	1.3	1.6	1.4	0.6	12.7	7.3	8.5	9.6	10.4
		3	Mineral fuels, lubricants and related materials	0.0	1.2	0.4	0.4	0.3	5.5	9.8	6.1	5.4	7.1
		4	Animal and vegetable oils, fats and waxes	4.8	1.4	2.7	1.2	3.1	1.6	1.7	2.9	4.4	5.0
		5	Chemicals and related products, n.e.s.	11.2	4.3	4.6	5.6	6.7	9.0	9.1	7.6	6.2	6.7
		6	Manufactured goods classified chiefly by material	23.5	32.8	39.0	41.9	19.8	45.6	44.2	44.5	36.1	37.1
		7	Machinery and transport equipment	55.0	42.1	31.0	29.5	41.4	12.3	13.1	15.9	16.6	17.3
		8	Miscellaneous manufactured articles	2.6	3.6	3.7	3.8	6.6	4.5	3.8	3.0	4.0	3.5
		9	Commodities and transactions not classified elsewhere in the SITC	0.0	0.9	0.0	0.6	0.2	2.4	0.8	0.5	0.9	0.7
	Russian Federation	Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
		0	Food and live animals	13.5	12.7	7.7	11.6	10.1	5.6	9.0	10.0	15.2	11.0
		1	Beverages and tobacco	1.6	4.4	2.1	3.2	1.9	0.7	1.4	1.1	1.6	1.2
		2	Crude materials, inedible, except fuels	9.3	6.6	6.0	6.1	4.7	12.7	7.3	8.5	9.6	10.4
		3	Mineral fuels, lubricants and related materials	0.7	2.0	5.0	6.6	9.5	5.5	9.8	6.1	5.4	7.1
		4	Animal and vegetable oils, fats and waxes	1.9	1.3	2.3	1.4	1.7	1.6	1.7	2.9	4.4	5.0
		5	Chemicals and related products, n.e.s.	6.6	5.3	3.8	5.4	4.8	9.0	9.1	7.6	6.2	6.7
		6	Manufactured goods classified chiefly by material	40.7	35.3	31.3	27.7	27.2	45.6	44.2	44.5	36.1	37.1
		7	Machinery and transport equipment	22.7	28.8	38.1	32.3	35.5	12.3	13.1	15.9	16.6	17.3
		8	Miscellaneous manufactured articles	2.9	3.3	3.3	4.5	4.1	4.5	3.8	3.0	4.0	3.5
		9	Commodities and transactions not classified elsewhere in the SITC	0.0	0.4	0.4	1.2	0.5	2.4	0.8	0.5	0.9	0.7

Source: UN COMTRADE, wiiw calculations.

Table A.II.11

Developments of BY-RU-KZ-UA exports by SITC commodity groups

Reporter	Partner			Growth rates in %			
				2010/2000	2009/2008	2010/2009	2010/2008
Belarus	**World**	**Total**		244.1	-35.3	18.5	-23.3
		0	Food and live animals	590.9	-0.9	44.4	43.2
		1	Beverages and tobacco	6.9	-19.9	87.5	50.2
		2	Crude materials, inedible, except fuels	106.2	-12.3	36.7	19.8
		3	Mineral fuels, lubricants and related materials	388.7	-35.4	-10.9	-42.5
		4	Animal and vegetable oils, fats and waxes	2135.2	119.0	-13.1	90.4
		5	Chemicals and related products, n.e.s.	341.2	-41.2	26.5	-25.6
		6	Manufactured goods classified chiefly by material	164.4	-39.0	31.8	-19.6
		7	Machinery and transport equipment	146.7	-46.5	40.3	-25.0
		8	Miscellaneous manufactured articles	109.7	-27.8	24.0	-10.5
		9	Commodities and transactions not classified elsewhere in the SITC	205.3	-21.0	99.1	57.3
Kazakhstan	**World**	**Total**		561.6	-39.3	32.5	-19.6
		0	Food and live animals	211.1	-47.1	18.3	-37.4
		1	Beverages and tobacco	224.8	-16.3	20.5	0.8
		2	Crude materials, inedible, except fuels	373.1	-41.5	19.5	-30.1
		3	Mineral fuels, lubricants and related materials	798.4	-38.6	36.7	-16.1
		4	Animal and vegetable oils, fats and waxes	4270.6	181.8	50.9	325.1
		5	Chemicals and related products, n.e.s.	2429.7	0.5	28.8	29.4
		6	Manufactured goods classified chiefly by material	218.7	-46.3	25.1	-32.8
		7	Machinery and transport equipment	85.2	-69.6	-8.4	-72.2
		8	Miscellaneous manufactured articles	22.7	-2.6	2.9	0.2
		9	Commodities and transactions not classified elsewhere in the SITC	414.5	10.8	32.0	46.3
Russian Federation	**World**	**Total**		261.9	-35.5	23.6	-20.3
		0	Food and live animals	607.6	15.2	-12.2	1.1
		1	Beverages and tobacco	750.2	-9.1	-14.6	-22.4
		2	Crude materials, inedible, except fuels	170.7	-44.8	37.1	-24.4
		3	Mineral fuels, lubricants and related materials	393.8	-38.1	35.5	-16.2
		4	Animal and vegetable oils, fats and waxes	692.5	-3.4	-19.9	-22.7
		5	Chemicals and related products, n.e.s.	166.2	-44.2	31.8	-26.4
		6	Manufactured goods classified chiefly by material	149.7	-34.0	23.4	-18.6
		7	Machinery and transport equipment	84.0	-31.1	8.7	-25.1
		8	Miscellaneous manufactured articles	24.1	-21.1	11.7	-11.9
		9	Commodities and transactions not classified elsewhere in the SITC	50.0	-20.4	-40.3	-52.5

Table A.II.11 (continued)

Reporter	Partner			Growth rates in %			
				2010/2000	2009/2008	2010/2009	2010/2008
Ukraine	World	Total		252.9	-40.7	29.6	-23.2
		0	Food and live animals	596.9	-9.8	-6.5	-15.7
		1	Beverages and tobacco	509.7	-13.3	-0.3	-13.6
		2	Crude materials, inedible, except fuels	188.6	-32.8	40.5	-5.7
		3	Mineral fuels, lubricants and related materials	353.3	-48.1	71.8	-10.9
		4	Animal and vegetable oils, fats and waxes	967.1	-8.0	44.8	33.2
		5	Chemicals and related products, n.e.s.	160.8	-51.6	39.1	-32.7
		6	Manufactured goods classified chiefly by material	187.5	-51.9	33.2	-35.9
		7	Machinery and transport equipment	395.9	-38.0	35.1	-16.2
		8	Miscellaneous manufactured articles	171.1	-20.2	13.2	-9.6
		9	Commodities and transactions not classified elsewhere in the SITC	5.5	4.2	7.4	11.9

Source: UN COMTRADE, wiiw calculations.

Table A.II.12

Developments of BY-RU-KZ-UA imports by SITC commodity groups

Reporter	Partner			Growth rates in %			
				2010/2000	2009/2008	2010/2009	2010/2008
Belarus	**World**		**Total**	303.3	-27.7	22.1	-11.7
		0	Food and live animals	174.8	-23.7	26.2	-3.7
		1	Beverages and tobacco	157.7	-8.2	5.3	-3.3
		2	Crude materials, inedible, except fuels	253.8	-42.7	52.0	-12.9
		3	Mineral fuels, lubricants and related materials	365.4	-19.2	6.6	-13.9
		4	Animal and vegetable oils, fats and waxes	120.5	-36.9	28.8	-18.7
		5	Chemicals and related products, n.e.s.	298.2	-21.5	29.4	1.5
		6	Manufactured goods classified chiefly by material	232.0	-41.9	42.5	-17.3
		7	Machinery and transport equipment	372.4	-32.8	20.8	-18.8
		8	Miscellaneous manufactured articles	290.5	-25.3	22.7	-8.3
		9	Commodities and transactions not classified elsewhere in the SITC	347.0	-28.7	80.1	28.5
Kazakhstan	**World**	**Total**		387.6	-24.9	-15.4	-36.5
		0	Food and live animals	446.9	-15.3	-0.2	-15.5
		1	Beverages and tobacco	270.9	-21.8	-28.4	-44.0
		2	Crude materials, inedible, except fuels	125.5	-40.9	-3.9	-43.2
		3	Mineral fuels, lubricants and related materials	322.1	-47.8	-16.1	-56.2
		4	Animal and vegetable oils, fats and waxes	174.3	-42.8	-16.6	-52.3
		5	Chemicals and related products, n.e.s.	466.9	-11.5	0.7	-10.9
		6	Manufactured goods classified chiefly by material	369.6	-12.7	-42.2	-49.6
		7	Machinery and transport equipment	397.4	-25.7	-7.6	-31.4
		8	Miscellaneous manufactured articles	566.1	-9.2	8.2	-1.7
		9	Commodities and transactions not classified elsewhere in the SITC	-29.5	-94.1	7.0	-93.7
Russian Federation	**World**	**Total**		541.7	-36.0	27.3	-18.6
		0	Food and live animals	405.5	-13.4	19.4	3.4
		1	Beverages and tobacco	204.5	-21.5	15.2	-9.6
		2	Crude materials, inedible, except fuels	146.8	-35.3	17.7	-23.9
		3	Mineral fuels, lubricants and related materials	144.2	-41.7	42.1	-17.2
		4	Animal and vegetable oils, fats and waxes	307.3	-35.8	25.9	-19.2
		5	Chemicals and related products, n.e.s.	638.2	-16.9	31.1	8.9
		6	Manufactured goods classified chiefly by material	488.4	-36.7	40.5	-11.1
		7	Machinery and transport equipment	973.8	-50.4	41.0	-30.1
		8	Miscellaneous manufactured articles	940.5	-27.2	44.6	5.3
		9	Commodities and transactions not classified elsewhere in the SITC	18.9	1.6	-67.0	-66.4

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Table A.II.12 (continued)

Reporter	Partner			Growth rates in %			
				2010/2000	2009/2008	2010/2009	2010/2008
Ukraine	World	Total		335.2	-46.9	33.7	-28.9
		0	Food and live animals	573.0	-21.7	16.4	-8.9
		1	Beverages and tobacco	306.6	-18.1	15.1	-5.7
		2	Crude materials, inedible, except fuels	188.9	-57.4	44.2	-38.5
		3	Mineral fuels, lubricants and related materials	226.9	-35.9	33.9	-14.1
		4	Animal and vegetable oils, fats and waxes	834.9	-38.5	20.2	-26.1
		5	Chemicals and related products, n.e.s.	606.0	-28.1	24.4	-10.5
		6	Manufactured goods classified chiefly by material	389.7	-46.7	40.7	-25.0
		7	Machinery and transport equipment	385.5	-67.1	41.3	-53.6
		8	Miscellaneous manufactured articles	631.7	-43.3	36.9	-22.3
		9	Commodities and transactions not classified elsewhere in the SITC	58.5	-74.8	66.5	-58.0

Source: UN COMTRADE, wiiw calculations.

ANNEX III

A – Technical overview of the CGE Model

A.1 Introduction

The core CGE model is based on the assumption of optimizing behaviour on the part of consumers, producers, and government. Consumers maximize utility subject to a budget constraint, and producers maximize profits by combining intermediate inputs and primary factors at least possible cost, for a given technology. The model employed here is based on Francois, van Meijl, and van Tongeren (2005) model (the FMT model). The FMT model is a standard, multi-region computable general equilibrium (CGE) model, with important features related to the structure of competition (as described by Francois and Roland-Holst 1997). Imperfect competition features are described in detail in Francois (1998). Social accounting data are based on the most recent Version 7.1 of the GTAP dataset (www.gtap.org). It includes 16 regions and 32 sectors. The full computer code for the FMT model can be downloaded from this link:
http://www.i4ide.org/people/~francois/data/DohaModel.zip

The model is implemented in GEMPACK, a software package designed for solving large applied general equilibrium models[61]. The model is solved as an explicit non-linear system of equations, through techniques described by Harrison and Pearson (1994). More information can be obtained http://www.monash.edu.au/policy/gempack.htm. For a detailed discussion of the basic algebraic model structure represented by the GEMPACK code, refer to Hertel (1996). This appendix provides a broad overview of the model and detailed discussion of mathematical structure is limited to added features, while the standard GTAP structure is covered in Hertel (1996).

A.2 General structure

The general conceptual structure of a regional economy in the model is as follows: firms produce output, employing land, labour, capital, and natural resources and combine these with intermediate inputs, within each region/country. Firm output is purchased by consumers, government, the investment sector, and by other firms. Firm output can also be sold for export. Land is only employed in the agricultural sectors, while capital and labour (both skilled and unskilled) are mobile between all production sectors. While capital is assumed to be fully mobile within regions, land, labour and natural resources are not.

All demand sources combine imports with domestic goods to produce a composite good. In constant returns sectors, these are Armington composites. In increasing returns sectors,

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[61] The result of our analysis can be downloaded and replicated our results, but the user will need access to GEMPACK, in order to make modifications to the code or data.

these are composites of firm-differentiated goods. Relevant substitution and trade elasticities are available in Table B.1. The production and consumption structure of the CGE model can be best understood by using a technology tree as shown in Figure B.1.

Figure A.1

The Basic Production Flows in the Model

Nested production structure
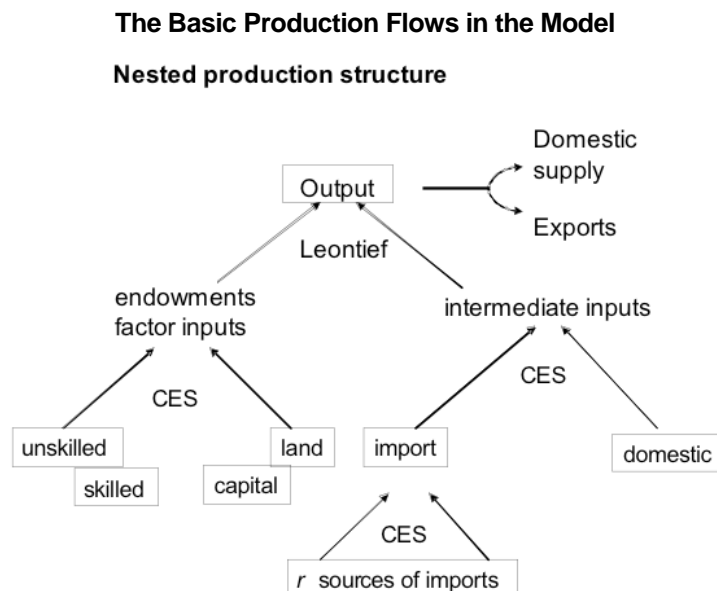
A.3   Taxes and policy variables

Taxes are included in the theory of the model at several levels. Production taxes are either placed on intermediate or primary inputs, or on output. Some trade taxes are modeled at the border. There are also additional internal taxes that can be placed on domestic or imported intermediate inputs, and may be applied at differential rates that discriminate against imports. Where relevant, taxes are also placed on exports, and on primary factor income. Finally, where indicated by social accounting data as being relevant, taxes are placed on final consumption, and can be applied differentially to consumption of domestic and imported goods.

Trade policy instruments are represented as import or export taxes/subsidies. This includes applied most-favoured nation (MFN) tariffs, antidumping duties, countervailing duties, price undertakings, export quotas, and other trade restrictions. The major exception is service-sector trading costs, which are discussed in the next section. The full set of tariff vectors are based on WTO tariff schedules, combined with possible Doha and regional initiatives as specified by the Commission during this project, augmented with data on trade preferences. The set up of services trade barrier estimates is described below.

A.4   Trade and transportation costs

International trade is modelled as a process that explicitly involves trading costs, which include both trade and transportation services. These trading costs reflect the transaction costs involved in international trade, as well as the costs of the physical activity of transportation itself. Those trading costs related to international movement of goods and related logistic services are met by composite services purchased from a global trade services sector, where the composite 'international trade services' activity is produced as a Cobb-Douglas composite of regional exports of trade and transport service exports. Trade-cost margins are based on reconciled f.o.b. and c.i.f. trade data, as reported in version 7 of the GTAP dataset.

A.5   Composite household and final demand structure

Final demand is determined by an upper-tier Cobb-Douglas preference function, which allocates income in fixed shares to current consumption, investment, and government services. This yields a fixed savings rate. Government services are produced by a Leontief technology, with household/government transfers being endogenous. The lower-tier nest for current consumption is specified as a Constant-difference elasticity (CDE) functional form, as parameterized in the core GTAP database. This allows for shifts in demand shares linked to non-homothetic consumer preferences. The regional capital markets adjust so that changes in savings match changes in regional investment expenditures[62].

A.6   Demand for imports

The basic structure of demand is based on CES (Armington) preferences. While the model also includes features linked to firm level product differentiation, for the purpose of long-run macroeconomic projections with endogenous TFP and capital accumulation, we follow a relatively standard approach and implement national product differentiation. Goods are differentiated by country of origin, and the similarity of goods from different regions is measured by the elasticity of substitution. Formally, within a particular region, we assume that demand for goods from different regions is aggregated into a composite import according to the following CES function, where α is a CES preference weight:

$$(1) \qquad q_{j,r}^{M} = \left[\sum_{i=1}^{R} \alpha_{j,i,r} M_{j,i,r}^{\rho_j} \right]^{1/\rho_j}$$

In equation (1), $M_{j,i,r}$ is the quantity of imports in sector j from region *i* consumed in region *r*. The elasticity of substitution between varieties from different regions is then equal to σ_j^M, where $\sigma_j^M = 1/(1-\rho_j)$. Composite imports are combined with the domestic good q^D in a second CES nest, yielding the Armington composite *q*.

$$(2) \qquad q_{j,r} = \left[\Omega_{j.M.r} \left(q_{j,r}^{M} \right)^{\beta_j} + \Omega_{j,D,r} \left(q_{j,r}^{D} \right)^{\beta_j} \right]^{1/\beta_j}$$

The elasticity of substitution between the domestic good and composite imports is then equal to $\sigma^{D}{}_{j}$, where $\sigma^{D}{}_{j} = 1/(1-\beta_j)$. At the same time, from the first order conditions, the demand for import $M_{j,i,r}$ can then be shown to equal

$$
\begin{aligned}
M_{j,i,r} &= \left[\frac{\alpha_{j,i,r}}{P_{j,i,r}} \right]^{\sigma_i^m} \left[\sum_{i=1}^{R} \alpha_{j,i,r}^{\sigma_j^M} P_{j,i,r}^{1-\sigma_j^M} \right]^{-1} E_{j,r}^{M} \\
&= \left[\frac{\alpha_{j,i,r}}{P_{j,i,r}} \right]^{\sigma_j^M} \left(P_{j,r}^{M} \right)^{\sigma_j^M - 1} E_{j,r}^{M}
\end{aligned}
$$

(3)

where $E^{M}{}_{j,r}$ represents expenditures on imports in region r on the sector j Armington composite, and $P_{j,r}$ denotes aggregate prices levels within an import country, while $P_{j,l,r}$ denotes a bilateral import price. In practice, the two nests can be collapsed, so that imports compete directly with each other and with the corresponding domestic product. This implies that the substitution elasticities in equations (2) and (3) are equal.

B – Mapping of Model Sectors to NACE and GTAP Sectors

Annex Table B.1

Mapping of Model Sectors to NACE and GTAP Sectors

CGE Model Sectors	NACE sectors	GTAP sectors
1 Agriculture, forestry, fishing	11 Growing of crops; market gardening; horticulture	1 PDR - Paddy rice 2 WHT - Wheat 3 GRO - Cereal grains n.e.c. 4 V_F - Vegetables, fruit, nuts 5 OSD - Oil seeds 6 C_B - Sugar cane, sugar beet 7 PFB - Plant-based fibers 8 OCR - Crops n.e.c.
	12 Farming of animals	9 CTL - Bovine cattle, sheep and goats, horses 10 OAP - Animal products n.e.c. 11 MLK - Raw milk 12 WOL - Wool, silk-worm cocoons
	20 Forestry, logging and related services activities	13 FRS - Forestry
	50 Fishing, operation of fish hatcheries and fish farms	14 FSH - Fishing
2 Coal	101 Anthracite, not agglomerated 101 Bitum coal, not agglomerated 101 Other coal, not agglomerated. 101 Briquettes etc (coal) 102 Lignite, not agglomerated 102 Lignite, agglomerated 103 Peat	15 COA - Coal
3 Oil 4 Gas	111 Extraction of crude petroleum and natural gas	16 OIL - Oil 17 GAS - Gas
5 Other minerals	120 Mining of uranium and thorium ores 131 Mining of iron metals 132 Mining of non-ferrous metal ores, except uranium and thorium ores 141 Quarrying of stone 142 Quarrying of sand and clay 143 Mining of chemical and fertilizer minerals 144 Production of salt 145 Other mining and quarrying n.e.c.	18 part OMN - Minerals n.e.c.
6 Petrochemicals	231 Coke oven products 232 Refined petroleum and nuclear fuel 233 Nuclear fuel	32 P_C - Petroleum, coal products
7 Processed Foods	151 Meat products 152 Fish and fish products 153 Fruits and vegetables 154 Vegetable and animal oils and fats 155 Dairy products; ice cream 156 Grain mill products and starches 157 Prepared animal feeds 158 Other food products 160 Tobacco products	19 CMT - Bovine meat prods 20 OMT - Meat products n.e.c. 21 VOL - Vegetable oils and fats 22 MIL - Dairy products 23 PCR - Processed rice 24 SGR - Sugar 25 OFD - Food products n.e.c. 26 part B_T - Beverages and tobacco products 26 part B_T - Beverages and tobacco products
8 Textiles and clothing	171 Preparation and spinning of textile fibre 172 Textile weaving 173 Finishing of textiles 174 Made-up textile articles 175 Other textiles 176 Knitted and crocheted fabrics 177 Jerseys/pullovers/etc 181 Leather clothes 182 Other wearing apparel and accessories 183 Dressing and dyeing of fur; articles of fur	27 TEX - Textiles 28 WAP - Clothing

CGE Model Sectors	NACE sectors	GTAP sectors
9 Chemicals and plastics	241 Basic chemicals 242 Pesticides, other agro-chemical products 243 Paints, coatings, printing ink 244 Pharmaceuticals 245 Detergents, cleaning and polishing, perfumes 246 Other chemical products 251 Rubber products 252 Plastic products	33 part CRP - Chemical, rubber, plastic products
10 Other light manufacturing	191 Tanning and dressing of leather 192 Luggage, handbags, saddlery and harness 193 Footwear 201 Sawmilling, planing and impregnation of wood 202 Panels and boards of wood 203 Builders' carpentry and joinery 204 Wooden containers 205 Other products of wood; articles of cork, etc. 211 Pulp, paper and paperboard 212 Articles of paper and paperboard 221 Publishing 222 Printing 261 Glass and glass products 262 Ceramic goods 263 Ceramic tiles and flags 264 Bricks, tiles and construction products 265 Cement, lime and plaster 266 Articles of concrete, plaster and cement 267 Cutting, shaping, finishing of stone 268 Other non-metallic mineral products 361 Manufacture of furniture 362 Jewellery and related articles 363 Musical instruments 364 Sports goods 365 Games and toys 366 Miscellaneous manufacturing n. e. c. 371 Recycling of metal waste and scrap 372 Recycling of non-metal waste and scrap	29 LEA - Leather products 30 LUM - Wood products 31 part PPP - Paper products, publishing 34 NMM - Mineral products n.e.c. 42 OMF - Manufactures n.e.c.
11 Metals	271 Basic iron and steel, ferro-alloys (ECSC) 272 Tubes 273 Other first processing of iron and steel 274 Basic precious and non-ferrous metals 281 Structural metal products 282 Tanks, reservoirs, central heating radiators and boilers 283 Steam generators 284 Forging, pressing, stamping and roll forming of metal; powder metallurgy 285 Treatment and coating of metals; general mechanical engineering 286 Cutlery, tools and general hardware 287 Other fabricated metal products	35 I_S - Ferrous metals 36 NFM - Metals n.e.c. 37 FMP - Metal products
12 Motor vehicles	341 Motor vehicles 342 Bodies for motor vehicles, trailers 343 Parts and accessories for motor vehicles	38 MVH - Motor vehicles and parts
13 Other machinery	351 Ships and boats 352 Railway locomotives and rolling stock 353 Aircraft and spacecraft 354 Motorcycles and bicycles	39 OTN - Transport equipment n.e.c. 40 ELE - Electronic equipment 41 OME - Machinery and equipment n.e.c.

CGE Model Sectors		NACE sectors		GTAP sectors
	355	Other transport equipment n. e. c.		
	321	Electronic valves and tubes, other electronic comp.		
	322	TV, and radio transmitters, apparatus for line telephony		
	323	TV, radio and recording apparatus		
	300	Office machinery and computers		
	291	Machinery for production, use of mech. Power		
	292	Other general purpose machinery		
	293	Agricultural and forestry machinery		
	294	Machine-tools		
	295	Other special purpose machinery		
	296	Weapons and ammunition		
	297	Domestic appliances n. e. c.		
	311	Electric motors, generators and transformers		
	312	Electricity distribution and control apparatus		
	313	Isolated wire and cable		
	314	Accumulators, primary cells and primary batteries		
	315	Lighting equipment and electric lamps		
	316	Electrical equipment n. e. c.		
	331	Medical equipment		
	332	Instruments for measuring, checking, testing, navigating		
	333	Manufacture of industrial process control equipment		
	334	Optical instruments and photo-graphic equipment		
	335	Watches and clocks		
14 Utilities	401	Electricity, gas, steam and hot water supply	43	ELY -Production, collection and distribution of electricity
	402	Manufacture of gas; distribution of gaseous fuels through mains	44	GDT - Manufacture of gas; distribution of gaseous fuels through mains
	403	Steam and hot water supply		
	410	Collection, purification and distribution of water	45	WTR - Collection, purification and distribution of water
15 Construction	450	Construction	46	CNS - Construction
16 Trade	500	repair of motor vehicles and motor-cycles; retail	47	TRD - trade and distribution services
	510	Wholesale trade and commission trade, except of motor vehicles an		
	521	Non-specialized retail trade in stores		
	522	Retail sale of food, beverages and tobacco in specialized stores		
	523	Other retail trade of new goods in specialized stores		
	524	Retail sale of second-hand goods in stores		
	525	Retail trade not in stores		
	526	Repair of household and personal goods		
	550	Hotels and restaurants		
17 Transport	600	Supporting and auxiliary transport activities; activities of travel agencies	48	OTP - other transport
	630	Land transport; transport via pipe-lines		
	610	Water transport	49	WTP - water transport
	620	Air transport	50	ATP - air transport
18 Communications	640	Post and communications	51	CMN - communications
19 Financial services	650	Financial intermediation, except insurance and pension funding	52	OFI - other financial services
	670	Activities auxiliary to financial inter-mediation		
20 Insurance	660	Insurance and pension funding, except compulsory social security	53	ISR - insurance
21 Other business services	700	Real estate activities	54	OBS - other business ser-vices
	711	Renting of transport equipment		
	712	Renting of other machinery and equipment		

CGE Model Sectors	NACE sectors		GTAP sectors	
	713	Renting of personal and household goods, n.e.c.		
	720	Computer and related activities		
	730	Research and development		
	740	Other business activities		
22 Recreational and other consumer services	920	Recreational, sporting, and cultural activities	55	ROS - recreational and other consumer services
	930	Other service activities		
	950	Private households with employed persons		
23 Other services	750	Public administration and defence; compulsory social security	56	OSG - public services
	800	Education		
	850	Health and social work		
	900	Sewage and refuse disposal, sanitation and similar activities		
	910	Activities of membership organizations n.e.c.		
	990	Extra-territorial organizations and bodies		
	n.a.	n.a.	57	DWE - dwellings

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