EXPORTS FROM UKRAINE TO THE EUROPEAN UNION:

MACRO-, MICRO- AND POLITICAL ECONOMY DETERMINANTS

by

EVGHENIA SLEPTSOVA

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ABSTRACT

This thesis deals with the exporting performance of Ukraine. Focusing on the reorientation of merchandise exports, both in terms of geography – from East to West – and in terms of commodity composition, it explores the multi-level determinants of the observed picture. While until 2003-2004 reorientation from East to West appeared to be a steady trend, in 2005 this trend reversed and CIS re-emerged as a leading destination market for Ukraine's exports. The commodity composition in trade with the EU has also hardly improved, and was more positive in trade with the CIS. Marginal improvements were observed on a more disaggregated level.

These findings were confirmed in the macro-level analysis – Ukraine tends to under-trade with the external trade blocs – EU-15 and the then CEFTA, and over-trade with the internal trade bloc of CIS. On a micro-level, the analysis has not revealed that trade with the EU has been associated with firm-level industrial upgrading, although FDI does increase the likelihood to export to the EU. Trade with the CIS has been associated with higher commodity diversification, which in turn is known to be associated with higher growth potential. On the level of policy lobbying, on the other hand, business elites have shown an increasing interest in the Western vector of integration.

This thesis is dedicated to my parents, Tamara and Viktor
for their endless love and support

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List of abbreviations

AD	Anti-dumping
AP	Action Plan
BEEPS	Business Environment and Enterprise Performance Survey
CAGR	Compound annual growth rate
CEECs	Central and East European Countries
CEFTA	Central European Free Trade Agreement
CEPS	Centre for European Policy Studies, Brussels, Belgium
CGE	Computable general equilibrium
CIA	Central Intelligence Agency
CIS	Commonwealth of Independent States
Comecon	Council for Mutual Economic Assistance
DCFTA	Deep and Comprehensive Free Trade Area
DOTS	Direction of Trade Statistics (IMF)
EBRD	European Bank for Reconstruction and Development
ENP	European Neighbourhood Policy
EU	European Union
EU-10	2004 accession countries
EU-15	15 EU member states prior to 2004 enlargement
EU-27	Old 15 member states plus ten 2004 new members and two 2007 new members
Eurasec	Eurasian Economic Community
FDI	Foreign direct investment
FEG	Fund for Effective Governance
FIG	Financial-industrial group
FSU	Former Soviet Union
FTA	Free trade area (or agreement, depending on the context)
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
GNP	Gross national product
GOST	*Gosudarstvennyi standart* (literally – 'state standard'), a set of technical standards in place in CIS since the USSR times, currently operated by the Euro-Asian Council for Standardisation, Metrology and Certification, operating under the auspices of the CIS
GSP	Generalised System of Preferences
HOS	Heckscher-Ohlin-Samuelson model of international trade
HS	Harmonised System (international commodity classification)

HT	High-technology
ICPS	International Centre for Policy Studies
ICT	Information and communication technologies
IER	Institute for Economic Research and Policy Consulting, Kiev, Ukraine
IFC	International Finance Corporation
IIT	Intra-industry trade
IMF	International Monetary Fund
IPO	Initial public offering
IQC	International quality certification
IRS	Increasing Returns to Scale, an economics model
IUD	Industrial Union of Donbass
LDCs	Least developed countries
LT	Low-technology
M&E	Machinery and equipment
MENA	Middle East and North Africa
MFN	Most Favoured Nation principle
MT	Medium-technology
NAFTA	North American Free Trade Agreement
NBU	National Bank of Ukraine
OECD	Organisation for Economic Cooperation and Development
OLS	Ordinary least squares, an econometric technique
p.p.	Percentage points
PCA	Partnership and Cooperation Agreement
PP	Primary products
R&D	Research and development
RB	Resource-based
RCA	Revealed comparative advantage
REER	Real effective exchange rate
ROW	Rest of the world
RTA	Regional Trade Agreement (or area, depending on the context)
SCM	System Capital Management
SES	Single Economic Space
SITC	Standard International Trade Classification
SOE	State owned enterprise
STATA	Name of the statistical software

UA	Ukraine
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNIAN	Ukrainian news agency
USA	United States of America
USPP	Ukrainian Union of Industrialists and Entrepreneurs
USSR	Union of Soviet Socialist Republics
WTO	World Trade Organisation
YES	Yalta European Strategy

CHAPTER 1. INTRODUCTION

1.1. Research context

This thesis deals with the exporting performance of a transition economy. Focusing on the reorientation of merchandise exports, both in terms of geographical distribution – from East to West – and in terms of commodity composition, it explores the multi-level factors that may have determined the observed picture.

Ukraine was chosen as a case study, being an interesting example of a large young economy, which gained independence after the collapse of the Soviet Union, and since then has been going through a thorny process of geopolitical and economic self-determination. On the one hand, the dissolution of a closely integrated economic bloc created conditions for restoring more natural levels of economic integration with the rest of the world, and in particular with a large market of the neighbouring European Union, where clearly there was an under-realised potential due to previous political isolation.[1] On the other hand, reality has shown that old economic and even older historical and political links die hard. Although policy initiatives for closer integration with the EU are developing, economic integration has been following an inconsistent, an inverted U-shaped, path.[2] The commodity structure in trade with the EU has not improved either, and remains heavily dominated by the exchange of resource-intensive products for capital-intensive products from the EU, which is a typical North-South relationship. Moreover, by 2009 Ukraine had the lowest share of exports going to the EU of all CIS countries that are part of the EU's Eastern Partnership Initiative (Ivan and Ghinea, 2010).[3]

This is contrasting with the path followed by the Central and East European countries (CEECs)[4], which reoriented their trade away from the former Council for Mutual Economic Assistance (Comecon) towards the European Union early on, having seen their share in extra-EU trade double between 1993 and 2003 and becoming the second major trading partner of

[1] Moreover, already in 1998 Ukraine declared its intention to join the European Union. While in practice foreign policy stance varied, officially the EU integration has remained the leading line in Ukraine's foreign policy discourse ever since.
[2] After an initial increase from 24 to 34 percent in 1996-2004, in 2007 the share of the EU-27 in total Ukraine's exports was down to 28 percent, while that of the CIS recovered to 38 percent (see Table 1 on page 67).
[3] Eastern Partnership Initiative is described in more detail in section 1.2.2.
[4] By CEECs we refer to the ten EU new member states – Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia, Slovenia, Poland and Romania. Most of them experienced a significant reorientation in terms of direction and structure of trade, although some – e.g. Romania and Bulgaria – were less successful with upgrading the commodity composition of trade.

the EU after the USA (Bussiere *et al.*, 2005).[5] The commodity structure of their trade with the EU has also undergone substantial change, moving from a largely North-South structure of trade that existed prior to the fall of 'iron curtain', to a North-North type of trade, whereby they exchange similar, mainly capital- and technology-intensive goods with the EU.

The reasons for such an asymmetrical performance between CEECs and CIS economies are numerous, and range from historical, policy, institutional to pure economic factors. Historically, admittedly, the CEECs were less integrated with the Council for Mutual Economic Assistance throughout the Soviet times than the republics of the USSR.[6] On the other hand, Baltic countries – Latvia, Lithuania and Estonia – were even more dependent on intra-USSR trade than Ukraine, but have successfully reintegrated with the EU.[7] Therefore the degree of initial openness to the rest of the world does not seem to explain the degree of eventual reorientation.

Generally, a consensus seems to emerge from the literature that successful trade reorientation in CEECs was driven by a combination of two broad factors: initial conditions – geographic proximity and cheap and educated labour, and dynamic factors – fast reform record and a prospect of EU enlargement. The latter encouraged strong inflows of FDI, which subsequently generated high levels of intra-industry trade through the inclusion of host countries into the transnational value chains. This argument essentially sums up the main institutional (EU integration factor), policy (internal reforms) and economic (FDI) factors behind the success of reorientation of CEECs.

In very broad terms, each of these, although working as a mirror reflection, can be argued to have prevented successful reorientation of the Ukrainian trade. Thus, Ukraine lacked the positive market signal and reform incentive in the form of the prospect of EU accession. It delayed many of the crucial reforms until mid-1990s. It also did not share the first-mover advantage enjoyed by the CEECs, when the announcement of prospective EU accession served as a strong incentive for both market-seeking and export-oriented inward FDI, which in turn facilitated the upgrading of product composition of exports. In the absence of these,

[5] The share of the EU in exports of Visegrad countries – Czech Republic, Hungary, Poland and the Slovak Republic – increased from about 40 percent to 70 percent between 1989 and 1995 (Hoekman and Djankov, 1996).

[6] The share of intraregional trade varied from 21 percent in Romania to 47 percent in Czechoslovakia, while for the republics of USSR intra-union trade accounted for 80-90 percent of total trade See Michalopoulos and Tarr (1996) for a detailed account of early trade reorientation record in CEECs and FSU.

[7] With the share of intra-union trade of around 90 percent, compared to 82 percent for Ukraine.

geographic proximity and educated labour seem to have been insufficient conditions for a closer integration with the EU.

The reform record has implications for a broad range of issues, which ultimately affect the general economic development and international competitiveness of a country. As discussed in CHAPTER 3, delayed trade liberalisation, macroeconomic stabilisation and structural reforms in the early years of transition negatively affected the business and investment climate in Ukraine. These reforms had subsequent implications for a whole range of supply-side factors in export performance: quality and composition of products, productivity, quality of transport infrastructure and trade-related institutions, attractiveness for FDI and participation in transnational manufacturing chains, financial intermediation and tax collection, as well as managerial and marketing culture, all of which affect the ability of a country to enter more advanced markets.[8]

On the demand side, admittedly Ukraine has not enjoyed the free trade regime granted by the EU to CEECs in early 1990s, has not benefited from regional and structural funds that facilitated institutional reforms and the upgrading of transport infrastructure, and has not enjoyed the flow of FDI that was driven to CEECs by their accession prospects, hence missing the opportunity of upgrading product quality towards standards that would meet the demand and tastes of the EU consumers.

All of the above are only some of the potential explanatory variables in the export performance equation. While acknowledging the variety and complexity of these factors, this study primarily focuses on a set of *macro- and micro- (or firm-level) economic forces* that are customary to trade reorientation literature. Acknowledging the specifics of Ukrainian business environment, where several large oligarch-controlled financial-industrial groups account for over 40 percent of exports, the thesis also extends the study to the *role of business elites in trade policy formation* between the EU and Ukraine.

The institutional environment of bilateral relations with the EU and CIS could justifiably be treated as another explanatory variable of the direction of Ukrainian exports. However, in the case of the EU-Ukraine-CIS triangle the institutional setting is characterised by a much more complicated dynamics, rather than being an exogenously defined explanatory variable. While in terms of trade policy of the EU Ukraine is still treated as most other third countries (not

[8] Thus, Vandycke (2003) finds that business environments, trade infrastructure (both physical and institutional), and local marketing skills present major challenges for foreign investors willing to include the CIS producers in their international value chains.

benefiting from a free trade regime), the geopolitical context is more far-reaching and may (or may not) imply a much closer political and economic integration in the future, where trade is only one of the pillars. Rather than policy affecting trade, the desire to expand trade and other economic links may in part be driving the policy of EU integration in Ukraine. Hence the institutional environment appears to be an endogenous variable. EU-Ukraine integration is therefore treated as a motivation and a point of departure of this thesis. It is however worth informing the rest of the study by describing the evolution of the institutional framework of relations with the EU and the CIS.

1.2. Institutional background to Ukraine's economic relations with the CIS and the EU

1.2.1. Ukraine-CIS

The Commonwealth of Independent States was founded in 1991 by the Russian Federation, Ukraine and Belarus, and joined later by the rest of the former republics of USSR except the Baltic states. Ukraine, however, has never ratified the next founding document – the CIS Charter, signed in 1994 – and therefore *de jure* remains a non-member of the CIS, although *de facto* it is an active participant. Economic cooperation within the CIS has been characterised by continuous efforts to save the deep integration that existed during the Soviet times, which were often driven by the Russian Federation. In the absence of supranational political bodies (which were nearly impossible to create on the backdrop of the newly regained sovereignty by individual FSU republics), economic route effectively became the main vehicle of integration and mutual influence. In 1994 a plurilateral agreement establishing a CIS-wide FTA was signed by all CIS members except Turkmenistan. However it was never ratified by Russia and hence remained inoperative.

A multilateral FTA was replaced by a patchwork (or a 'spaghetti bowl')[9] of bilateral FTAs signed between most CIS members during the 1990s. These agreements are aimed at liberalising all trade in goods and services; however they operate with numerous exemptions and with an active use of contingent measures and quantitative restrictions, especially by Russia in its trade relations with Ukraine, Moldova, Georgia, and more lately even with a traditional ally Belarus.[10] Between 1999 and 2003 Russia and Ukraine engaged in a series of

[9] e.g Broadman (2005), p. 161.
[10] The FTA between Russia and Ukraine excludes about 200 categories of goods, some of which are major Ukrainian export categories. Against the spirit of an FTA in 1997-1998 Russia introduced VAT and tariffs on foodstuffs and alcoholic drinks from CIS countries that were not members of the customs union.As a result

trade wars, and more recently Russia has been resorting to bans on imports of broad product categories from Ukraine, often the ones where Ukraine had a particular comparative advantage.[11]

While these rows had left the international community largely uninterested, the gas rows that erupted between Russia and Ukraine in January 2006 and in 2009, and resulted in the interruption of gas supplies to many parts of Western Europe, attracted a lot of attention and became a major security issue for the EU.

The reason Russia never ratified a CIS-wide FTA is believed to be its preference for a customs union over an FTA. Ever since the collapse of the USSR, it has been promoting the establishment of a "Russo-centric" customs union with varying membership. The first attempt was the CIS Economic Union between Russia, Belarus and Kazakhstan (later joined by Kyrgyzstan and Tajikistan) created in 1995, which was formalised into a customs union in 1999. As a next step in an incremental move towards policy harmonisation the same countries established the Eurasian Economic Community (or Eurasec) in 2000. Ukraine and Moldova became observers in Eurasec in 2002. A year later, in 2003, another regional agreement was established – Single Economic Space – which was meant to include only the biggest economies of CIS: Russia, Belarus, Kazakhstan and Ukraine. Integration within this organisation has not moved very far due to Ukraine's resistance to go as far as customs union. After a while this initiative has lost momentum and Eurasec remained the only effectively operating organisation.[12]

For Ukraine participation in the customs union with the CIS states has always been less desirable in view of its aspirations to join the European Union, which would be impossible as a country cannot be a member of two customs unions at a time. Participation in the SES would be incompatible even with an FTA with the EU, as Ukraine would have to give up its sovereignty over certain trade policies to a supranational SES decision-making body (CEPS,

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Ukrainian exports of sugar declined by 55 percent and those of alcohol by more than two thirds. (Clement, 1999, p. 292)

[11] Russia was targeting Ukrainian steel pipes, zinc, steel, some metal products and confectionery (through higher tariffs and/or antidumping measures), and Ukraine targeting imports of electric filaments, a variety of products from light and chemical industries, and automobiles from Russia, using quotas, higher tariffs and antidumping measures as a tool (World Bank, 2004). Since 2006 Russia imposed a ban on imports of all livestock and dairy products from Ukraine, all in all 20 products. http://www.foodproductiondaily.com/Quality-Safety/Russian-import-ban-hits-Ukraine-dairy-industry , retrieved on 20 August 2010.

[12] After Ukraine's consistent refusal to participate in a customs union within CIS, Russia finally brokered the establishment of the customs union with Belarus and Kazakhstan in early 2010. Since harmonisation of external tariffs had been in process long before this agreement was signed, this union, unlike previous initiatives, seemed to start functioning at the time of writing.

2006: 56). However a customs union within CIS has been argued to have potential negative implications for all of its members. In terms of static effects, customs union envisages a harmonisation of external tariffs at the level closer to Russian import tariffs, which are generally higher than those of smaller and hence more open CIS members. This would be trade diverting, as goods from the union would displace previously cheaper goods from third countries, which is why tariff harmonisation was one of the major stumbling blocks in all previous negotiations. Dynamic effects of a customs union with relatively high common external tariffs are also likely to be negative, as members of the customs union are likely to become locked in with locally produced technology, while lower competition from outside of the union might have negative implications on firms' efficiency, productivity and innovation (Michalopoulos and Tarr, 1997). Moreover, as Hare (2000) argues, both FTA and customs union among CIS countries are likely to be economically disadvantageous as, unlike EU or NAFTA[13], this union would not be large or competitive enough to gain significant benefits from economies of scale and specialisation within the region.[14]

Even before looking at the progress of cooperation with the EU, the existing evidence shows that economic integration within the CIS is heavily distorted by the abundant use of contingent measures. The apparent divergence of Ukraine from the Russo-centric deep economic integration project suggests that politically and institutionally Ukraine has been gradually moving away from the East in its foreign economic relations.

1.2.2. Ukraine-EU

The European Union built its relations with the former Soviet Union countries (except Baltic countries) on the basis of Partnership and Cooperation Agreements (PCA). The PCA with Ukraine was signed in 1994 and was ratified by all EU member states in 1998, and in the same year Ukraine declared EU membership as its strategic goal. The European Union, however, has drawn a clear line between its relations with the CEECs and the former Soviet Union (FSU), never providing a membership perspective to either of the latter. Although PCA was meant to promote institutional, legal and administrative reforms, lack of a strong

[13] North American Free Trade Agreement.

[14] Another complicating layer in the customs union formula has been the intention of perspective members to harmonise their trade policies prior to WTO accession. Ukraine indicated unambiguously that WTO accession would be a priority for Ukraine over CES. As of 2005-2006 Ukraine intensified the adoption of reforms necessary for WTO accession, agreeing to bind its tariffs at a level much lower than that of Russia, and in 2008 joined the WTO. This effectively froze the development of CES and prompted the leaders of Russia, Kazakhstan and Belarus to focus on establishing the customs union on the basis of Eurasec (Cooper, 2007).

incentive – as e.g. EU membership – and its legally non-binding nature made it a largely ineffective tool in promoting any domestic change in Ukraine and in other CIS countries.

As far as trade in goods is concerned, although EU average tariff is rather low – just over 4 percent – and Ukraine enjoys additional trade preferences through the Generalised System of Preferences (GSP), the regime still masks significant tariff peaks on 'sensitive' products, in particular on agricultural products, where tariffs can reach 100 percent (e.g. dairy products are subject to 93 percent duty, Francois and Rombout, 2001: 10). However higher quality and technical requirements than those in the CIS and developing economies make non-tariff barriers not less if not more important than tariff protection. In a survey of Ukrainian exporters, Jakubiak *et al*. (2006) found that costs incurred to meet EU technical and quality requirements amount up to 14 of total production costs, while certification costs add up to further 4 percent. The anti-dumping measures are also actively used by both sides[15]. It is unfortunate that no similar estimates are available on the costs of non-tariff barriers, in particular of contingent protection, in the Ukrainian-Russian trade. On a micro-level, however, they certainly exceeded 18 percent of total production costs for certain producers, affected by the Russian ban on imports of Ukrainian products, as they were losing up to 50 percent of their annual export revenues (thus most likely exceeding the production costs) by losing the Russian market.

As long as Ukraine, as well as Moldova and Georgia, which also demanded accession prospects, remained away from the EU borders, the EU had little interest in, or commitment to, deepening the economic relations with these countries. The approaching eastern enlargement, however, changed this perspective and the EU sought to project its 'transformative power' (Grabbe, 2006) on the countries beyond its new eastern border (Wolczuk, 2009). In order to do this in 2004 it launched the European Neighbourhood Policy (ENP) targeting its neighbours in the FSU and the Mediterranean. The ENP was aimed to make a bigger difference in the region by promoting 'security and prosperity' in return for a stronger incentive – 'access to the internal market' (Commission of the European Communities, 2004: 2-3). At the same time, Ukrainian December 2004 'Orange' revolution

[15] According to WTO, Ukraine ranked 14th in the world as a target of AD investigations between 1995 and 2008, with 61 investigations initiated against it (a share of total investigations about ten times greater than Ukraine's share of world trade). The European Union has been mainly applying AD measures against Ukraine's metallurgical and chemical products. By the end of 2008 Ukraine had eight AD measures against the EU in force, covering fabrics, steel pipes, screw compressor installations, incandescent lamps, laminated fiberboards. (European Commission, 2010. *Seventh Annual Report from the Commission to the European Parliament. Overview of third country trade defence actions against the European Union*. Available at http://trade.ec.europa.eu/doclib/docs/2010/june/tradoc_146274.pdf , accessed on 10th of October 2010).

brought to power a pro-Western leadership, which, in addition to a strong demand for EU membership, promised to embark on a path of comprehensive reforms. This was in line with the EU's goal of creating an area of 'stability and prosperity' on its borders, and therefore made the case for stronger EU involvement.

Although the PCA envisages 'considerable projection of EU rules' as it introduces commitments that require changes in the domestic legislation in Ukraine (Dimitrova and Dragneva, 2009), either due to the lack of strong conditionality, or due to the lack of sufficient political will, it remained largely an ineffective tool for promoting domestic change in Ukraine. The ENP uses principles built into the PCA, but adds 'normative' (Wolczuk, 2009) or 'soft power' (Cremona and Hillion, 2006) character through its main implementation tool – the Action Plan. The EU-Ukraine Action Plan, signed in February 2005, contains a detailed list of measures that Ukraine needs to implement in order to benefit from the incentives offered by the EU – liberalisation of trade in goods and services, facilitation of free movement of people, bigger financial assistance and participation in the EU programmes and projects. Moreover, it provided for a limited period of implementation – only three years.[16] While admittedly at that stage the incentives were less clearly defined than Ukraine's 'to do list',[17] in 2006 the EU offered Ukraine to establish a *deep and comprehensive* free trade area (DCFTA), the first of its kind to be offered to a non-candidate country.[18] Along with visa facilitation talks, DCFTA became the main incentive for the reform process in Ukraine. Moreover, in March 2007 the EU and Ukraine launched negotiations on a new enhanced agreement to replace the PCA, and in September 2008 during the EU-Ukraine Summit it was decided to name it the 'Association Agreement', which would envisage both economic integration and political association.[19]

While the conditions of the Association Agreement and of DCFTA in particular are still being negotiated, a certain critical opinion of the ENP has formed among Ukrainian leadership and in the academic *fora* early on. Ukraine's official immediate and henceforth consistent response to the ENP has been negative, as it did not offer membership prospects and proposed

[16] When negotiated during Kuchma presidency, the AP foresaw implementation within five years, after Orange revolution it was decided to shorten it to three years.
[17] Most core incentives - 'enhanced preferential trade relations', 'increased financial assistance' and in particular 'a stake in the internal market' – were not clearly defined and presumed only long-term effect.
[18] Being part of the offer of 'access to the internal market', it is currently present only in Ukraine's and Moldova's Action Plans.
[19] In the process of negotiating the Association Agreement, on 23rd of November 2009 the sides agreed to strengthen the content of the Action Plan and replaced it with the Association Agenda ("EU-Ukraine Association Agenda to prepare and facilitate the implementation of the Association Agreement", available at http://ec.europa.eu/external_relations/ukraine/index_en.htm , retrieved on 25th of January 2010).

a universal approach to very different neighbours – from Northern African countries, which would never seek EU membership, to Belarus, whose democratic record has been one of the worst in Europe. More broadly, the ENP has been criticised for its weakness in promoting 'stability and prosperity' due to its vaguely defined incentives, long-term character of rewards in return for short-term costs, lack of sanctions and assumption of administrative capacities where they were lacking.[20]

At the same time, it has to be acknowledged that WTO accession was accelerated by the EU making it a precondition for the start of negotiations on the DCFTA.[21] As Wolczuk (2009) argues, despite the political instability in Ukraine and the lack of consistent political will, the level of effectiveness and accountability of the government was sufficient, and 'pro-European enclaves within the state apparatus' (p. 202) managed to achieve substantial progress in the implementation of the Action Plan (AP) – a process she labels 'implementation without coordination'. Melnykovska (2008) suggests that the combined effort of EU-oriented enclaves and that of business groups accelerated the AP implementation.

Although the impact of the progress in AP implementation on the exporting performance of Ukrainian enterprises is hard and too early to assess, in certain areas the positive effects can be inferred. Thus, simultaneously with the adoption of the AP, in February 2005 the EU granted market economy status to Ukraine, improving the position of Ukraine in the resolution of anti-dumping investigations. Accession to the WTO, which was accelerated by the prospect of launching the DCFTA negotiations, removed quantitative restrictions (quotas) on imports of Ukrainian steel products by the EU. An already undertaken legal approximation in certain areas and harmonisation of standards in the area of customs administration and technical standards, even if immediate effects are unknown, carries substantial dynamic positive effects as part of trade facilitation efforts. Further legal approximation with the *acquis* will improve access of Ukrainian products to the markets of all developed economies, not only those of the EU, as essentially legal harmonisation implies the adoption of best international standards.

Several conclusions relevant to the rest of this thesis emerge from the above discussion:

[20] See Borzel (2009), Mayer and Schimmelfenning (2007), Noutcheva and Emerson (2007), Delcour and Tulments (2009) for an analysis of weaknesses of the ENP.
[21] As stipulated in the '10 points' strengthening the Action Plan, proposed by Javier Solana and Benita Ferrero-Waldner. General Affairs External Relations Council (2005) "EU-Ukraine – Strengthening the Strategic Partnership". MEMO/05/57, Brussels, 23 February 2005, available at http://www.europa.eu.int/comm/external_relations/ukraine/intro/index.htm , retrieved on 20 September 2006.

- Ukraine is already enjoying free trade agreements with most CIS economies, while trade with the EU is still protected by tariff and non-tariff barriers, and adoption of a free trade regime might take a few years to achieve. Moreover, some sensitive products might still be excluded from the DCFTA.
- Although average import tariff in the EU is low, 'sensitive' agricultural products, in some of which Ukraine has comparative advantage, are subject to tariff peaks of up to 100 percent. At the same time, with CIS members Ukraine enjoys pragmatic economic relations already built on the basis of a free trade regime. However, the *de jure* free trade with Russia, the most important destination country for Ukrainian exports, *de facto* is marred by numerous distortions – exemptions from free trade, tariff quotas, anti-dumping measures and, most importantly, contingent protection, whereby imports of some of the most important Ukrainian export products are suspended for prolonged periods of time. By adding a huge element of insecurity and uncertainty, this affects not only the current export revenues, but also enterprises' future output, thus producing a downward pressure on future GDP growth.
- As far as deeper integration efforts are concerned, integration within the CIS – as promoted by Russia, through the creation of the customs union – mainly implies harmonisation of external import tariffs with those of Russia,[22] which has a potential trade diverting effect and negative dynamic effects through locking in trade among less technologically advanced partners. Initiatives to adopt a single currency or coordinate macroeconomic policies and WTO accession reforms proved unrealistic and have been abandoned. Since Ukraine repeatedly rejected the idea of joining a customs union with Russia and other CIS members, the only option currently (2010) on the Ukrainian agenda is preserving a free trade regime with the CIS, which is clearly in its interests. This may, however, change with time should Ukrainian government return to the idea of a customs union with Russia and other CIS members.
- On the other hand, deeper integration with the EU, in the form of a deep and comprehensive free trade agreement, is a very slow process, with numerous demands on the Ukrainian side and no incentive in the form of membership prospects, and few other effective tools for accelerating the implementation. Despite these weaknesses, Ukraine is making progress in implementing the trade-related reforms envisaged by

[22] Although by the time Ukraine joined WTO (in 2008) this would be impossible as at the time of accession it bound its tariffs at an agreed level, which is lower than that of Russia.

the Action Plan (see e.g. Razumkov Centre, 2007). In the long-term, this integration entails large positive dynamic gains – improvement of the business and investment climate, which would encourage industrial and product upgrading and attract inward FDI, gaining access to the largest market in the world, as well as general benefits of more advanced democracy and human rights. As will be discussed in CHAPTER 2 below, integration with a technologically more advanced market is also expected to bring about technological upgrading, innovation, and improved productivity. Despite the weaknesses of the institutional setting of EU integration, early evidence of implementation during 2005-2008 suggests that even non-enforceable EU conditionality can bring about slow but positive domestic change.

- In an analysis of legal institutional powers of the EU and CIS in their relations with Ukraine, Dimitrova and Dragneva (2009: 858) also conclude that EU's external governance "is clearly more advanced in using institutions to structure governance and to project policies". However, Ukraine's interdependence with Russia may limit this ability. Since this interdependence is weaker in trade relations than in e.g. foreign policy and energy, it is precisely through this channel that the EU is trying to promote 'rule transfer'. Freinkman *et al*. (2004) also suggest that despite the existing possibilities for a deeper trade integration within the CIS, institutional and legal weaknesses of the regime prevented any progress in this direction.

Therefore, it appears that integration with the EU, even if slow, is preferable to integration within CIS that goes beyond free trade agreements. This has been the policy choice made by successive Ukrainian governments. It is, therefore, forming a background to this research. The discussion also suggests that institutional setting is a complex and endogenous variable in the EU-Ukraine trade relations. In this thesis, however, the author pursues the aim of exploring the factors that have determined Ukraine's trade performance so far, before the trade liberalisation with the EU has taken place, and shedding light on the ground-level economic and political economy forces.

The next section will review the relevant approaches in the literature that have been used to study Ukraine's export performance, while section 1.4 will explain the approach taken in this thesis.

1.3. Review of the relevant literature

Reorientation of Ukrainian exports has received a lot of attention in the literature. At the risk of over-simplification, in terms of the analytical approaches this literature can largely be divided into four strands:

- General political economy analysis of Ukrainian (or CIS) trade;[23]
- Europeanisation literature, which analyses the institutional and political science considerations of Ukraine's political and economic integration with the EU, where trade and investment play a central role;[24]
- Literature based on computational modelling of the consequences of trade liberalisation, or *ex ante* analysis (which is sometimes used to support the arguments in the Europeanisation literature);[25]
- Empirical literature, or *ex post* analysis, which looks at the determinants of past export performance on the basis of statistical analysis or structural indices and/or indicators.

The first strand of literature concerns a broad range of aspects relating to trade reorientation, and is drawn upon in various parts of this thesis; therefore its review is beyond the scope of this chapter. Analysis stemming from the Europeanisation literature has partially been reflected in sections 1.2.1 and 1.2.2 above, and concerns mostly institutional and political science aspects of integration, which, as has already been mentioned, is viewed as an endogenous rather than exogenous variable for the purposes of this thesis, and therefore is not reviewed in more detail here. The third approach effectively refers to the dependent variable – the extent of reorientation of Ukrainian trade to the EU and, more specifically, the effects of further liberalisation of this trade. The fourth directly relates to the approach pursued in this thesis.

Studies based on computable general equilibrium models focus on how the existing trade patterns (and general welfare) would change in the future, should trade with the EU be liberalised.

The universal conclusion from these studies (CEPS, 2006; IER, 2006a; Ecorys and Case, 2007) is that free trade agreement that involves only elimination of tariffs by both Ukraine

[23] e.g. World Bank (2004), Quaisser and Vincentz (2001), CEPS (2006), and as far as trade with CIS countries are concerned, Michalopoulos and Tarr (1994, 1997), Freinkman *et al.* (2004), Broadman (2005), Cooper (2007).
[24] e.g. Wolczuk (2005, 2008, 2009), Vinhas de Souza et al. (2005), Dodini and Fantini (2006)
[25] E.g. CEPS (2006), Ecorys and CASE Ukraine (2007), IER (2006a, b), Harbuzyuk and Lutz (2004).

and the EU will not lead to either increase in exports or to welfare gains for either of the parties. This is due to the asymmetry in the existing levels of protection – on average much lower in the EU than in Ukraine – and, secondly, due to the EU's tendency not to fully liberalise certain sensitive agricultural imports, some of which are Ukraine's comparative advantage (e.g. dairy products). Thus, a study by CEPS (2006) finds that overall welfare gains are negligible in case of a simple FTA, but significantly positive in the case of a DCFTA – ranging from 7-10 percent of GDP in static effects, and two to three times higher if improved institutional quality is achieved (dynamic effects).

While studies based on CGE modelling seek to explore future levels of trade after preferential liberalisation, *gravity model analysis* seeks to explain the observed levels of trade and compare them with the 'natural' levels. From early years of transition, and yet before the collapse of the USSR, scholars had been wondering how much did the political and economic isolation distorted the volumes of trade between members of Comecon and Western economies, and how these volumes were expected to change once the barriers were eliminated (e.g. Hamilton and Winters, 1992; Baldwin, 1994; Piazolo, 1996; Gros and Dautrebande, 1992). Gravity modelling was the typical analytical tool applied to answer this question.

Kaminski *et al.* (1996) estimated that in 1985 the degree of inter-state exports for Ukraine should decline from the actual level of 85 percent to the predicted level of 33 percent. Indeed, by 2001 Ukraine's exports to the CIS amounted to 30 percent, suggesting that the country reached the normal level of trade with the FSU. In another early study on trade reorientation Brenton and Gros (1997) highlighted that as of 1995, unlike CEECs, both Ukraine and Russia were lagging behind in reorienting their trade towards the EU. Ukraine's normal levels of exports to the EU would be expected to be around 40 percent of total exports, and the same share of imports would be expected to originate from the EU. They note that at that point only 10 percent of Ukrainian exports were going to the EU. It is important to note that they were referring to the then 15 members of the EU. While as a trade bloc of 27 countries the EU is often cited as Ukraine's most important trade partner, followed by Russia (e.g. IER, 2006)[26], it is remarkable that the share of the EU-15 never exceeded 21.2 percent (in 1999), and in

[26] Thus, in 2005 the share of EU-27 in total Ukrainian exports was 29.8%, while that of Russia 21.9%. Although this comparison is valid if one compares strictly the customs territories, as a preferential trade area, even if only on bilateral basis, CIS appears to be a more intuitive comparator. And in this case the share of CIS exceeds that of the EU-27 – 31.3% in 2005 vs 29.8% respectively, a gap which widened even further by 2008 – 35.6% vs 27% respectively. These and other trade patterns will be discussed in more detail in Chapter 3.

2008 amounted to only 14.4 percent of total exports. Hence, even if the estimate of 40 percent was exaggerated, the observed shares suggest that the expected level of trade reorientation was never reached in Ukraine. The common conclusion that seems to emerge from these and other studies (e.g. Freinkman *et al.*, 2004; Broadman, 2005) is that Ukraine does not over-trade with the EU, but, given the bias towards the CIS and other partners (e.g. China and Turkey), some rebalancing towards the EU-15 would still be reasonable to expect.

This thesis shifts the focus of the analysis from over- or under-trading to whether, other things being equal, membership *in a specific trade bloc (EU or CIS) is associated with relatively higher or lower levels of Ukrainian exports.*

All macro-level studies, however, are concerned with countries (or industries), but do not capture the specifics of firms – the actual entities that conduct trade. Firm-level analysis has found its way into the trade-related literature relatively recently – since early 2000s – and research of this kind focusing on Ukraine is still very scarce. A few studies that have been done mainly looked at the general internationalisation of Ukrainian firms, rather than destination-specific internationalisation (that would distinguish between exports to the EU and CIS). Thus, Wright *et al.* (2002) and Filatotchev *et al.* (2001) found a strong positive relationship between foreign investments and export intensity in Ukraine, Russia and Belarus. The latter study also found positive effect of product innovation and previous export experience on the likelihood of the firm to internationalise. A more recent study (Shevtsova, 2010) looked at destination-specific internationalisation, and found that entry to both the EU and CIS markets by Ukrainian firms leads to post-entry productivity gains, however the gains are higher in trade with the EU than those in trade with the CIS. Evidence on the internationalisation of Ukrainian firms is still very patchy, and this thesis intends to shed more light on this issue by making use of the two newly available datasets.

The next section outlines the general approach followed in the rest of the thesis.

1.4. Approach in this thesis

The research in this thesis adds to the existing body of literature by taking a multi-level approach to export determinants, exploring macro-, micro- and political economy factors. This will hopefully add coherence to what is now a very patchy picture of determinants of Ukraine's integration into the global economy, and by bridging various approaches will reinforce the conclusions from each of the angles.

The principal **subject** of this research is export performance of Ukraine, as a special case of a transition economy undergoing a process integration and trade liberalisation with the European Union, at the same time maintaining deep economic links with its historical neighbours – former Soviet Union republics. As opposed to many studies that seek to explore the implications of greater integration with the West versus the East, this analysis takes an *ex post* approach, arguing that understanding the forces that have been driving Ukraine's export performance so far is equally important for the ongoing and future policy-making.

The **objective** of this research is two-fold. *Firstly, to assess the degree of Ukraine's reintegration with the global economy*, departing from the assumption suggested by theory that higher trade with the European Union is desirable for Ukraine in view of the economic benefits that stem from integration with a more advanced market.[27] This is done by looking at the history of trade liberalisation since independence and the evolving geographical and commodity distribution of exports; and by undertaking a further structural analysis of exports by their factor content and by revealed comparative advantage, to reveal any positive dynamics in the country's export profile. *Secondly, to explore the reasons that lay behind the observed evolution and the degree of this reintegration*. Knowing these reasons better might help in understanding the prospects for future deeper integration, and the obstacles that Ukraine is facing in this process.

While the *dependent variable* in this research is export performance and destination of exports in particular, the *explanatory variables* are: macro-economic and trade bloc effects, firm-level characteristics and interest group lobbying. A more detailed description of research questions and hypotheses is provided in the conceptual framework in CHAPTER 2.

Essentially, by the end of this multi-level analysis, the thesis will have shed light on the following conceptually simple research questions:

[27] A motivation for this assumption is described in Chapter 2.

- Does Ukraine *under-trade with the EU as a trade bloc, as opposed to the traditional market of CIS*, after controlling for basic economic and geographic factors? Are there any signs of trade diversion occurring as a result of EU Eastern enlargement?
- Are Ukrainian *enterprises exporting to the EU larger, more dynamic, more innovative and more likely to have foreign links* – as theory would predict – as opposed to enterprises serving the CIS market?
- *Do large oligarchic businesses influence EU-Ukraine trade policy-making?* Are they interested in the EU-Ukraine trade liberalisation and the EU integration in general? If so, how is this interest demonstrated?

To the best of our knowledge, such an integrated multi-level approach is novel to the study of export performance, and should enrich the existing body of literature by a set of new interrelated findings.

1.5. Methodology

This section briefly maps the ontological, epistemological and methodological considerations of the thesis.

The thesis represents an empirical, rather than a theoretical, inquiry into the reorientation of exports using an example of a single country. An empirical approach presumes an *ex-post* rather than *ex-ante* view.

Single-country studies carry with them both advantages and disadvantages. They can be considered comparative if they employ or develop concepts that are applicable to other countries (Rose, 1991), or if they explore changes over time. Such studies are useful for generating hypotheses for theories that are yet to be fully specified or as 'plausibility probes' (Eckstein, 1975: 108). They also constitute the most intensive of the comparative methods. The disadvantage of single-country studies is their susceptibility to problems of selection bias, introduction of too many variables with insufficient observations, and indeterminate research designs that yield less secure inferences than the other modes of comparison (Landman, 2003).

At the same time, this thesis aspires to prioritise the depth of the analysis and comprises a range of within-country comparative approaches. Firstly, it is a multi-level analysis, exploring the determinants of exports at different levels – essentially macro and micro. Secondly, sectoral comparisons constitute an important part of macro-level studies (the former

differentiating between steel- and non-steel exports). Thirdly, the study contains a temporal analysis, exploring how Ukraine's competitiveness on advanced and traditional markets has changed since the start of transition. The different levels of analysis – micro or individual level, and macro, or system level – in political science literature gave rise to what is sometimes called the 'structure-agency' problem (Hay, 1995, 2002). Micro-analysis assumes that the world is shaped by the actions of 'structureless-agents', while macro-analysts believe that the world is shaped by the unstoppable process of 'agentless-structures'. Thus, the macro-level approach in trade literature looks at the system or economy level, and ignores the individual role played by firms. In this thesis an attempt was made to bridge these two approaches to inform the conclusions with insights from both systemic and firm levels.

The analysis of these different levels of export determinants necessitates the use of *methods appropriate for each of the explored levels*. Mixed-method research strategies have become well-established in social sciences since the second half of the twentieth century, and Tashakkori and Teddlie (1998: 18) specifically distinguish "designs with multi-level use of approaches" as one of the possible mixed-method strategies. Bryman (2004a: 681) highlights that mixed-method research offers advantages in terms of increasing the validity of an investigation, however can pose problems of interpretation, especially if findings are inconsistent.

The macro- and firm-level chapters attempt to infer some generative mechanisms and the relationships between the level of and the likelihood of exporting to the EU (as opposed to the CIS) and certain macro-economic and firm-level factors. Both the nature of the data available on these two levels and the dominant tradition of research in trade literature suggest a *quantitative method* for analysing these questions. In contrast, in exploring the role of business elites in trade policy-making *a qualitative method* is required, as the primary aim of this inquiry is not to infer generalisable conclusions and mechanisms, but rather to obtain a better understanding of the behavioural and contextual aspects that may explain the observed role of business elites in the EU-Ukraine trade. Besides, this part of the thesis is looking at a small number of objects of enquiry (large or 'oligarchic' businesses), in which case causal relationships are much harder to establish. As Bryman (2004b: 508) puts it,

> ...employing both quantitative and qualitative research may provide a means of bridging the macro-micro gulf. Quantitative research can often tap large-scale, structural features of social life, while qualitative research tends to address small-scale, behavioural aspects. When research seeks to explore both levels, integrating quantitative and qualitative research may be necessary.

This is exactly the strategy that is pursued in this thesis.

The quantitative and qualitative inquiries are unavoidably informed by different ontological and epistemological roots. Ontologically, the fundamental purpose of quantitative research is to avoid subjectivity. The qualitative research, however, will be by definition subjective, even though the author's aspiration was to be as objective as possible.

Epistemologically, in their broader meaning, quantitative approach takes its philosophical roots in the positivist, while the qualitative – in the interpretivist tradition. However, the philosophical traditions that have developed in between these two ends of the scale can drive both quantitative and qualitative inquiries.

While the orthodox view about quantitative research is fundamentally based on a positivist epistemology, whereby measurement is valid, reliable and can be generalised with clear anticipation of cause and effect (Cassell and Symon, 1994), the author of this thesis is more inclined towards a **critical realist epistemology**, which challenges some of these assumptions. While *'positivists take the view that the scientist's conceptualisation of reality actually directly reflects that reality, realists argue the scientist's conceptualisation is simply a way of knowing that reality'* (Bryman and Bell, 2007: 18). The critical realist perspective recognises that all observation is fallible and has error and that all theory is revisable[28], and looks beyond the observed relationships to explore the structures at work that generate those events.

Although there is still no broad consensus as to the methodology of application of critical realism in economics, it does not preclude the application of quantitative methods.[29] Either the methods applied can be different from those applied in orthodox quantitative approaches, or the way inferences are made. E.g. in econometrics, time series analysis is seen as superior to simple ordinary least squares (OLS) regressions (e.g. Downward, 2003).

While the quantitative part of thesis still largely relies on OLS or similar techniques (OLS in the macro-level analysis and panel data and logit regression analysis in the micro-level chapter), the method of drawing inferences is modified in the micro-level chapter. Recognising the limited explanation that the regression analysis is providing with regard to the given effect of exogenous variables, the approach in this thesis was to look at the underlying trade data that was driving the results and try to inform the interpretation of results

[28] http://www.socialresearchmethods.net/kb/positvsm.php , Research Methods Knowledge Base. Positivism & Post-Positivism. Retrieved on 10/08/2010.
[29] E.g. see Downward, 2003 for a review of perspectives on critical realism in applied economics.

by this additional information. As a result, the study gives the idea of both the broad determinants of export performance and of the structures at work that generate those events. Both macro- and micro-level analyses were carried out using a deductive approach.

The study of the role of business elites in trade policy-making, on the other hand, was conducted using an inductive qualitative approach, with no strong hypotheses formed before the fieldwork. During the fieldwork the author conducted a range of in-depth unstructured interviews in Brussels, Kiev and Donetsk (15 in total), as well an analysis of media documents on the topic. At the end of the fieldwork the interviews and other findings were transcribed and analysed in a simple narrative way. The findings, however, provided little systematic picture, which made it difficult to arrive at a comprehensive academic analysis. A further analysis of political economy, economics and political science literature yielded a useful insight into certain stand-alone facts and allowed developing a conceptual framework that streamlined the findings from the fieldwork.

Some important comments need to be made about the **data** used in this thesis. The *macro-level chapter* benefits from being based on a dataset put together by the author, rather than using a ready-made dataset that could contain incompatibility or missed observations problems. However, since it was conducted at the early stage of the research, in the summer of 2006, it made use of the latest available data at that point, therefore covering the period from 1996 until only 2004. The *micro-level data*, on the other hand, was a great challenge to obtain. The readily available World Bank/EBRD Business Environment and Enterprise Performance Survey (BEEPS) dataset provides a wide range of explanatory variables, but only differentiates between exporters and non-exporters (without distinguishing between destination markets) and therefore was not useful for analysing the determinants of export reorientation. After a series of failed attempts to obtain funding for a tailored survey of Ukrainian enterprises, incidentally the author received a dataset from a project funded by the European Commission grant on Economic and Social Consequences of Industrial Restructuring in Russia and Ukraine, which distinguished between destination markets. This dataset allowed exploring only a limited number of explanatory variables, but was the best data available on Ukraine at that period of time, and without it an envisaged multi-level study would not be possible. The data that was obtained from the interviews and used in the chapter on the role of business actors in trade policy-making was useful and informative, however the specificity of elite interviews should be borne in mind – the informants may not be willing to comment on politically sensitive issues.

Overall, the *conceptual significance of the evidence* was increased by the use of multi-level analysis and a 'multi-layered' approach in the micro-level and political economy of lobbying chapters. Even though the political and economic situation in Ukraine changed substantially after 2008 (due to the economic crisis and the change of government), the conceptual framework developed in CHAPTER 7 should remain a useful tool for analysing any given constellation of power among business and political elite, and not only in Ukraine but in any other country.

CHAPTER 2. CONCEPTUAL FRAMEWORK

2.1. Introduction

This chapter sets out the theoretical foundations that form the basis for this study, and describes the conceptual framework used for the exploration of factors that explain the observed patterns of Ukraine's export performance since independence and the degree of reorientation towards the EU.

The first section provides the theoretical background against which the empirical part of this thesis should be interpreted. It reviews the relevant trade theoretical literature and explains why analysing export performance is important, why the geography and the commodity composition of exports matter, and what might be the best combination of those.

The second section builds on the theoretical framework discussed in the first section and describes the conceptual framework employed in this thesis for the empirical analysis of the research question under investigation – factors that determine the trajectory of Ukrainian exports and their geographic and commodity composition since independence. The framework is based on the supposition that supporting the quantitative analysis of macro-level factors by firm-level quantitative analysis, and supporting the latter by a qualitative analysis of large financial-industrial groups (firms that cannot be explored in a quantitative manner) will provide a more comprehensive picture of Ukraine's export determinants than the one available in the existing body of literature.

The chapter as a whole, in the words of Leshem and Trafford (2007: 99), is meant to serve the following purpose:

- Integrate the theories that offer explanations of the issue under investigation;
- Serve as a bridge between paradigms which explain the research issue and the practice of investigating that issue; and
- Provide traceable connections between the theoretical perspectives and research strategy and design.

It is important to note that the theoretical perspectives described below motivate the study and provide the context for the empirical analysis. They do not, however, form the direct subject of the empirical part of the research. Apart from introducing the subject of research, the conceptual framework will ultimately help to conceptualise the *conclusions* within the respective theoretical context.

2.2. Theoretical background

The broad aim of this thesis is to explore the factors that determine the degree of Ukraine's integration with the EU as opposed to the integration with the traditional market of the CIS, as reflected through merchandise exports. In order to interpret the findings of the empirical part of this thesis correctly, it is essential to put the empirical approach in a broader theoretical context.

2.2.1. Why focus on exports?

First of all, it is important to explain why this thesis is about exports. Exports reflect the country's role and place in the global economy. While the *volume* of exports reflects the degree of the country's openness and the extent of integration with the global economy, the *commodity structure* shows the role it plays in this global setting and the gains that it reaps from trade. Exports may directly contribute to the economic growth of a country. Although there has been significant debate about the causality between exports (or overall trade) and growth, there is little disagreement over the positive association between these two processes.[30] The channels through which exports may induce growth are numerous. Giles and Williams (2000) provide an extensive survey of the empirical literature on this subject. In the most direct way, export growth may represent an increase in the demand for the country's products and thus help to increase its real output. New trade theory suggests that increased competition and economies of scale may lead to increased specialisation in exported products, which may then boost the productivity level and the level of skills, contributing to higher growth. Export expansion may also lead to industrial upgrading (Chow, 1987). Endogenous growth literature underlines the importance of access to technologies, learning-by-doing effects and better management practices, leading to further efficiency gains (e.g. Hart, 1983; Krugman, 1987; Lucas, 1988; Romer, 1990). In a similar vein, Lal and Rajapatirana (1987) suggest that export-oriented strategy may boost entrepreneurial activity, which will feed into a more dynamically developing economy.

[30] Earlier studies (Sachs and Warner, 1995; Dollar 1992; Edwards, 1992; Frankel and Romer, 1999) found a strong and consistent relationship between exports (or trade) and economic growth. Development of new econometric techniques allowed scrutinising these findings and, although the positive relationship and the causality were not universally rejected, the link has been argued to be weaker than previously thought. In some cases (e.g. Henriques and Sadorsky, 1996, for Canada or Konya 2004 for Canada, Japan and Korea) the opposite causality has even been found – growth-driven exports rather than export-driven growth.

2.2.2. Exports of what?

The products that a country exports also have important implications for the country's economic growth potential and its place in the world economic order.

The neo-classical trade theory – in particular Heckscher-Ohlin theorem (Heckscher and Ohlin, 1924) – predicted that a capital-abundant country will be able to produce capital-intensive goods most efficiently, and will therefore export the capital-intensive good, while the labour-abundant country will export the labour-intensive good. Based on this approach, for a long time the conventional view of the world was that a country's fundamentals – endowments of physical and human capital, labour and overall institutional quality – will determine the relative costs and the patterns of specialisation of a country (Hausmann *et al.* 2006).[31] Rich countries are usually considered to be more endowed with capital, while poor countries with labour. Consequently countries like the USA and Germany will be better positioned to produce and export cars or machinery, while Brazil or China would be better at exporting clothing or food.

The Heckscher-Ohlin orthodoxy was challenged in the 1980s by an observation that the bulk of international trade was conducted between countries with similar factor proportions and that significant overlap existed within industries, implying that a considerable portion of trade was not being driven by factor endowments.[32] E.g. in 1996, 65 percent of merchandise trade of the EU-15 was conducted within the union. Europe's imports from Japan exceeded its imports from all of Africa and were more than twice as high as its imports from all of the Middle East (WTO, 1997, Table A10). Moreover, trade between EU and Japan, both on the imports and on the exports side, was dominated by capital-intensive products, such as cars, electronics and other machinery and equipment. In order to explain this extensive intra-industry trade, Helpman and Krugman (1985) proposed a so-called *increasing returns to scale theory* (IRS)*,* later referred to as *new trade theory,* which abandoned the assumption of non-differentiated (identical) goods and identical technologies across countries, the main premise of the Heckscher-Ohlin theory, and highlighted the importance of sectors with product differentiation – such as different brands in various product categories – which in order to be developed require economies of scale. Moreover, the share of intra-industry trade will be larger between countries that are similar both in composition of factor endowments and in

[31] Although conceptually it fitted the trade patterns between developed and developing economies rather well, empirical evidence was inconclusive. See Helpman (1999) for review.

[32] This observation is attributed to Grubel and Lloyd (1975), who analysed the levels of intra-industry trade worldwide and composed an index of intra-industry trade (now referred to as Grubel-Lloyd index).

size. The IRS theory, however, still left room for factor proportions. Krugman (1981) and Helpman (1981) presented a vision of world trade patterns which integrated the new trade theory with the traditional factor endowments theory. Trade among rich countries, the North-North trade, is intra-industry type and is based on the gains from specialisation and on economies of scale. The North-South trade, on the other hand, is predominantly inter-industry – where the North exports technology-intensive goods and imports lower value-added resource- and labour-intensive products from the South – and is based on differences in factor endowments.[33] This hybrid paradigm has become a new vision of the determinants of world trade patterns.

However, a developing country may manage to shift its comparative advantage and reorient its trade with the industrialised partners towards commodity patterns observed in the North-North trade, i.e. towards more technology-intensive products, thus increasing its economic growth potential due to higher value-added content of exports. This idea, although based on the Ricardian concept of comparative advantage, has been embedded into the endogenous growth theory and referred to as a 'dynamic comparative advantage' theory (theoretically formalised by Redding, 1999, but mentioned earlier by various authors, e.g. Krugman, 1987, and Grossman and Helpman, 1991).

Trade structure is also important for it is believed to have an impact on economic growth. The neoclassical trade literature tends to stress the importance of factor-content of exported products for growth prospects, drawing a broad distinction between resource-intensive or primary products and capital-intensive or manufacturing exports.

Sachs and Warner (1995, 2001) provided an influential body of research that found a detrimental impact of *natural resource abundance* on economic growth, which has since then been confirmed in many studies. In a study of least developed countries (LDCs), Fosu (1990) also found that the primary export sector exhibits little or no effect on GDP growth in LDCs, while there was a differential positive impact of the manufacturing export sector on growth. Similar results were reported by Auty (1998) and Dowrick and Golley (2004). As opposed to primary exports, exports of *manufacturing goods* have been found to have a positive impact on economic growth and on total factor productivity.[34]

[33] The North-South Divide is a socio-economic and political division that exists between the wealthy developed countries, known collectively as "the North", and the poorer developing countries, or "the South." http://www.s-cool.co.uk/gcse/geography/development/contrasts-in-development.html , retrieved on 10th of July 2010

[34] Fosu (1990) for least developed countries, Ghatak et al. (1997) for Malaysia, Herzer et al (2006) for Chile.

The channels through which the concentration of export structure in resource-intensive products may harm economic growth include: an alleged lower human and physical capital accumulation and productivity growth of resource-intensive sectors; the so-called 'Dutch disease', when over-reliance on the tradable sector leads to exchange rate appreciation, which harms the non-tradable sector; high concentration in resource-intensive exports may lead to higher export price volatility and hence greater macroeconomic volatility.

While Sachs and Warner's approach has become a mainstream approach to 'resource curse' issues, there is alternative literature that disagrees with this approach. Thus, Lederman and Maloney (2003) found a strong positive effect of natural resource-intensive exports on growth, controlling for export concentration (which indeed was found to have a negative impact), physical and human capital accumulation and intra-industry trade. The implication of this finding is that should a resource-rich country manage to maintain a diversified export structure and maintain high levels of physical and human capital accumulation, natural resource abundance will have a positive effect on the economic growth. Norway, Australia or Canada can serve as examples of such cases. However, in view of the author, either by chance or by some path-dependency, the majority of resource-rich countries, in particular non-OECD, tend to have export structure highly concentrated in the abundant resource commodity. Therefore it seems that not allowing for export concentration would confirm the conventional wisdom that *over-reliance* on (i.e. high concentration in) natural resources may have a negative impact on the economic growth. This distinction is important in the Ukrainian context, where metals, often of low degree of processing, constitute around 40 percent of total exports.

Endogenous growth literature brought a new dimension to the analysis of the effects of product composition on economic growth. By stressing the importance of innovation, knowledge accumulation and new technologies (and the spillovers and positive externalities that these factors may cause through trade), it suggests that product *diversification* (or variety) and *specialisation in technology-intensive products* may also have a positive impact on economic growth. Amable (2000), Laursen (2000), Peneder (2002) and Crespo-Cuaresma and Worz (2005) all find evidence of positive impact of specialising in technology-intensive sectors on economic growth, in particular through productivity-enhancing effects. Product variety has also been found to matter for growth. Funke and Ruhwedel (2001, 2005) find that higher export variety is associated with higher growth in both OECD and East European transition economies, including Ukraine. Klinger and Lederman (2006), although not

establishing the direction of causality, also showed that export diversification was a part of the growth process.[35]

Building on the idea that technology matters for growth, and its effects can be dispersed across countries through trade, a number of scholars have developed more detailed measures of technology- or (in one instance) productivity-intensiveness of exports. Thus, Lall (2000) and Hatzichronoglou (1997) focus on factor content and technology-intensiveness, while Michaely (1984) and Hausmann, Hwang and Rodrik (2007) look at the implied productivity content of exports. The latter study demonstrated that the proposed measure of productivity level associated with a country's export specialisation pattern is a consistent and robust predictor of subsequent growth. Interestingly, Ukraine performs relatively well on this dimension, i.e. its export structure is more sophisticated than its level of per capita income would predict, or, in other words, over-performs the level that would be in line with the aggregate level of productivity (see Annex 1 for a mapping of Ukraine compared to other countries).

2.2.3. South-North or South-South?

2.2.3.1. Trade theory

As was already discussed above, both neoclassical and new trade theories propose a specific explanation of why trade flows are as they are between the developed (North) and developing (South) economies.[36] To briefly recap, the former argues that global trade is dominated by the North-South exchange of goods, whereby North exports capital intensive products to the South, and in return buys labour-intensive goods. The new trade theory, on the other hand, seeks to explain why the North trades more with the North, and exchanges similar, mainly capital- and technology-intensive products. In this context, the South appears marginalised, as it has little capacity to achieve the necessary economies of scale to develop technology- and research and development (R&D) intensive export industries, which would allow them to increase the trade volumes with the North.

Endogenous growth theory, first applied to international trade context by Grossman and Helpman (1991), is mainly based on the presumption that technological innovation is undertaken in the North, and the South mainly serves as an imitator. The 'dynamic

[35] Since this study is not directly investigating the link between exports and growth, the precise mechanisms for the latter effects are not discussed here. See e.g. Mayer (1996) for the discussion of the implications of the new trade and endogenous growth theories for diversification of exports.
[36] Note that here North/South is an economic concept, and does not have a geographical meaning.

comparative advantage' theory, however, suggests that the South can shift its specialisation towards technology-intensive products by allowing temporary government intervention. Hence the theory implicitly suggests that trade with the North will be more growth-inducing. As far as transition economies are concerned, a number of authors found a significant positive association between growth in exports to non-FSU countries and growth in GDP (Michalopoulos and Tarr, 1996, for example).

Classifying Ukraine on a North-South scale is not straightforward. Although in terms of GDP per capita Ukraine and the rest of Former Soviet Union fall under the North, and are not usually referred to as 'developing economies', but rather transition or emerging economies, in terms of their export structure – highly concentrated in primary and resource-intensive products – they rather have to be classified as the South. Hence, at least for analytical purposes, trade between Ukraine and CIS has to be categorised as a South-South relationship. On the other hand, at the start of transition, Ukraine and the rest of former Soviet Union, as well as CEECs, emerged as relatively industrialised economies with abundant and educated labour force. Both regions had limited trade with the EU, and whenever present, it was of North-South type in terms of commodity composition. CEECs, however, have relatively quickly reoriented their trade structure with the European Union towards North-North patterns, where vertical intra-industry trade has played a crucial role. At the same time Ukraine's trade with the EU and other OECD remained of North-South type. Therefore, while there is no reason for Ukraine to fall under South in terms of its economic fundamentals, in terms of its export structure with the advanced economies, it does come across as North-South relationship.

Both North-South and South-South vectors are of similar importance to Ukraine, accounting for about a third of total exports each, with the share of CIS following a U-shaped trend – first falling from over 80 percent to below 30 percent between 1991 and 2004, and recovering again to 36 percent after 2004 (see in more detail in CHAPTER 3). Moreover, while the commodity composition in trade with the North (EU) is dominated by products of low degree of processing, trade with the South (CIS), as will be discussed in detail in CHAPTER 3, is more reminiscent of North-North patterns, having a high degree of intra-industry trade[37] and a higher content of capital- and technology-intensive products. Clearly, in view of the discussion above and of the experience of CEECs in trade with the EU, a reorientation towards North-North commodity structure in trade with the EU would be most beneficial.

[37] 54 percent, as opposed to 36 percent with the rest of the world (World Bank, 2005: 29).

However if the existing trend persists, at least in the medium term there is a dilemma – what is more beneficial for Ukraine – *higher trade with the South in more sophisticated goods, or higher trade with the EU, but with a stagnant low-value added export structure?* Although a range of factors are at play, from historical to institutional, it is interesting to see what economic theory has to say about this issue.

Most of the literature that seeks to explain the levels of trade between a number of given countries is based on the gravity model (a simple model based on Newton's law of gravity, first widely applied in geography, and then applied to international trade by Tinbergen, 1962), which has become a workhorse model of the trade literature. Although it can be derived theoretically, it is essentially atheoretical, and explains the volumes of trade between given countries based mainly on distance and economic mass (as well as a number of control variables, such as common border, common language and membership in trade blocs). Although it has provided a spectacular fit, the results are hard to relate to either of the strands of trade theory discussed above.[38]

Endogenous growth theory suggests that technology-intensive exports are more conducive to economic growth than resource-intensive exports, through their effects on knowledge, innovation and human capital accumulation. At the same time, the theory is based on the assumption that most of the R&D and technological innovation is produced in the North, hence suggesting that trade with the North should be more beneficial for growth. Although most of the work is focused on the transfer of knowledge through imports, one other important channel is vertical intra-industry trade, whereby the South imports semi-finished products from the North for further processing or assembly, and exports back finished goods. This is the path that was followed by CEECs during the 1990s, which, whether directly or indirectly, has been associated with higher growth (e.g. Hunya, 2002; Campos and Kinoshita, 2002). At the same time, North-South type of trade, dominated by inter-industry trade based on the classical notion of comparative advantage determined by factor proportions, exhibits decreasing returns to scale and may lead to regional trade diversion and protectionist pressures (Kaminski and Rocha, 2002).

At the same time, Schiff, Wang and Ollareaga (2002), measuring bilateral openness to trade, find that both North-South and South-South trade openness has a positive impact on productivity, though the former is larger. Interestingly, it is primarily R&D-intensive

[38] See a more detailed discussion of the literature on gravity models in CHAPTER 5. MACRO-LEVEL DETERMINANTS OF UKRAINIAN EXPORTS IN 1996-2004: STEEL MATTERS.

industries that are found to benefit from North-South trade, while low R&D-intensive industries benefit more from South-South trade. They explain this finding by a dynamic comparative advantage, whereby the South has a comparative advantage in low R&D-intensive industries, which, if shared, may benefit its trading partners.

In contrast, Orlova (2005), in a cross-country study of developed and transition economies, finds that while trading partners' economic growth has a strong positive effect on domestic growth, the partners' relative income level (GDP per capita), however, is negatively correlated with growth, suggesting that trading with a less developed but fast-growing country can be more beneficial for growth.

A completely new strand of literature emerged when new theories of the firm and international trade were developed in early 2000s (starting with a seminal paper of Melitz, 2003). Usually referred to as being based on *models of heterogeneous firms*, these studies shift the focus to firms as subjects of trade, rather than countries or industries, and consider which characteristics make firms more or less likely to export. While mainly focused on internationalisation per se, some firm-level studies (e.g. Blalock and Gertler, 2004) predict that *exporting to the countries with higher level of technological development* will bring about higher productivity gains, especially when capital intensive products are exported (through learning-by-doing, access to new innovative technologies, better managerial practices and other effects), while exporting to less advanced markets is not expected to have such positive externalities. Shevtsova (2010), studying the firm-level export dynamics in Ukraine, finds that exporting to both the EU and CIS is associated with post-entry productivity gains, and these gains are higher in trade with the EU and for capital-intensive products.[39] Damijan et al. (2004), using the example of Slovenia, also find that firms exporting to more advanced markets have higher level of productivity prior to entry. Assuming that higher productivity of individual enterprises is associated with higher levels of aggregate growth, this finding also suggests that exporting to the 'North' will be associated with higher growth, although causality may run both ways.

Hence, while theory predicts that trade with the North should be more growth-enhancing, empirical evidence is sometimes contradicting. This should be borne in mind when drawing conclusions from the apparently limited success of Ukrainian products on the European markets.

[39] The evidence of capital-intensive exports to the EU being more productivity-enhancing than capital-intensive exports to the CIS is, however, inconclusive.

2.2.3.2. Regional trade integration / bilateral trade liberalisation

A potential of regional integration changes completely the angle of the above assessment of benefits that may stem from greater trade with either the EU or the CIS. So far the discussion has been focused on greater volumes of trade and exports in particular. Regional trade integration with a more advanced market, depending on whether it is deep or shallow (also called negative and positive), may involve a broader range of positive effects. Shallow integration involves mainly elimination of tariffs and quotas, often with the exclusion of sensitive industries (like agriculture) and services. Deep integration, labelled so by Lawrence (1996), in addition to the free movement of goods, may include free movement of services and capital, and harmonisation of legal and institutional norms.

When undertaken with a trade bloc of advanced economies, the benefits of such integration may also include a range of politically desirable effects: locked-in reforms, intra- or extra-regional security, increased bargaining power in multilateral and bilateral trade negotiations, as well as project cooperation (e.g. in transport, energy, environment, etc.) (World Bank, 2000). The same effects are likely to be less pronounced when a regional trade agreement is formed between less developed economies, while the first effect – promotion of reforms – is even less likely in cooperation between countries with mixed institutional and/or democratic record. From this point of view, Ukraine can clearly benefit from the incentives that an FTA with the EU can provide for institutional reforms.

Moreover, establishment or enlargement of regional trade agreements can be trade creating or trade diverting, according to the famous Vinerian customs union theory (Viner, 1950). Trade diversion occurs when an enlarged bloc engages more in intra-bloc trade and/or raises external trade barriers and some more efficient third-country suppliers lose their market share. Trade creation, on the contrary, occurs when new members of a trade bloc lower their external tariff and non-tariff barriers, creating better market access to third-country suppliers. However, the formation of a customs union can create additional trade with non-members if it boosts the economic activity levels of the members enough to generate additional trade with non-members, sufficient to outweigh the trade-diverting effect. In the case of EU-Ukraine relations, enlargement of the EU customs union entailed abolition of free trade agreements between Baltic countries and Ukraine, and adoption of product standards and technical requirements in sensitive areas like agriculture by all new EU members, making it more difficult for Ukrainian producers to export to the Baltic countries and other new EU members. These and other factors created risks of trade diversion in trade between the new EU members

and Ukraine, creating strong incentives for a neighbouring third country like Ukraine to join the free trade area (or indeed a customs union) with the enlarged EU as well. Therefore the possibility of a deep integration with the European Union, even if distant, seems to promise greater benefits to Ukraine than integration with the CIS.

Frankel (1997) also notes that South-South integration – trade blocs consisting of poorer countries with a level of development, or capital-labour ratio below world average – may, under certain conditions, lead to the divergence of welfare among bloc members, with the benefits captured by the most developed member of the bloc. This is particularly likely to happen when external tariffs of this bloc are high, which is not the case in the CIS.

When accompanied by a prospect of full integration or membership, as was the case with the Eastern enlargement of the EU, regional integration may result in higher FDI flows, industrial upgrading, participation in integrated production processes and value chains, as well as institutional and legal reforms that further improve the business and investment climate in a less developed economy. Eventually, EU accession process has also been argued to result in income convergence (e.g. Barbone and Zalduendo, 1997; Matkowski and Prochniak, 2004).

Ukraine has been calling for a prospect of EU membership since 1998, although itself making little progress in reforming its economy to approximate to the EU standards. EU, being in a state of enlargement fatigue, has consistently stated that membership is not on offer. As a result of long insistence on the part of Ukraine on its European vocation, EU recognised these aspirations by offering Ukraine the prospect of deep integration through a deep and comprehensive free trade agreement (DCFTA). Apart from the liberalisation of trade in goods, it foresees liberalisation of trade in services and capital, and harmonisation of product-related, legal and institutional standards (such as competition rules, intellectual property rights, government procurement, customs, etc.).[40]

This process may produce large gains in the future; however the early progress – from launching of the European Neighbourhood Programme in 2004 to 2008, when negotiations on DCFTA were officially launched – has been rather slow.

Although future benefits from deeper integration with the EU are important, as long as negotiations on the EU-Ukraine DCFTA are ongoing, the assessment of these benefits has to follow an *ex ante* approach, using either policy analysis or computable general equilibrium

[40] According to the terms of reference for the new enhanced agreement between the EU and Ukraine (ECORYS and CASE, 2007).

modelling (which computes economic costs and benefits resulting from given policy changes). This thesis, however, aims to explore the performance of Ukrainian exports in an *ex post* fashion, as this may provide important insight based on actual events that already took place as opposed to future opportunities (keeping in mind the assumption of potential large gains from EU-Ukraine integration). Therefore, abstracting from the future effects for the purpose of this study, the next sub-section sets out the empirical framework for the *ex post analysis* undertaken in this thesis, placing it in the context of the above theoretical discussion.

2.3. Empirical framework

From the context we know that European integration has been a major factor in Ukraine's political discourse and has a potential to significantly shape Ukraine's future – economically, institutionally, politically and socially. Integration within the CIS, on the other hand, already has a track record. As discussed in the INTRODUCTION, the project of CIS integration, although *de facto* quite advanced, *de jure* remained unfinished: Russia never ratified the main plurilateral Agreement on the Establishment of the Free Trade Area, signed by all CIS countries (except Turkmenistan) in 1994, which therefore remains ineffective; Ukraine has not ratified a CIS Charter, thus remaining a participant, but legally not a full member. These are just some examples of 'stumbling blocs' in CIS integration. The main reason for this uneven progress has been the desire of the former Soviet republics to preserve their newly gained sovereignty. As far as trade liberalisation is concerned, bilateral free trade agreements between CIS countries also include a wide range of exemptions and contingent measures that distort the free trade and do not comply with WTO standards. The repeated attempts at creating sub-regional groupings (Eurasian Economic Union, which was supposed to become a customs union, Single Economic Space) have also failed so far.

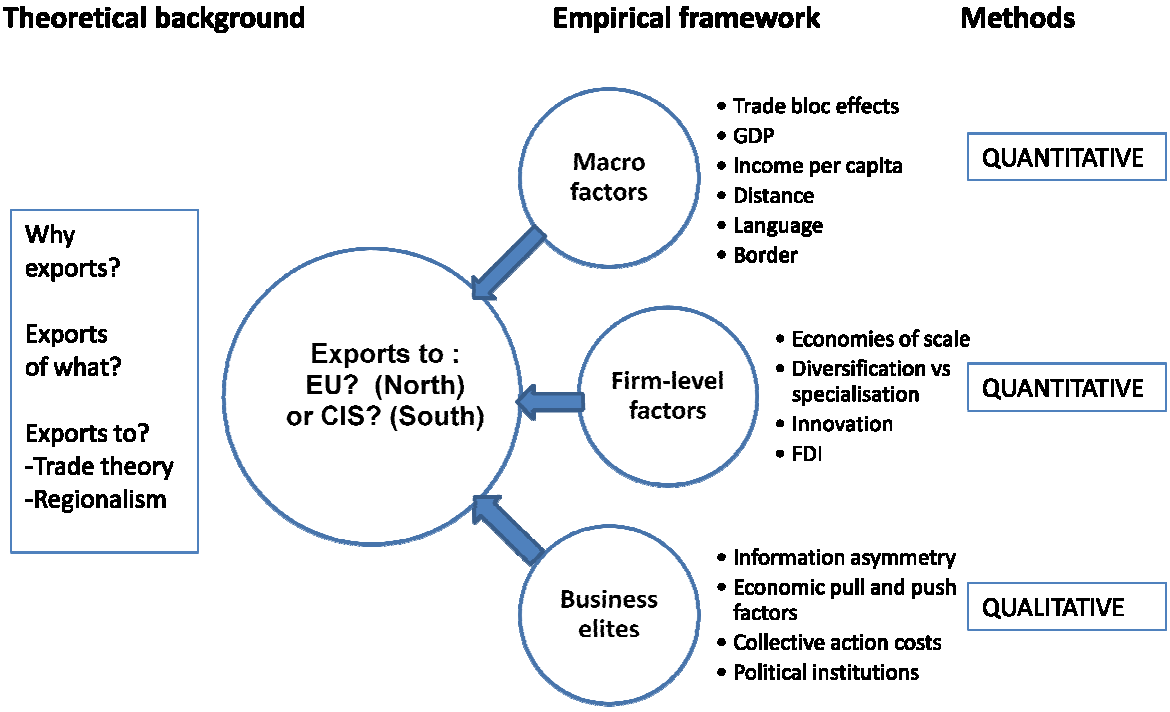
Therefore, these geopolitical as well as pragmatic pull and push factors speak in favour of moving progressively towards integration with the European Union. This process is, however, at its early stages and, arguably, has not yet affected the micro- and macro-economic fundamentals of Ukraine. Due to its prominence in the political discourse and the intensification of this discourse since 2005, it is, however, a point of departure of this thesis.

While, as mentioned in the Introduction, it is important to acknowledge the multiplicity of factors that can explain the observed patterns of trade of a given country, the author chose to focus on economic forces – macro-level, explored with the help of the gravity model, micro- or firm-level, and business lobbying. The latter effectively serves as an extension of the firm-

level analysis, which acknowledges the specifics of the Ukrainian economy – where several financial-industrial groups control most of the metallurgy production, which, in turn, accounts for 40 percent of Ukrainian export revenues and about a quarter of GDP – and complements the quantitative firm-level analysis by a qualitative political economy analysis.

Figure 1 below demonstrates schematically the 'model' adopted in the thesis for the purpose of this analysis. Ukrainian exports, with a focus on main trade partners – the EU and CIS – are the dependent variable, while macro-, micro- and political economy of lobbying are the explanatory variables chosen in this study. The two former are studied using quantitative methods, while for the latter a qualitative approach is more appropriate.

Figure 1. Conceptual framework of the thesis



Source: Author's research

Although a lot of the theoretical background discussed above was about the eventual impact of exports on economic growth, the thesis as such does not explore this relationship. It was, however, important to set the scene for the rest of the empirical analysis, in order to understand the fundamental reasons for why geographic and commodity distribution of exports, and the combination of those, should matter. The fundamental trade theory assumptions, discussed in the theoretical background, will feature either directly or indirectly both in the theoretical and empirical discussions of the chapters that follow.

2.3.1. Dependent variable: Exports to the EU versus exports to the CIS

The study starts with describing *the dependent variable – the actual export performance of Ukraine on the main markets of interest, the EU and the CIS*. CHAPTER 3 contains a detailed analysis of the changes in volumes, as well as geographic and commodity structure of exports in light of the changing political economy conditions in Ukraine since independence, which affected the overall health of the economy and hence export performance as well.

Building on the theoretical discussion in the first part of this chapter, the thesis proceeds to analysing the *factor content* and *revealed comparative advantage* in trade with the EU and Russia. The balance between resource- and labour-intensive products on the one hand, and technology-intensive products on the other will reveal to what extent Ukraine can be characterised as the South in international trade terms (if its exports are resource- and labour-intensive) and whether there are signs of 'dynamic comparative advantage'. The latter, respectively, would indicate a sign of positive industrial upgrading that could bring about higher growth prospects and/or reorientation closer to the North-North relationship in trade with the EU. Factor-content analysis is undertaken according to Lall's classification (Lall, 2000), while in order to estimate Ukraine's comparative advantage the traditional Balassa index of revealed comparative advantage is used (Balassa, 1965).

The general picture that emerges from this analysis is that trade with the North (the EU) indeed exhibits a Heckscher-Ohlin commodity structure, with little intra-industry trade, an exchange of resource- and labour-intensive products in return for capital- and technology-intensive imports from the EU, and little upgrading of the commodity structure. There are, however, some signs of an increase in exports of medium-technology products to the EU. Trade with the CIS, on the contrary, after an initial decline, has been recovering dynamically since early 2000s, while commodity composition underwent some positive change towards higher share of technology-intensive goods.

At the first glance, these findings are at odds with the picture that was observed at the beginning of this research – in 2005. From early 1990s until 2003-2005 Ukraine seemed to be undergoing a steady reorientation of its exports towards the EU, a trend which reversed since then and is casting doubt on the shifting centre of gravity in Ukrainian trade. This fact calls for a more careful examination of the underlying factors that have been driving this export performance.

2.3.2. Macro-level determinants

The argumentation of the endogenous growth theory suggests that higher trade with the EU is *apriori* desirable for Ukraine due to potential productivity and efficiency gains it may provide. The existing policy (e.g. CEPS, 2006) and political science discourse (e.g. Wolczuk, 2006, 2008) also highlights the institutional, political and economic development benefits that the EU integration can bring to Ukraine. Using this majority view as a motivation, CHAPTER 5 explores whether Ukraine under- or over-trades with the EU as opposed to the traditional market of CIS, employing the traditional empirical tool of international economics – the gravity model. Gravity model investigates whether a country A over- or under-trades with (in this study – exports to) a country B compared to the 'natural level of trade', which would be expected based on basic economic and geographic fundamentals – GDP, GDP per capita, distance, common border, access to the sea and common language. In an ideal, frictionless world without tariff and non-tariff barriers and with non-differentiated consumer preferences, after controlling for these fundamental factors, the effect of trade blocs should be neutral. In the real world, however, all of the above does not hold – tariffs may be abolished inside trade blocs or between countries that signed an FTA, and remain in place for third countries; non-tariff barriers are overcome more easily by some countries, and less easily by others; despite equal distances, infrastructure may make it easier for a country A to export to country B, and more difficult for country C; last but not least, products and consumer preferences differ across importing countries.

Therefore, the main scope of the macro-level analysis is to see whether Ukraine over- or under-exports to the main trade blocs or groupings in its near proximity – CIS, CEFTA (which included most of the EU candidate countries until their accession to the EU in 2004) and EU-15. A difference is made here between old and new EU members first of all because CEECs did not join the EU until 2004, and secondly to explore separately a potential of Vinerian trade diverting effects of the EU Association Agreements signed by the EU with candidate countries in early 1990s, which liberalised EU-CEE trade early on and could entail some trade diverting effect for the third countries. EU-15 also has a potential trade diverting effect due to higher intra-bloc trade and potentially lower trade with third countries. Similarly, free trade agreements signed with CIS countries are hypothesised to produce a trade creating effect for Ukraine.[41]

[41] While they could be trade diverting for non-CIS members, this is not a subject of this study.

Another interesting hypothesis that gravity model allows to test is whether Ukraine will export more or less to countries of similar level of development (measured by income per capita). The former would indicate a Heckscher-Ohlin type of trade, where countries with dissimilar capital/labour ratios would engage in more trade, while the latter would comply with the Linder hypothesis (Linder, 1961), which, contrary to the Heckscher-Ohlin theory, expects countries with similar levels of development to trade more.

To eliminate the bias created by high concentration of exports in metals and articles of metal (about 40 percent of total exports), a similar analysis is conducted with exports of metals removed.

2.3.3. Micro- (firm-) level determinants

Firm-level analysis of internationalisation – entry of firms to international markets – has developed in trade literature relatively recently, due to the availability of new data and theoretical advances. It provided a whole new range of possibilities. First of all, it shifted the focus from countries and industries as subjects of trade to firms, entities that actually conduct trade. Secondly, it provided a much better avenue for testing the hypotheses of new trade and endogenous growth theories.[42] The predictions of the latter – that knowledge accumulation and innovation, facilitated through trade, will be more productivity-enhancing and therefore will encourage higher growth – in its essence refer to the performance of firms, not countries. Lack of data, however, did not allow testing these predictions on firm data until early 2000s. Thirdly, firm-level data allows conducting a comparative analysis within the limits of a single country, which is not possible with country-level data. Moreover, firm-level data allows breaking down the analysis further by industries, which is done in this thesis.

This thesis therefore attempts to build on the findings of the macro-level gravity model by adding a micro-level dimension.

The firm-level data on Ukraine is still very scarce, as are firm-level studies. To the best of our knowledge, the only authors to have studied the firm-level export performance in Ukraine are Filatotchev et al. (1999, 2001) and Shevtsova (2010). The latter study does not, however, look at the determinants of exports, but rather at the exports-productivity link. Neither of the

[42] The models of heterogeneous firms, on which firm-level internationalisation literature is based, are mostly derived from models of new trade theory, but they do not explicitly aim to test either new trade or endogenous growth theory. They use, however, the same set of variables, such as size (as a proxy for economies of scale) and foreign links, which feature in new trade theory, or diversification, skill intensity, innovation and productivity, all being the central factors in the endogenous growth theory.

studies looks at the destination-specific determinants of exports, i.e. what makes firms more or less likely to export to the EU as opposed to the CIS. Therefore this thesis will be one of the pioneering studies in firm-level determinants of exports in Ukraine.

Drawing on the existing empirical literature on firm-level determinants of export performance, the following research questions are explored:

- Is there a systematic difference between firms exporting to the EU and those serving the domestic market?
- Are economies of scale associated with higher or lower probability of exporting to the EU?
- Is higher product diversification associated with higher or lower probability of exporting to the EU?
- Are firms serving the EU market more innovative, judging from process innovation?
- Are firms with foreign links more likely to enter the EU market?

We also explore the determinants of non-destination specific internationalisation, by asking similar questions – whether size, foreign links and product innovation make firms more likely to export – and, additionally, whether age of the firm, international quality certification, skill- and capital-intensity of an enterprise increase the likelihood of internationalisation.

Essentially, this part of the study attempts to see whether, as trade theory predicts, exporters have foreign links in the form of FDI or joint venture, are bigger, more dynamic and more innovative than non-exporters, and whether the same is true for exporters to the EU relative to exporters to the CIS. The findings of this thesis, however, confirm only part of these expectations.

Acknowledging the specifics of the Ukrainian business environment, where enterprises controlled by financial-industrial groups represent important outliers in the above analysis, it is interesting to explore their role in trade policy-making using qualitative research methods, as described next.

2.3.4. Role of business elites in the EU-Ukraine trade policy-making

This part of the study develops a conceptual political economy framework to explain the observed degree of mobilisation of large Ukrainian business groups towards EU-Ukraine trade policy-making. It departs from the proposition of Alt *et al.* (1996) that the level of trade

liberalisation in a country will be determined by an interaction of economic considerations, special interests within a society and political institutions. In this study this approach is modified by making the *degree of business mobilisation a dependent variable*, being a function of (i) *economic costs and benefits* as perceived by business elites (where information asymmetry plays an important role), (ii) nature of prevalent *political institutions* that form trade policy-making, and (iii) *collective action costs*.

We find that the predictions of classical and new trade theories logically fit the behaviour of business groups in Ukraine with regard to trade. The former, being at the roots of endogenous tariff theory (Mayer, 1984; Grossman and Helpman, 1994) essentially predicts that due to immobility of factors of production economic agents cannot adjust to unfavourable changes of trade policy and those who stand to lose will mobilise a lobby against respective trade policy changes. In this case the resulting policy equilibrium is likely to be protectionist.

The new trade theory (applied to the political economy of trade policy lobbying by Milner, 1988 and Milner and Yoffie, 1989) shifts the attention to larger firms, whose economies of scale make them competitive not only domestically, but also internationally. As a result of their international competitiveness and negotiating power such firms can pursue a 'strategic policy', i.e. can become 'policy makers' rather than 'policy takers' on the international arena. Moreover, by acting strategically such actors can overcome information asymmetry (concrete legislative proposals not yet being 'put on the table'). While normally applied to MNCs, a similar behaviour is observed in Ukraine on the example of financial-industrial groups (FIGs) and their attitudes to the EU-Ukraine trade policy making.

Political institutions and the 'Olsonian' collective action costs represent another crucial factor in identifying the degree of business mobilisation with regard to trade. The study will discuss how both of these favour direct lobbying channels in Ukraine by largest business interests and inhibit mobilisation of medium and large enterprises.

Thus, by the end of this research the author expects to have explored the determinants of Ukrainian exports from three very different perspectives. This will hopefully provide new insight into the traditional question of trade reorientation of a transition economy, with wider application to other economies.

The next chapter explores the dependent variable of this research – the trends in geographic and commodity reorientation of Ukrainian exports.

CHAPTER 3. POLITICAL ECONOMY OF UKRAINIAN TRADE LIBERALISATION AND EVOLUTION OF TRADE PATTERNS

3.1. Introduction

The break-up of the Soviet Union resulted in a massive economic and social shock for the economies of the newly formed independent states and their citizens. Old industrial links were disrupted, the aggregate demand in the former Soviet Union collapsed, payments became unreliable – the need for reorienting towards the rest of the world was urgent and obvious. Ukraine was slow in responding to the realities of transition in the early years of independence, trying to develop its own 'third way' in terms of reforms, which resulted in a protracted decline in output, accompanied by a widening current account deficit. Nevertheless, the initial geographic re-distribution of exports took place rather quickly.[43] Until 2005 it seemed that Ukraine was on a steady path of trade reorientation and deeper integration with the rest of the world, with the European Union emerging as the largest export partner, consistently accounting for over 30 percent of total exports. In 2005, however, the trend reversed, and the share of the EU started to fall and that of CIS to restore its positions. While the EU is still the second most important market for Ukraine after CIS, the reorientation is no longer following a clear-cut route, and it is important to understand what was driving these two different trends, and whether the recent reversal has longer-term implications.

The commodity composition of Ukrainian exports has undergone even less reorientation. Being a heavily industrialised economy in the Soviet times, during the years of independence Ukraine lost some of its positions and became more dependent on resource-intensive exports, primarily steel, oil refinery products and some low value-added agricultural commodities. Hence, Ukrainian trade with the rest of the world became even more of a 'North-South' type, whereby Ukraine export resource- and labour-intensive goods, and imports capital- and technology-intensive goods. To see whether there are any positive developments away from this pattern the chapter will look at a detailed commodity composition of exports by regions, while the next chapter will look at a more detailed picture to see whether Ukraine is developing any narrow niches in higher value-added products by using a factor content and revealed comparative advantage analysis.

[43] The share of CIS fell from over 80 percent in 1990 (then still USSR) to 50 percent in 1996 and 24 percent in 2002 (Michalopoulos and Tarr, 1994; UN Comtrade Online Database).

This chapter starts with the political economy of trade liberalisation in the early years of independence, looks at the evolving geographic composition of exports, and proceeds with the analysis of geographic and commodity composition of Ukrainian trade, focusing mainly on trade with the main Ukrainian economic partners and neighbours, CIS and the European Union

3.2. Trade liberalisation and the evolving geographic composition of exports

3.2.1. The dissolution of the USSR and adjusting to a market economy

Almost entirely dependent on intra-USSR trade, with over 80 percent of total trade in 1990 (Michalopolous and Tarr, 1994), in the early years of transition the newly independent states had to urgently restructure their economies and establish new foreign economic relations, as trade with the former Soviet Union (FSU) partners was suddenly disrupted. There were numerous reasons for this disruption.

First of all, aggregate demand and output collapsed in all of the FSU economies. Between 1991 and 1996 the cumulative average GDP growth in CIS economies was minus 63 percent (see Annex 2 for the breakdown of FSU economies' GDP growth rates in 1991-2008). Hence, the traditional export markets lost more than a half of their previous purchasing power, reducing sharply the demand for imports. On the supply side, Ukraine's output was also contracting sharply. Since export performance and output are endogenous, as exports are a reflection of the structure of the economy, the falling output, in turn, was reinforcing the contraction of exports.

Although some output decline was expected at the start of transition, the actual decline in FSU economies exceeded all expectations, giving rise to a severe criticism of the 'Washington consensus' reform package. There is extensive economics of transition literature trying to explain 'what went wrong' with the reforms and the reasons for such a drastic output decline in FSU economies.[44] The detailed review of these reasons is beyond the scope of this chapter, but some of them are directly relevant to Ukraine's foreign trade performance.

The standard reform package for the economies in transition[45], largely designed by the economists of IMF and the World Bank – hence the 'Washington Consensus' – involved three pillars of reforms: macroeconomic stabilisation, external liberalisation and restructuring.

[44] E.g. Kornai (1997), Gross and Steinherr (1995), Lavigne (1999), Blanchard (1997).
[45] Originally designed for the Latin American economies.

These reform programmes were not dictated by the IMF and World Bank, and governments could in principle decline them. In practice, countries often accepted the reform package, but then did not implement them. Whether or not one wanted to follow the exact prescriptions of the IMF for each of these pillars, each of the former centrally planned economies (even Belarus, which followed a least liberal route of economic reforms), had to undergo some form of macro-economic stabilisation, some form of external liberalisation (in the absence of Gosplan and state orders from Moscow), and some form of restructuring once private ownership was allowed. Ukraine lagged behind in all of these reforms. In the early years of transition, when foundations for future growth had to be laid, Leonid Kravchuk's government tried to exploit the opportunities offered by the old system and postpone many of the painful reforms. Although corruption did play a role, the premise was often benign – to protect the existing industries and to preserve jobs. This resulted in both the most prolonged recession among the CIS economies, and the loss of external competitiveness throughout the 1990s, which some authors even call "the lost decade" (Babanin et al., 2002).

In terms of the *macroeconomic stabilisation*, the biggest problem for all the CIS economies was the persistence of the Soviet ruble zone across CIS. With fifteen, and after the exit of Baltic countries, twelve central banks issuing ruble credit in competition with one another, three- and in 1993 four-digit hyperinflation was hard to curb (Aslund, 2009: 73).[46] The Ukrainian government wanted to exploit the ruble zone for access to cheap credit and raw materials, and postponed the introduction of a national currency. The coupon *(Karbovanets)* circulated simultaneously with the ruble (the former as cash, the latter as a means for bank transfers) from 1991 to 1993, and although by then counted in millions, still was not abolished until 1996, leaving the Ukrainian monetary system in a mess. And although hryvnia was printed in 1992 and the Soviet ruble zone was abolished in 1993, new currency was not introduced until August 1996, on the grounds of the need to bring down hyperinflation first. While most FSU economies introduced new convertible currencies in 1993-1994, Ukraine was the latest in the region to conduct currency reform in 1996. Varying degrees of hyperinflation in FSU economies, in turn, distorted the international payments system and gave rise to extensive barter schemes, leaving the majority of small and medium enterprises with no efficient means to conduct foreign trade transactions (Michalopolous and Tarr, 1994).

[46] Using earliest available data, in 1993 annual consumer price index in Ukraine was 4,735%, the highest of all CIS economies. CPI of comparable scale was registered only in Belarus in 1994, at 2,221% and in Kazakhstan in 1993 at 1,877%. (World Bank WDI, April 2010 edition).

If currency bottlenecks were not enough, *external liberalisation* reforms were imposing further barriers to the evolution of market-based foreign trade. A 'gradualist' approach was adopted to shield the economy away from the pains of opening up to global markets. Until mid-1990s trade was still heavily regulated, with numerous licences, quotas and permits required to both export and import (Aslund, 2008). The bilateral trade agreements, established in 1992, aimed at preserving inter-state trade, also retained some mechanisms applied during the central planning. A system of "state orders" to enterprises was still in place, accompanied by guaranteed or restricted prices. State trading organisations were also maintained across the CIS. Price controls discouraged enterprises from meeting the state orders and instead forced them to come up with alternative routes to export. These administrative controls were meant to preserve the previously existing links in closely integrated industries, but in fact not only did they not achieve their goal[47], they also to some degree facilitated the breakdown of such value chains, as suppliers were often unwilling to deliver inputs at restricted prices (Michalopolous and Tarr, 1994: 7). Moreover, they inhibited the establishment of new foreign trade links and distorted a more efficient reallocation of resources and restructuring by state-owned enterprises (SOEs) or privatised enterprises. Intra-CIS trade was also facing payment difficulties, with delays of two or three months. Trade with third countries was distorted by export restrictions, to keep the minimal available output inside the country.

S*tructural reforms* have had the most long-lasting impact. Privatisation was delayed (de facto started only in 1994), and when initiated, favoured insider-ownership. Although nominally the employees were the holders of former SOEs' shares, in practice incumbent directors gained control of those enterprises. With close links to the government, they ensured the preservation of soft budget constraints, through cheap credit, discretionary import and export licenses and subsidies. These measures were often taken for good reasons – to preserve the jobs – however workers were becoming even less productive than in the Soviet times, as lack of threat to lose the job was compounded by salaries below subsistence levels. Lack of structural reforms and institutional weaknesses in the areas of banking, credit, insurance and other supporting financial infrastructure were further limiting foreign trade (Hare, 2000).

The output contraction was partially caused by the so-called "disorganisation" process – the disruption of previously highly integrated and administratively controlled production chains

[47] Besides, industries that were competitive enough and/or highly dependent on other CIS suppliers, e.g. Ukraine's production of aircraft engines for the Russian helicopters and airplanes, could survive without these administrative controls.

(Blanchard, 1997, Blanchard and Kremer, 1997), resulting in lower production and investment levels.[48]

It should be stressed, however, that not everything should be blamed on policies. The reason for such a sharp output decline was the fact that FSU economies were much more closely integrated with each other than the CEE countries, and therefore the consequences of disintegration were graver. The break-up of the Soviet Union disrupted the production links in vertically integrated industries, such as heavy machinery, electronics, equipment and consumer goods. The supporting science and research centres were also no longer funded by Russia and their activities came to a halt. High inter-republican specialisation, which was also made possible primarily by subsidisation from Moscow, was also disrupted, and the newly formed states had to adjust to the conditions of market economy and start developing their own, more natural, competitive advantages and patterns of trade.

As a result, between 1990 and 1993 intra-CIS trade contracted sharply – intra-CIS exports fell by more than 60 percent, while imports shrank even more, by 63 percent (Michalopolous and Tarr, 1994). Part of the decline reflects the overvaluation of the official exchange rate of ruble in 1990 and the preceding years. Besides, trade statistics between 1990 and 1996 was rather poor due to hyperinflation and changing standards. Illegal trade was also accounting for a certain unobserved share of cross-border flows. However the scale of the decline was too big to be explained by exchange rate differences or statistics only.

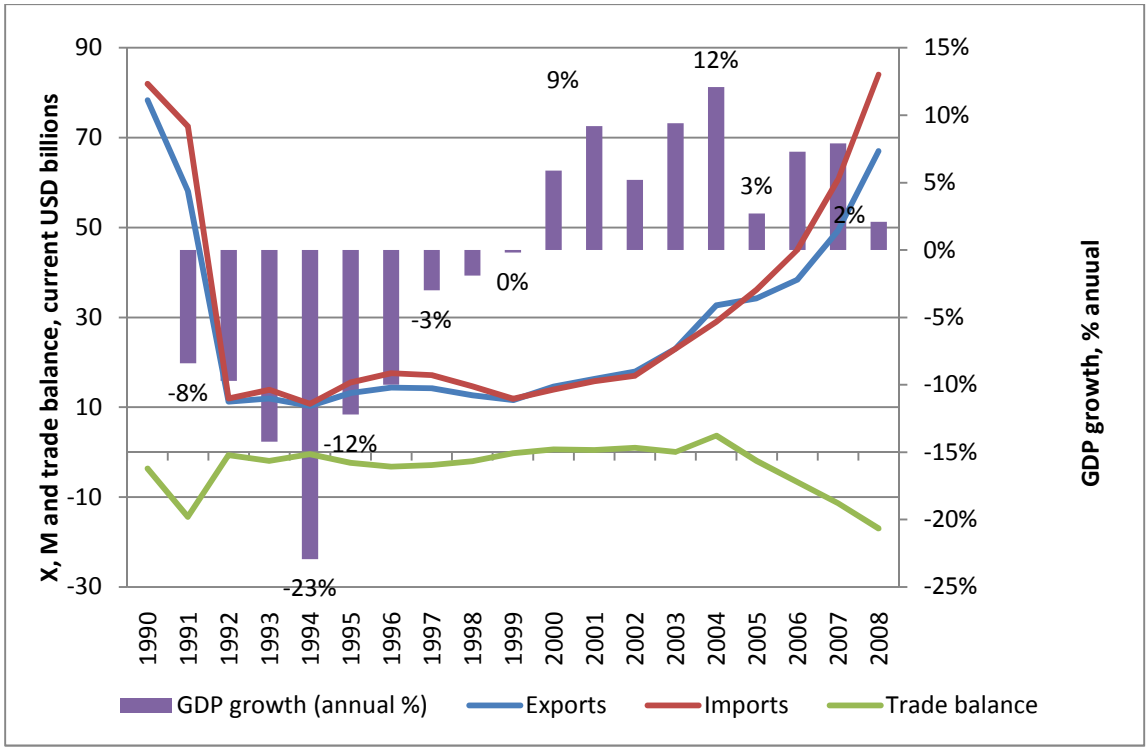
For Ukraine, all the 1990s were marked by trade and output contraction, reinforcing each other. As Figure 12 below shows, both exports and imports plummeted in 1991 and 1992. The data, including for 1990, is measured at official US dollar exchange rates, potentially overstating the volume of trade in 1990. The precise value was never established, however Michalopolous and Tarr (1996) provide alternative measures at implicit exchange rates. In that case the starting export value for 1990 would be lower by some 6 percent, at US$73.7bn, while 1993 exports would be about twice as high as in the figure (i.e. US$23.9bn rather than US$12bn). The estimated decline in exports would still amount to almost 70% between 1990

[48] Under planned economy, large state-owned enterprises benefited from a fixed price and guaranteed inputs from nominated suppliers. Once Soviet Union was dismantled and markets liberalised, both suppliers and buyers could choose the best partner, which should in principle make the production process more efficient. This, however, is dependent on timely reallocation (a move from state to private ownership) and restructuring (improvement of performance through more efficient allocation of labour and capital). In Ukraine both of these processes were delayed. The delayed privatisation, resulting in insider ownership, in fact leaving ownership in the hands of incumbent directors, was not conducive to restructuring. Therefore, in case of suppressed restructuring capabilities, disorganisation of previous industrial links had a disproportionately negative effect on output.

and 1993. The fall and the subsequent sluggish growth of exports up to 2000 were accompanied by a cumulative contraction of GDP by 83 percent between 1991 and 1999.

In fact, reservations need to be made about data quality not only in pre-independence years, but in all years since independence. As the example on p. 73 with machine-building exports will show, the mirror statistics of exports by Ukraine and imports by its partner countries often diverge significantly. Various tax evasion practices employed by businesses are the main reason, however they are not unique to Ukraine – such practices and data problems are common for most countries, although more so for countries with a high share of the shadow economy.

Figure 2. Evolution of Ukrainian trade and GDP growth, 1990-2008



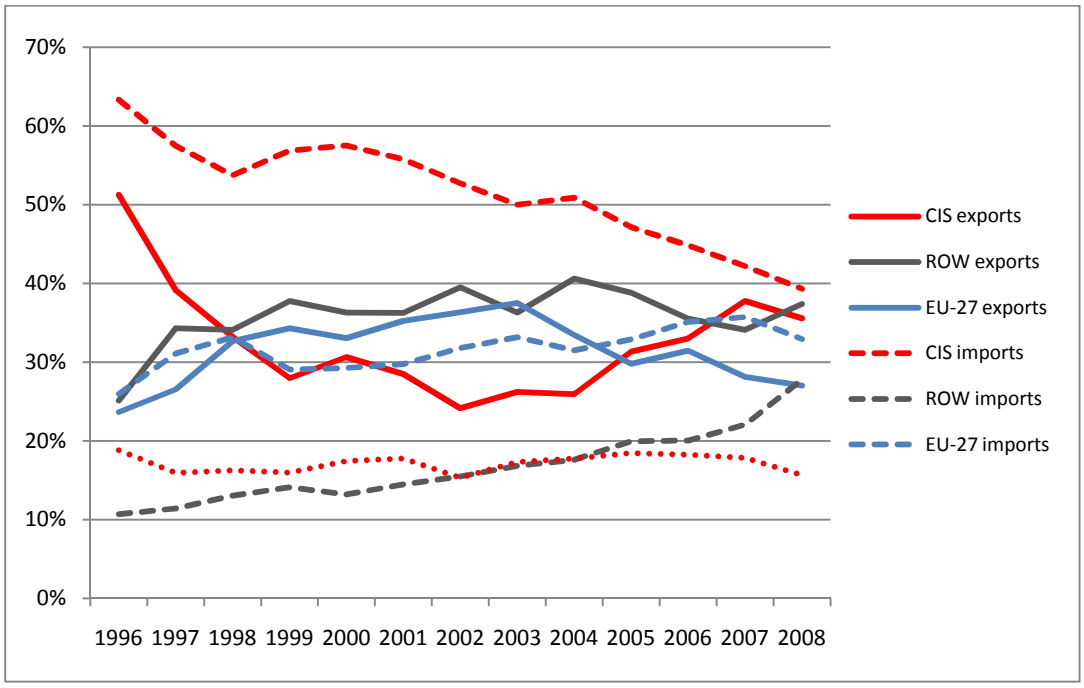
Source: Trade data for 1990-1993 Michalopolous and Tarr (1996), trade data and GDP growth for 1994-2008 World Bank WDI, April 2010 edition.

Table 1 shows the evolution of export and import trends and the geographic composition of trade, while Figure 3 illustrates the geographic distribution of exports graphically. The following three periods can be distinguished during the 1990s:

(1) **1990-1993** – a sharp trade contraction in the early years after the collapse of the USSR, associated with a sharply shrinking share of CIS in both exports and imports. The share of CIS in total exports fell by 43 percent between 1990 and 1993 (from 81 to 46 percent), while

that of the EU-15 increased by 14 percent, although still remaining limited at 6.4 percent, and that of the rest of the world more than doubled – increasing from 13 percent to 47 percent. Imports from CIS also declined, although to a lesser degree – by 18 percent, those from the EU-15 increased from 5 percent to 8 percent, and imports from the rest of the world went up to almost a third of total, compared to 16 percent in 1990.

Figure 3. Geographic distribution of Ukrainian imports and exports, % of total



Source: UN Comtrade Database, retrieved on 18 May 2010

As described above, there were three main reasons for a sharper fall of exports to the CIS than that to the rest of the world in this period – a sharp demand contraction in the former Soviet Union economies (associated with output contraction both in Ukraine and in the rest of CIS), the disorganisation of industrial linkages and severe payment distortions. A virtual lack of market reforms and a failure to deregulate trade and prices, in particular for intra-CIS trade, were exerting further pressure on Ukraine's business and hence export performance.

Table 1. Ukrainian exports and imports, US$m, and geographic composition, % of total, 1990-2008

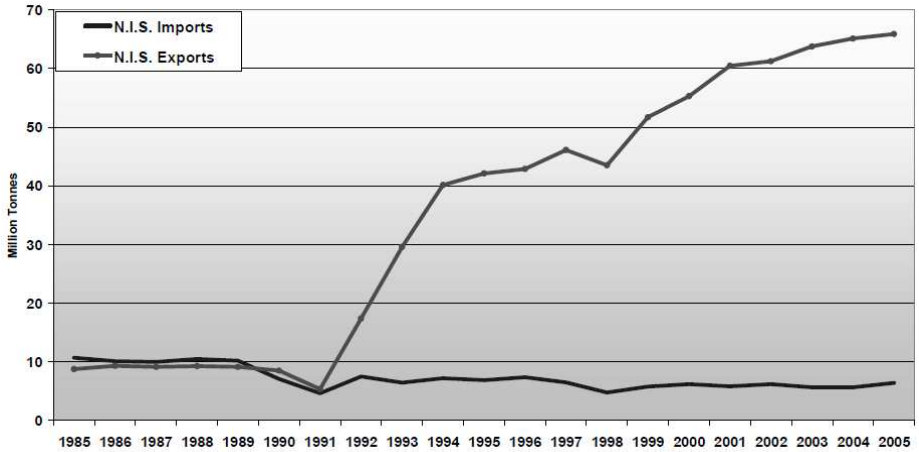
	1990	*1993*	*1996*	*1999*	*2004*	*2005*	*2008*	*1993/ 1990 % change*	*1996/ 1993 % change*	*2004/ 1996 % change*	*2005/ 2004 % change*	*2008/ 2005 % change*	*2008/ 1996 % change*
Exports	78,336	11,969	14,400	11,582	32,666	34,228	66,952	-85%	20%	127%	5%	96%	365%
Exports index, 1990=100	*100*	*15*	*18*	*15*	*42*	*44*	*85*						
Imports	81,991	13,885	17,603	11,846	28,997	36,122	85,448	-83%	27%	65%	25%	137%	385%
Imports index, 1990=100	*100*	*17*	*21*	*14*	*35*	*44*	*104*						
Trade balance	-3,655	-1,916	-3,203	-265	3,669	-1,894	-18,496						
Trade balance, % of GDP	*-4.5%*	*-2.9%*	*-7.2%*	*-0.8%*	*5.7%*	*-2.2%*	*-10.3%*						
Trade structure													
Exports	100%	100%	100%	100%	100%	100%	100%						
CIS	81.2%	46.3%	51.2%	28.0%	26.0%	31.3%	35.6%	-43%	11%	-49%	21%	13%	-30%
Russia	54.6%	34.8%	38.6%	20.6%	17.8%	21.9%	23.5%	-36%	11%	-54%	23%	7%	-39%
EU-27	..	..	23.6%	34.3%	33.5%	29.8%	27.0%	..	..	41%	-11%	-9%	14%
EU-15	5.6%	6.4%	11.8%	21.2%	18.0%	16.7%	14.4%	14%	85%	53%	-7%	-14%	22%
ROW	13.2%	47.3%	25.1%	37.8%	40.6%	38.8%	37.4%	258%	-47%	62%	-4%	-4%	49%
Imports	100%	100%	100%	100%	100%	100%	100%						
CIS	78.3%	64.1%	63.3%	56.8%	50.9%	47.1%	39.3%	-18%	-1%	-20%	-7%	-17%	-38%
Russia	58.0%	45.0%	49.9%	47.1%	40.2%	35.6%	22.7%	-22%	11%	-19%	-12%	-36%	-55%
EU-27	..	..	26.0%	29.1%	31.5%	32.9%	32.9%	..	..	21%	4%	0%	27%
EU-15	5.3%	8.2%	16.2%	20.2%	22.1%	22.4%	20.7%	55%	98%	37%	1%	-8%	28%
ROW	16.4%	27.7%	10.7%	14.1%	17.6%	20.0%	27.8%	69%	-61%	64%	13%	39%	160%

Source: World Bank (2004), UN Comtrade Database, retrieved on 20 May 2010.

The role of CIS in imports declined to a lesser extent due to the high energy dependency of Ukraine on CIS, and on Russia and Turkmenistan in particular. The dissolution of the USSR also seriously affected the steel market, both within the region and internationally. Production of steel in the former Soviet Union fell from its peak of 163 million tonnes in 1988 to 77 million in 1994, whereas consumption fell much sharper – from 125 million tonnes in 1988 to just over 25 million tonnes in 1994.[49] Therefore large extra capacity was created, boosting exports of steel from CIS to the rest of the world.

Figure 4 shows that exports of steel from CIS skyrocketed between 1991 and 1994, increasing from just over 6 to 40 million tonnes – a more than 6 times increase. Ukrainian production of iron and steel fell from just under 100 million tonnes in 1990 to 40 million tonnes in 1995, while consumption in 1995 was only 31 percent of that observed in 1990 (Ustenko, 2004). Since within CIS Ukraine is the second major exporter of steel after Russia (the rest of CIS account for no more than 10 percent of production and exports)[50], a lot of the increase in CIS exports came from Ukraine. Despite this, the lower level of global steel prices and even lower prices charged by heavily subsidised Ukrainian producers (bringing about numerous anti-dumping cases by the EU, US and Russia) meant that total Ukrainian exports were still in decline.

Figure 4. Steel trade of Newly Independent States 1985-2005, million tonnes



Source: OECD (2004), p.11

[49] http://www.worldsteel.org/?action=stats&type=steel&period=latest , retrieved on 2 June 2010.
[50] WorldSteel Association (2009) *Steel Statistical Yearbook 2008.* http://www.worldsteel.org/pictures/publicationfiles/SSY2008[1].pdf , retrieved on 2 June 2010.

(2) **1994-1996** – saw a positive trend with exports recovering by 20 percent and imports growing faster at 26 percent; exports to Russia regained some of its positions, at 39 percent, compared to 35 percent in 1993; however the reorientation to the EU was steadily taking place – the share of the EU-15 in total exports almost doubled in three years, increasing from 6.4 percent to 11.8 percent.

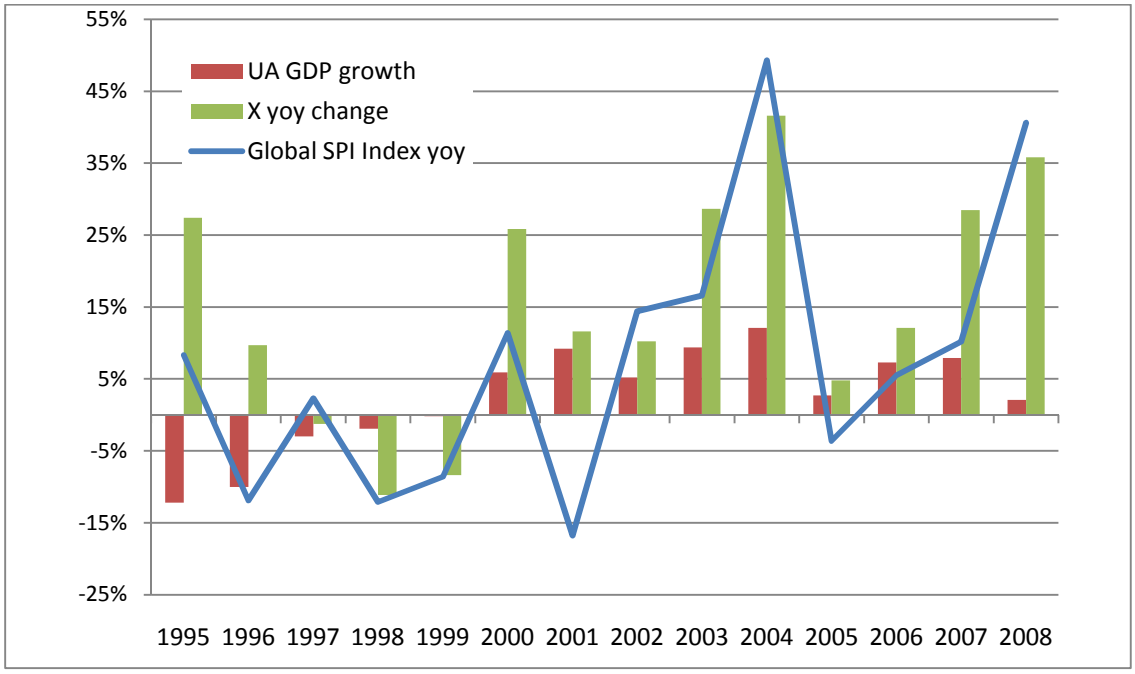
Domestically, this period was characterised by a meaningful break-through in the reform process, as the newly elected president – Leonid Kuchma – was using the momentum to implement the long overdue reforms. Trade and prices were substantially liberalised; exchange rate was finally unified and currency exchange liberalised.[51] Privatisation of most small and medium enterprises was also completed during this period, although privatisation of large enterprises was still lagging behind. Corporate and personal income taxes were simplified and rates lowered (Aslund, 2009: 74). In terms of external conditions, steel prices increased by 18 percent in 1994, however the growth moderated in 1995 and went into negative in 1996; therefore steel prices were not responsible for the positive export performance. Arguably, the reform package can be credited for the improved export performance.

(3) In **1996-1999** the recovery of foreign trade reversed again, with both imports and exports returning to the levels below those observed in 1993. Reorientation of trade, however, continued. The share of CIS and Russia declined significantly – to 28 percent and 21 percent respectively, while that of the EU-15 doubled, reaching 21.2 percent. A combination of factors explains the fall of exports. Firstly, global steel prices were in decline, as seen from Figure 5 above. Secondly, in 1998 Ukraine was hit by knock-on effects of the Russian financial crisis and by the debt crisis of its own. Demand in Russia contracted, producing a chain effect on output and demand in other CIS economies – major destination markets for Ukrainian produce. Thirdly, an important policy stance reversal took place. By 1996 business elites strengthened their influence on policy-making and formed a political centre, advocating policies similar to those of the Communist Party, but for pragmatic rather than ideological reasons – higher taxes, which would affect smaller businesses as large businesses often enjoyed discretionary taxation privileges, subsidies and higher regulation, which gave them

[51] Previously, a separate exchange rate existed for the energy trade, which subsidised imports of natural gas from Russia, effectively boosting imports and increasing Ukraine's indebtedness, whereas revenues from subsidisation went to individual gas traders controlling this trade. (Aslund 2009, p.74)

more control over situation, and would also stifle competition as smaller businesses would have less capacity to overcome the barriers of regulation – forming what Aslund calls a "flourishing ... rent-seeking economy combined with repressed productive economy" (Aslund 2009: 121). These numerous pressures, both domestic and external, could not have gone unnoticed for Ukraine's economy and might explain a lot of the negative performance of exports in this period.

Figure 5. Relationship between the evolution of Ukrainian exports, GDP growth and global steel prices



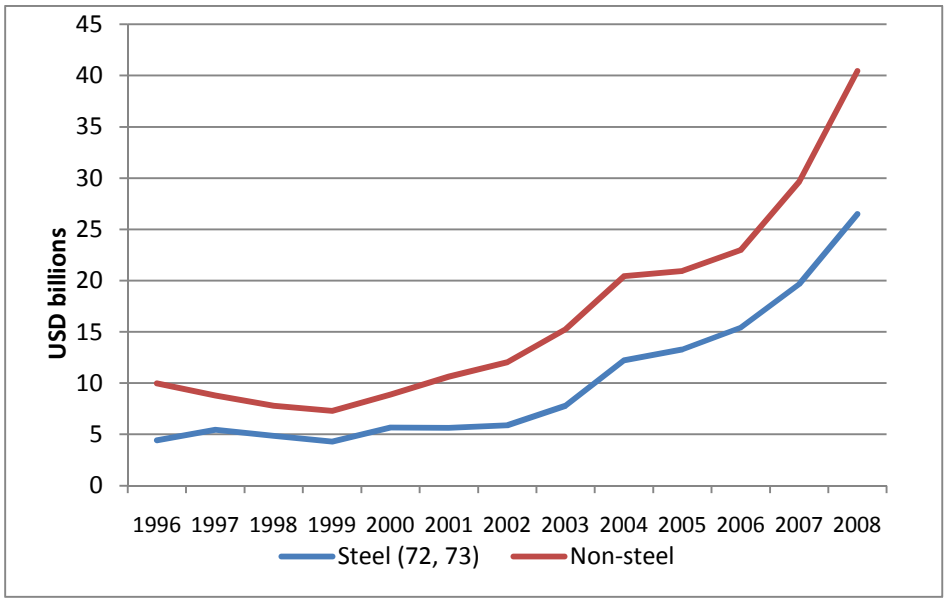
Source: GDP – World Bank World Development Indicators, Exports – UN Comtrade Database, Steel Price Index – www.crugroup.com , retrieved June 2010.

3.2.2. 2000s - Delayed reforms and recovery of exports and growth

As seen from Figure 2, 2000 marks the beginning of a steady recovery of Ukrainian exports and GDP. Although steel prices were on the rise throughout 2000s, they were not the main driver of recovery in 2000-2001. In 2000 there was an 11 percent increase in global steel prices, but in 2001 they fell by almost 17 percent, however exports continued to grow. Figure 6 shows that between 2000 and 2002 exports of steel and articles of steel (HS 2-digit numbers 72 and 73 respectively) were in fact flat, while non-steel exports were on the rise. 2000 was a

peak of business cycle in the western world, before the dot-com bubble burst in March 2000[52], however, despite by then a substantial exposure to the EU-27, both Ukrainian exports and GDP continued to register robust growth throughout the crisis period. Currency devaluation during 1998 debt crisis was another important factor. Although initially it triggered negative balance sheet effects on corporate sector's foreign exchange-denominated debt, in the aftermath of the crisis this boosted the country's external competitiveness.[53] A new phase in domestic reforms, therefore, seems to have played a bigger role in Ukraine's robust export performance.

Figure 6. Evolution of steel and non-steel exports, 1996-2008, US$ billion



Source: UN Comtrade Online Database

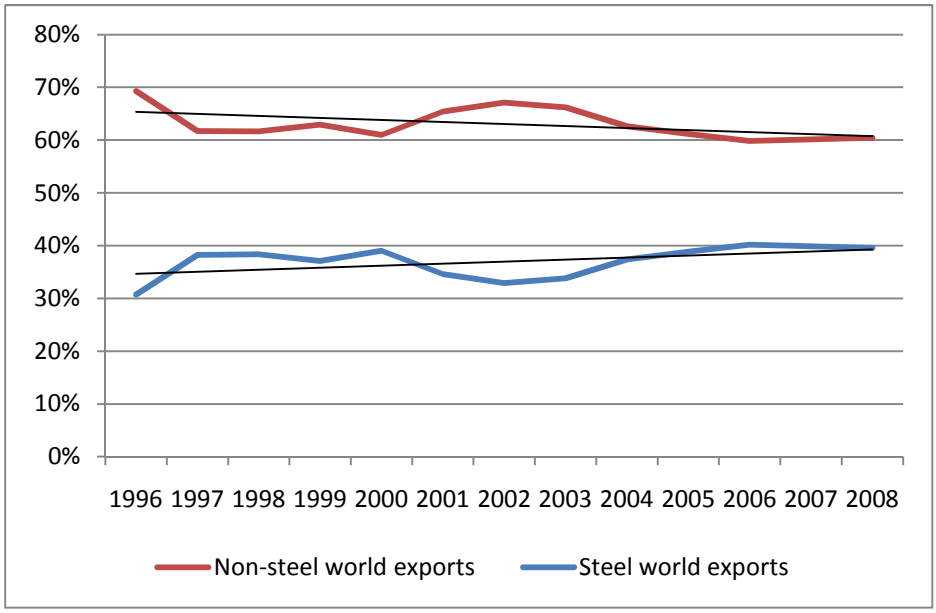
By the end of 1999 the danger of default convinced business elites of the need of reform, and a centre-right majority was formed to allow Kuchma appoint Viktor Yushchenko a prime minister. Yushchenko enacted a 100 day programme, which represented an overhaul of the economic order. Important missing laws were passed[54] and operation of small businesses deregulated. Barter was abolished and energy trade cleaned up. Budget deficit was reduced from 5.4 to 1.1 percent of GDP by cutting down subsidies, removing loopholes in taxation and eliminating about 270 decrees granting social transfers to the well-connected enterprises.

[52] The effects of equity or financial crises on real economy in partner countries are usually delayed due to contracts being concluded in advance for several months or quarters.
[53] See a more detailed discussion of exchange rate effects in CHAPTER 5.
[54] A tax code, a land code, a housing code, a law on banking, and a new criminal code and law on public procurement.

Agricultural reform formally disbanded state and collective farms. The next wave of large-scale privatisation was undertaken, and private sector started to adjust and restructure (Aslund, 2009: 141).

As of 2002 global steel prices have been experiencing a boom, largely due to the steadily growing demand in China (see Figure 5). Interestingly, however, between 2001 and 2004 the share of steel in total Ukrainian exports was below its all-time average, as seen from Figure 7 below. This was due to an increase in exports of natural gas and petroleum products.[55] Due to the orientation of gas and petroleum products to the Western markets the share of CIS in total Ukrainian exports was at its lowest in these years. A lot of trade in natural gas, however, was discontinued in 2005, as it was allegedly based on non-transparent schemes of several gas traders. The case was made that Ukraine, as a net importer of gas, could not sustainably export such large volumes of gas. This suggests that what may have seemed as a structural reorientation of exports towards the EU, in fact was a temporary trend in commodity composition, which soon reversed.

Figure 7. Share of steel and non-steel exports in total Ukraine's exports, 1996-2008, %



Source: UN Comtrade Online Database

A 26 percent growth of exports in 2000 was accompanied by a 6 percent recovery – the first positive growth record since the start of transition. Although endogeneity between exports and economic growth is always an issue, there is evidence suggesting that Ukrainian recovery

[55] A more detailed discussion of commodity composition follows below.

was consistently export driven. World Bank (2004) notes that Ukraine's accelerated growth in 1999-2003 was largely export driven and about 40 percent of GDP growth can be attributed to the increase in net exports (World Bank, 2004: 14). Likewise, Dritsakis and Gialetaki (2005) and Dawson and Hubbard (2004) show that exports have a significant and positive effect on GDP growth in Ukraine and in other Central and East European economies.

3.2.3. Orange Revolution and its aftermath

December 2004 Orange Revolution brought to power a new pro-liberal government with Viktor Yushchenko as a president and Yulia Timoshenko as prime minister. Soon, however, these leaders became fierce rivals and an era of political instability ensued. Apart from contributing to political instability, Yulia Timoshenko enacted a number of economic measures, which sent strong negative signals to the markets. Threats to re-privatise up to 3,000 enterprises and opening of criminal cases against 2,000 people; regulation of gas, oil and meat prices, even with attempts to introduce planning of production, combined with increased tax burden needed to meet populist policies could not have left business environment unaffected. Reforms in the customs and tax administration, however, were a step in the positive direction. Lowering of import tariffs across a number of sectors was a long-awaited measure in the process of WTO accession. Nevertheless, economic growth fell from 12 percent in 2004 to minus 1.6 percent in August 2005 year-on-year (Aslund, 2009: 209).

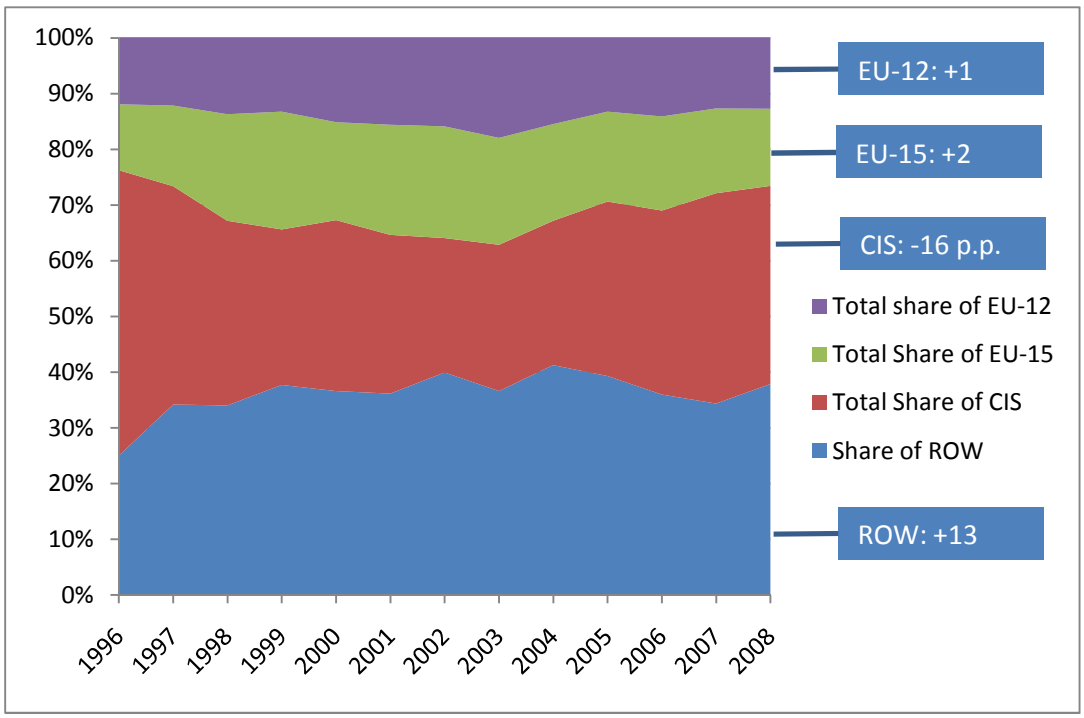
On the backdrop of a political instability and inconsistent economic policy, coupled with a deceleration of growth of global steel prices (see Figure 5), in 2005 exports from Ukraine plunged. Overall exports grew only by 5 percent. Moreover, at this point exports to the EU-27 started to fall continuously. As Table 1 shows, in 2005 the share of EU-27 in total exports fell by 11 percent and by further 9 percent between 2005 and 2008. At the same time the falling trend in trade with the CIS has reversed and between 2004 and 2008 its share recovered from 26 to 35.6 percent of total world exports of Ukraine. This change represents a key moment in the path of Ukrainian integration into the world economy, and *is essentially a cornerstone fact in this research*. 2005 marked a structural change in both geographic and commodity composition of Ukrainian exports. In order to understand the reasons for this shift one needs to look closer at the commodity composition of exports.

However, before looking at the commodity composition, it is important to highlight that although this thesis is mainly concerned with the East *vs.* West dimension, in fact a not less

important export reorientation took place towards the rest of the world (ROW), as seen from Figure 8. Between 1996 and 2008 (the period when reliable statistics became available) the share of the CIS declined by 16 p.p., while that of the EU-15 and EU-12 increased only by 2 p.p. and 1 p.p. respectively. In contrast, the share of the ROW increased by 13 p.p. If compared to the starting point in transition, 1990, the change in the role of the CIS is even more dramatic, down by 46 p.p. (from 81 percent to 36 percent), while the change in the role of the EU-15 was somewhat more substantial, by 8.8 p.p. (from 5.6 percent to 14.4 percent).[56] While in absolute terms exports to the EU-27 increased by a factor of five between 1996 and 2008, exports to the Middle East and North Africa (MENA) experienced an almost 12 times increase (compared to the change in world exports of 4.6 times). A similar change occurred with 'other Europe', by 11.9 times. At the same time, in 2008 the share of 'other Europe' remained low, at 3 percent, while the top ROW countries, apart from the USA, were Turkey, Egypt, Syria, Jordan, Saudi Arabia, UAE, Iran (together accounting for 16.3 percent of total Ukrainian exports) – i.e. mainly MENA countries, as well as India and South Korea (both accounting for 2.4 percent). I.e. if the focus of the analysis were purely a reorientation of exports, *one could arguably speak about the reorientation of Ukrainian exports from the FSU to the Middle East rather than the EU*. However, since the motivation of this analysis is broader and is based on deeper political and economic integration processes between Ukraine on the one hand and CIS / EU on the other, these two regions remain the main focus of the thesis.

[56] No data is available for the share of EU-12 in 1990, which made part of the ROW in 1990, therefore no change is reported for the ROW between 1990 and 2008.

Figure 8. Geographic distribution of Ukrainian exports by regions, % of total exports



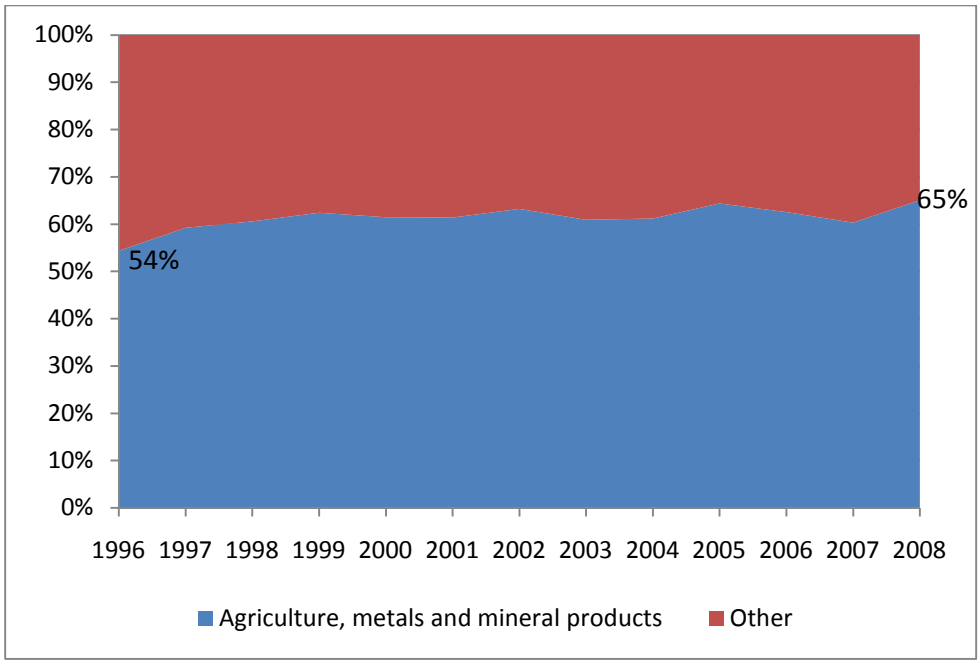
Source: UN Comtrade Online Database, retrieved on 18 May 2010

3.3. Commodity composition of trade

3.3.1. General commodity composition

After the collapse of the USSR Ukraine emerged as a resource-abundant economy, which fact had both positive and negative implications. Positive because in conditions of collapsing competitiveness of the industrial production, with no major reconstruction required, the country maintained competitiveness in at least some sectors and avoided huge current account deficits; negative because it weakened the incentives for major reorientation of production towards more value-added products. Primary and resource-intensive products, namely metallurgy, mineral products and agriculture, have consistently accounted for over half of Ukraine's exports. As Figure 9 below shows, the share of these sectors has in fact increased since 1996, reaching almost two thirds of total exports, primarily due to increasing global steel prices. Dependence on global steel prices is remarkable – the correlation between global steel prices and total Ukrainian exports for the period 1996-2008 is 0.8 (see Annex 4). This leaves the economy increasingly more vulnerable to external price shocks.

Figure 9. Resource-intensive versus other sectors in Ukrainian exports, 1996-2008, % of total



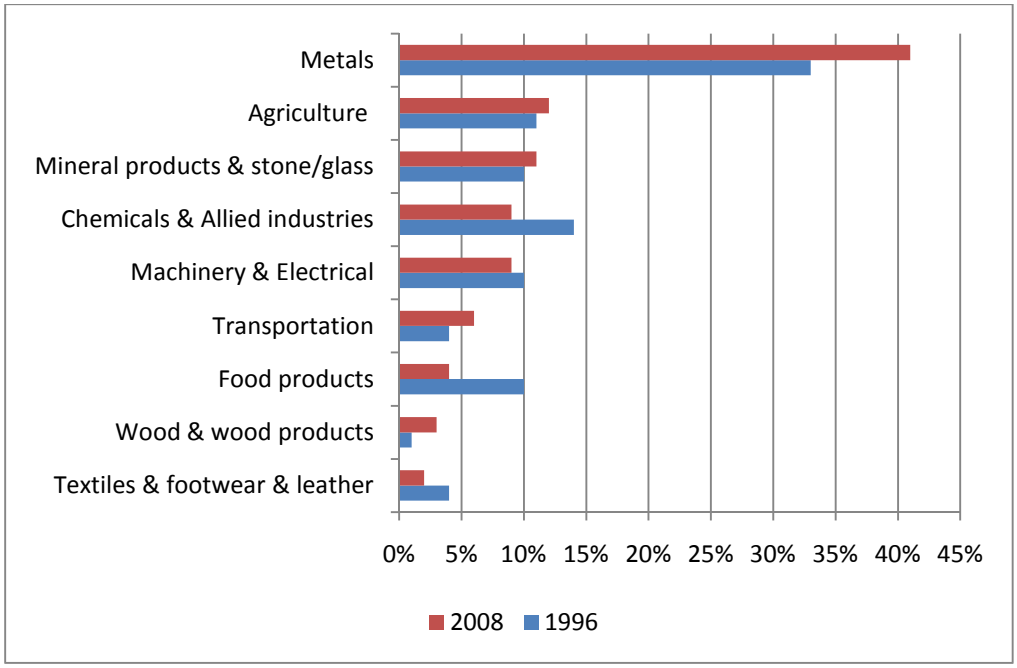
Source: UN Comtrade Online Database, retrieved on 18th of May 2010.

Figure 10 below further breaks down the above picture. The point for commodity reorientation can hardly be made – no major qualitative change took place between 1996 and 2008 – and exports are highly and consistently concentrated in resource-intensive and primary products. Metals demonstrated the most robust growth, pushing downwards the share of other products, but other resource-intensive products – namely agriculture and mineral products – also strengthened their positions, while the share of more processed products – chemicals, machinery and electrical products and textiles – shrank noticeably. It is important to note, however, that increase in the share of metals in total exports is mainly driven by price effects. Export prices for steel more than doubled between 2001 and 2006 in US dollar terms, while in volume terms exports of iron and steel grew modestly by 2% on average between 2003 and 2006 (OECD, 2007, p. 107).

Looking at a more detailed picture, Table 2 shows that metals (mostly iron and steel) consistently comprise around 30-40 percent of merchandise exports, with a strong upward trend since 1996. Mineral products, mostly represented by petroleum refinery products and until 2005 natural gas, are the next most important category of exports, accounting for 12 percent of total exports on average during 1996-2008. Mineral products experienced an

above-average growth of 15.1 percent p.a. between 1996 and 2008, mainly due to the growing oil and petroleum prices. Chemicals, machinery and electric products, and agriculture account for about a tenth of total exports each. The most important chemical products are inorganic chemicals (ammonia, aluminium oxide and others) and fertilizers.

Figure 10. Commodity composition of exports, % of total, based on current prices, 1996 and 2005



Source: UN Comtrade Database, retrieved on 10th of May 2010.

Although Ukraine is a major exporter of fertilizers and inorganic chemicals, accounting for 2.8 percent and 1.4 percent of world exports respectively, it has recently been losing its positions in these markets. With fertilizers Ukraine moved from 7th place in the world in 2004 to the 9th in 2008, while with inorganic chemicals – from 16th to 19th, respectively (Intracen Trade Competitiveness Database, 2010).

Machinery and Electric products are composed of two product groups: HS 84 "Nuclear reactors, boilers, machinery", where top export products are turbo-jets, turbo-propellers and other gas turbines; air and other pumps, and machinery parts; and HS 85 "Electrical and electronic equipment", where top performers have been: electric transformers, insulated wire and cable, electric motors and generators, and more recently television cameras and radio transmission apparatus. Machinery and electrical products, although having lost 1 p.p. of their

share, given the growing pressure from metallurgy and mineral products, have on the whole performed rather well.

Table 2. Commodity composition of Ukrainian exports, 1996-2008, US$m and %

	1996	*2000*	*2004*	*2008*	*% change 2008/1996*	*1996-2008 CAGR*[57]
Metals	4,763	6,468	13,048	27,594	*479*	*15.77*
Agriculture	1,647	974	2,328	8,306	*404*	*14.43*
Mineral products & stone/glass	1,417	1,517	4,622	7,648	*440*	*15.08*
Machinery & Electrical	1,407	1,358	3,032	6,341	*351*	*13.37*
Chemicals & Allied industries	2,077	1,788	3,221	6,043	*191*	*9.31*
Transportation	635	438	2,033	4,321	*580*	*17.33*
Food products	1,403	403	1,141	2,518	*80*	*4.99*
Wood & wood products	194	418	909	1,675	*764*	*19.68*
Textiles & footwear& leath	574	724	1,212	1,522	*165*	*8.47*
Other	285	484	1,121	985	*246*	*10.89*
Total	**14,400**	**14,573**	**32,666**	**66,952**	***365***	***13.66***
Metals	33%	44%	40%	41%	*25%*	
Agriculture	11%	7%	7%	12%	*8%*	
Mineral products & stone/glass	10%	10%	14%	11%	*16%*	
Machinery & Electrical	10%	9%	9%	9%	*-3%*	
Chemicals & Allied industries	14%	12%	10%	9%	*-37%*	
Transportation	4%	3%	6%	6%	*46%*	
Food products	10%	3%	3%	4%	*-61%*	
Wood & wood products	1%	3%	3%	3%	*86%*	
Textiles & footwear& leather	4%	5%	4%	2%	*-43%*	
Other	2%	3%	3%	1%	*-26%*	

Source: UN Comtrade Online Database.

While metals have clearly been the star performer and the dominant export group, having their share grow by 15.8 percent between 1996 and 2008, (which is above the average per annum growth of 13.7 percent), some other sectors – transportation and wood-related products – have experienced an even more dynamic growth, by 17.3 percent and 19.7 percent

[57] Compound Annual Growth Rate (CAGR) reflects average growth per annum.

respectively. Exports of transportation products are mainly represented by automobile[58] and railway vehicles (mainly selling to Russia and some other CIS economies), while those of wood-related products – by wallpaper and other paper products.[59] Transportation and wood products were also the most dynamically growing sectors as a share of total Ukrainian exports, their share growing by 46 percent and 86 percent respectively.

Looking at the relative competitiveness of Ukrainian products in global markets in 2008, Figure 11 shows that railway vehicles and equipment have the highest world market share, with over 7 percent, followed by iron and steel (4.5 percent share), cereals (3.6 percent, mainly represented by wheat and barley), fertilizers (2.8 percent) and oil seeds (2.2 percent, mainly sunflower seeds). Among these, fertilizers are the most dynamic industry in global trade, and Ukrainian exporters face a significant pressure in maintaining the existing world market share.

Figure 12, showing the dynamic picture, shows that indeed the share of fertilizers in world trade has declined by almost 10 percent since 2001. On the other hand, Vehicles are an important emerging category of exports, enjoying an almost 40 percent growth in the world market share since 2001 (although the total world market share still remains very low, at 0.10 percent). Oil seed, Cereals, Paper and paperboard, Animal and vegetable fats and oils, Electrical and electronic equipment, as well as salt, sulphur, earth and stone have all benefited from a 10 percent to 50 percent growth in the world market share. Transportation and certain machinery and electrical products therefore seem to represent an important emerging cluster of a dynamic competitive advantage for Ukraine.

[58] Automobile industry has been on the rise since 2003-2004, supported by joint ventures and foreign investment. Top export products for the period 2001-2008 have been cars (Zaporizhye Automobile Plant ZAZ, assembling Daewoo, Chevrolet and Opel cars in partnership with General Motors, pick-up trucks by "Bogdan Corporation"), diesel powered trucks, mainly produced by Kremenchug Automobile Plant KrAZ, traktors (mainly Kharkiv Traktor Plant) and buses (mainly small buses produced by "Bogdan Corporation", in partnership with Japanese Isuzu).

[59] Ukraine is a fifth top exporter of railway equipment in the world, accounting for 7.2% of world exports of HS category 86 "Railway, tramway locomotives, rolling stock, equipment". (UN Comtrade Database, retrieved on 9th of July 2010). Main export lines are train locomotives, engines and wagons.

Figure 11. Competitiveness of Ukrainian export products, 2008

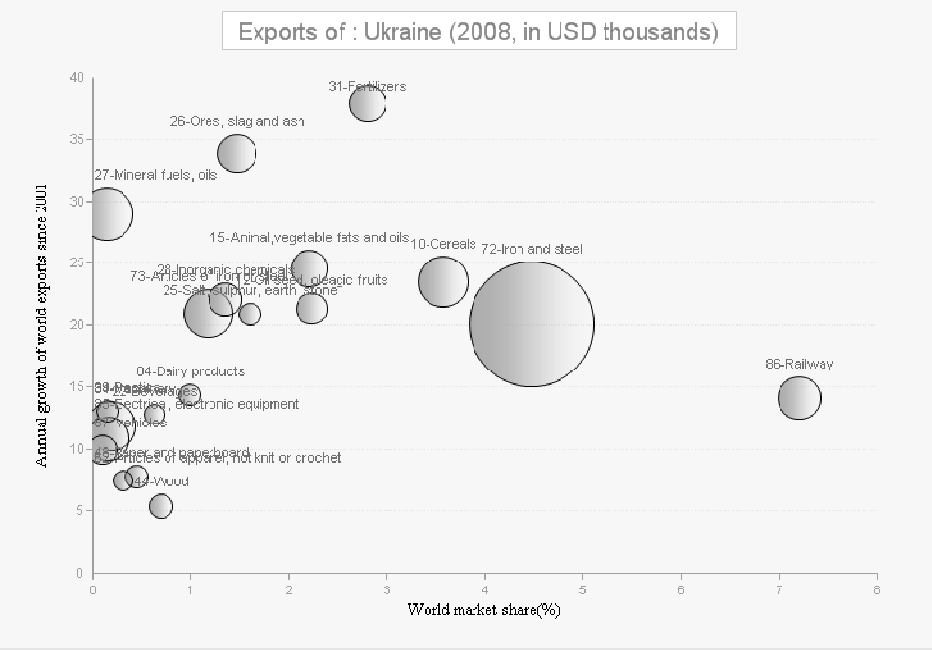
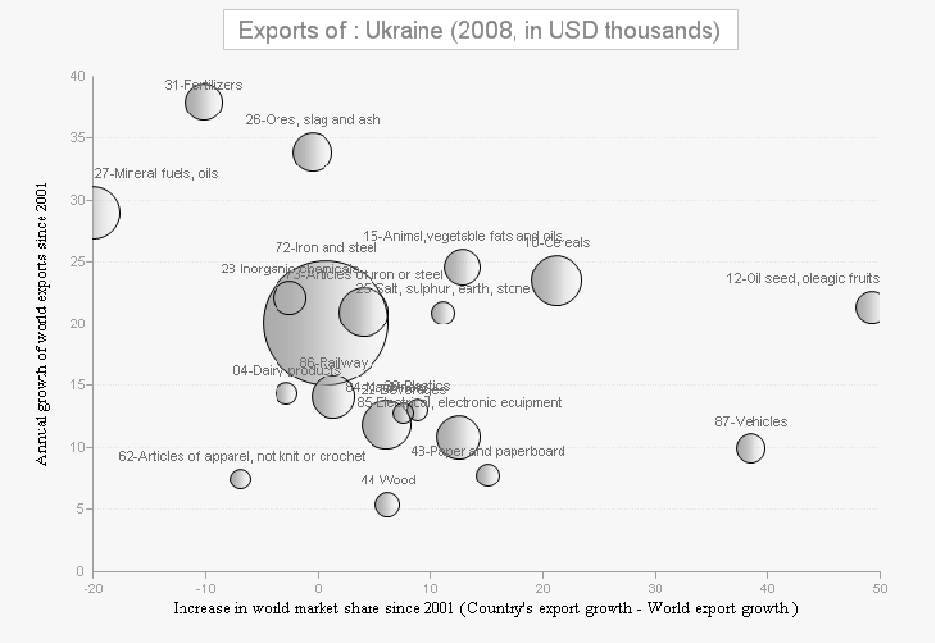


Figure 12. Dynamic competitiveness of Ukrainian export products[60]



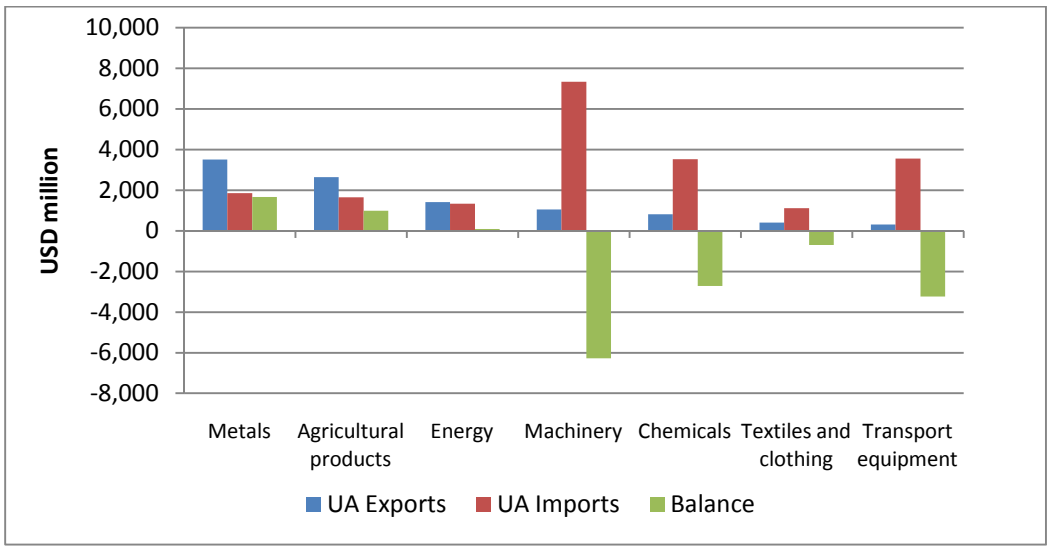
Source: Intracen Trade Competitiveness Map, 2010 http://www.intracen.org/appli1/TradeCom/TP_EP_CI.aspx?RP=804&YR=2008, retrieved on 10 July 2010

[60] Note to both figures: Relative size, increase in world market share against growth of world market exports of respective products. The area of the circles corresponds to the relative size of exports of respective industries

3.3.2. Commodity composition by destination markets

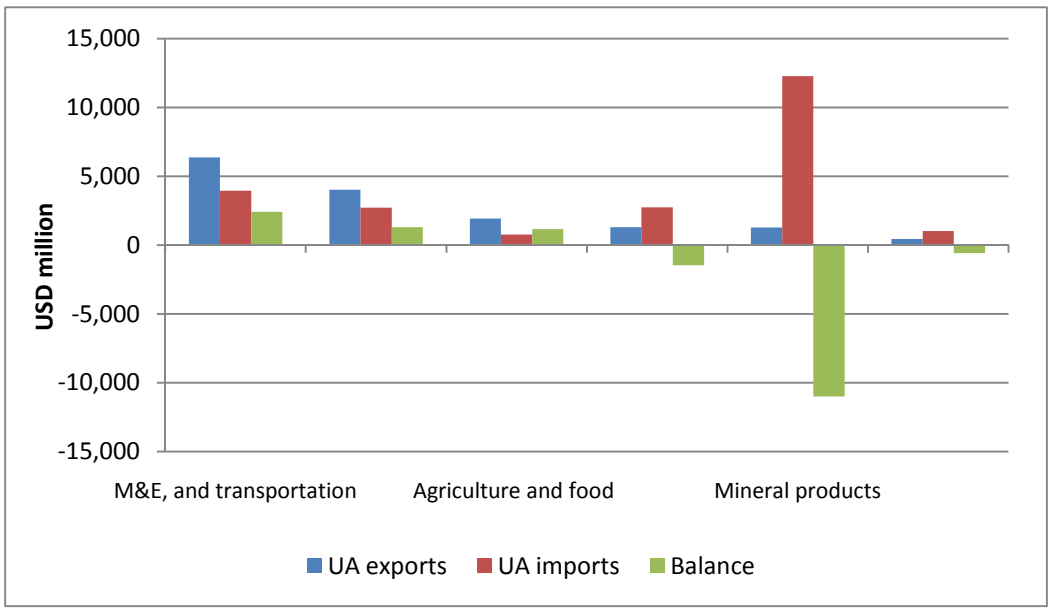
Turning to commodity composition by destination markets, Figure 13 and Figure 14 illustrate the composition of Ukrainian trade with the EU and Russia in 2008. The asymmetry is easily observed. Trade with Russia is reminiscent of intra-industry trade, with similar goods being exchanged between the two countries. Moreover, Ukraine is running a positive balance in most product categories, including the highest positive balance in technology-intensive industries of machinery and equipment, with a negative balance only in mineral products (due to high oil and gas dependency on Russia) and chemicals. Trade with the EU, on the contrary, is more representative of a North-South pattern of trade, whereby Western economies export high-value added products to an emerging economy and import raw materials and products with a low degree of processing. Ukraine has a positive balance with the EU only in iron and steel, energy and low value-added agricultural products. In all other lines there is a huge negative balance, especially in technology-intensive goods – machinery and transport equipment – reflecting the fact that EU is a major source of technological upgrading in Ukraine. Indeed, as Annex 3 shows, intra-industry trade (IIT) with the CIS has been about twice as high as with the rest of the world in 2000 – 60 percent versus 28.7 percent, the former being quite high by international standards and approaching the level of OECD countries. Moreover, no significant change has been observed since 1996. In trade with CIS the level of IIT increased by 2 p.p., while with the rest of the world only by 1 p.p. Among all CIS members, Ukraine has the highest level of intra-CIS IIT (Freinkman et al., 2004).

Figure 13. Commodity composition of Ukrainian trade with the EU, 2008



Source: European Commission (2010)

Figure 14. Commodity composition of Ukrainian trade with Russia, 2008

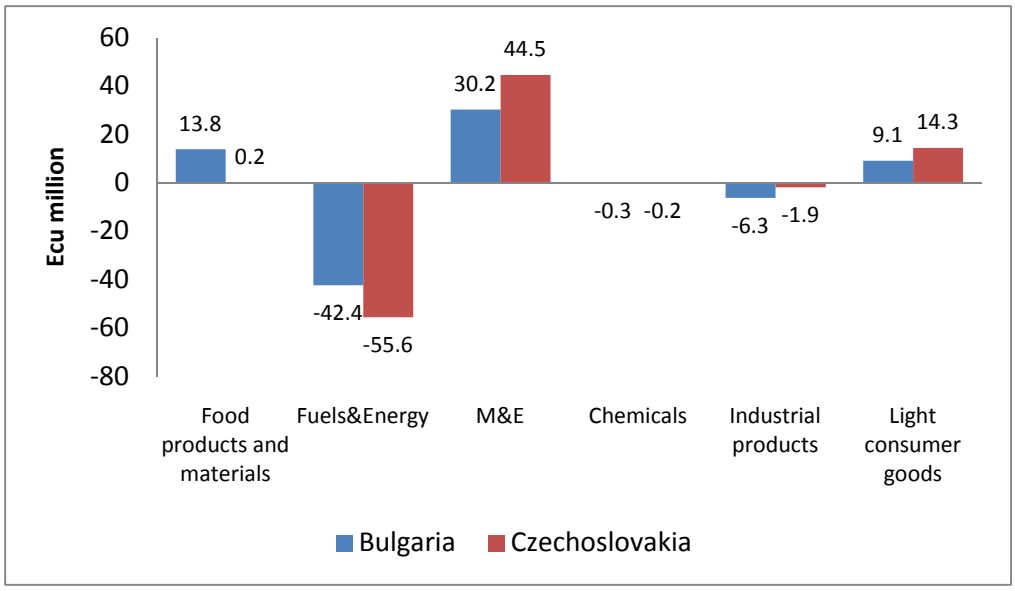


Source: Tsvetkov (2009)

A useful insight can be gained from making a similar comparison with the two new EU members – Bulgaria and Czech Republic (see Figure 15 below). In 1988 these two countries had very similar trade relations with the EU – both countries were net importers of machinery and equipment, and net exporters of fuels and energy. In 2002 the picture was very different. Bulgaria remained a net importer (with big trade deficit) of machinery and transport equipment, whereas Czech Republic's trade has become more of an intra-industry type, with high inward and outward trade flows in technological goods. Therefore, a positive evolution of the commodity composition in trade with the EU, and hence closer economic integration, is not the only logical consequence of political integration and is not a self-reinforcing process – even having a free trade agreement with the EU and deeper cooperation in many other areas may not be sufficient to promptly boost competitiveness of some of the EU members. The chapter will look at a more detailed picture of Ukrainian exports to the EU below, to reveal any emerging signs of improving competitiveness.

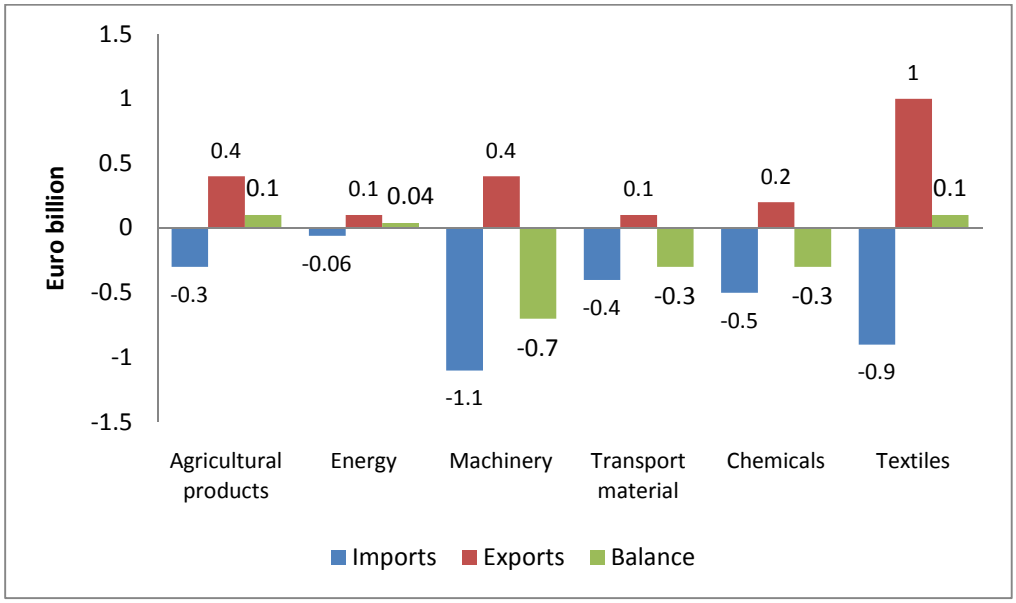
Figure 15. Evolution of trade balances between EU and Bulgaria and Czech Republic (ex-Czechoslovakia)

a) Trade balances of the EU in trade with Bulgaria and Czechoslovakia, 1988



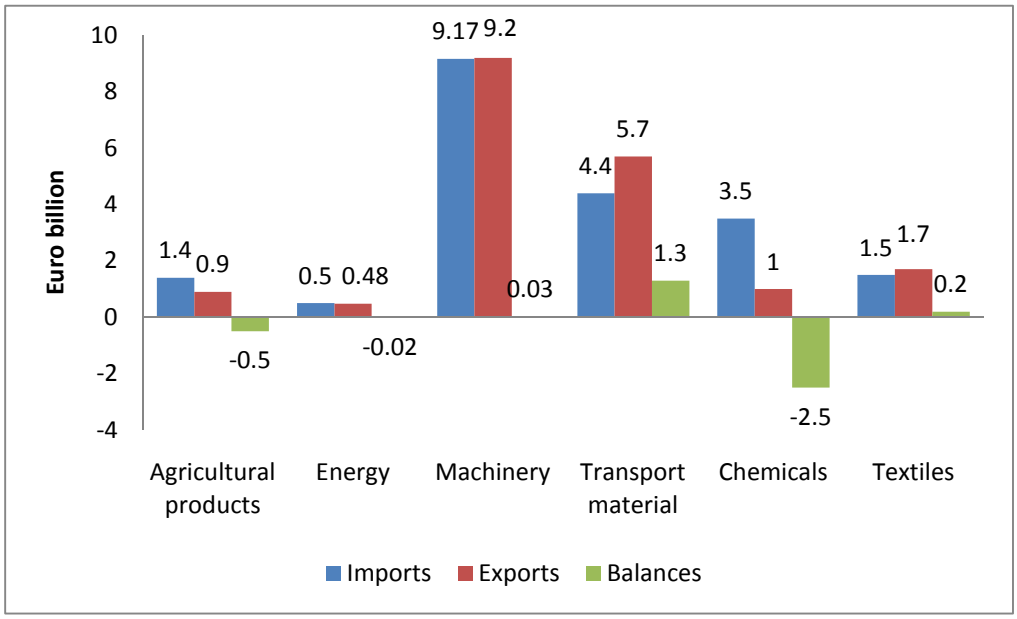
Source: Smith (2000), Chapter 4.

b) Merchandise trade of Bulgaria with the EU, 2002



Source: http://trade-info.cec.eu.int, retrieved on 8 December 2003

c) Merchandise trade of the Czech Republic with the EU, 2002



Source: http://trade-info.cec.eu.int, retrieved on 8 December 2003

3.3.2.1. Top markets and products

Table 3 below further describes the *commodity and geographic distribution by top destination markets and top export products*. In 2005 there was an observable geographic reorientation of exports – four of the top 5 importers were EU customs union members, which was not the case in 1999, Belarus and China both not featuring among the top five. Russia remains Ukraine's by far most important export partner throughout the years, although its share was shrinking sharply between 1996 and 2004 – falling from 39 to 18 percent. Since 2005, however, as was discussed above, reorientation has somewhat reversed – the share of Russia and other CIS economies has grown substantially, Russia recovering to 24 percent, and Belarus re-emerging as one of the top five trade partners again in 2008, with a share of 3 percent of Ukraine's total exports. Germany is no longer in top five, and only three of the top five are members of the EU customs union, although their share is still rather high, at 15 percent, compared to only 6 percent in 1996. In terms of geographic distribution of exports trade structure has become less concentrated, with top 5 partners now accounting for 41 percent, compared to 54 percent in 1996. However an alternative calculation shows that product structure, on the contrary, became more concentrated. If in 1996 the top ten products (at 2-digit level according to HS 1996 classification) accounted for 64 percent of total exports,

in 2008 this share was 74 percent, which was mainly due to a 10 p.p. increase in the share of metals.[61]

In terms of top commodities, little restructuring seems to have occurred, apart from trade with Russia. Now all top four commodities exported to Russia, after iron and steel, are high- to medium-technology intensive products. In trade with Belarus electronic equipment emerged as one of the top five. With the rest of the countries no visible qualitative change in the commodity structure has occurred. Turkey became a member of the EU Customs Union in 1996, which might explain the disappearance of live animals from top five products, but other than that export structure has undergone little change.

Table 3. Top five export partners and top five export lines

1996		2000		2005		2008	
1. Russia 39%		**1. Russia 24%**		**1. Russia 22%**		**1. Russia 24%**	
73	Articles of iron and steel	72	Iron and steel	72	Iron and steel	72	Iron and steel
72	Iron and steel	84	Nucl. reactors, boilers, machinery	84	Nucl. reactors, boilers, machinery	86	Railway locomotives and equipment
84	Nucl. reactors, boilers, machinery	73	Articles of iron and steel	73	Articles of iron and steel	84	Nuclear reactors, boilers, machinery
17	Sugars	28	Inorganic chemicals	86	Railway locomotives	73	Articles of iron and steel
85	Electrical and electronic equipmnt	02	Meat and edible meat offal	04	Dairy products, eggs, honey	85	Electrical / electronic equipment
2. China 5%		**2. Turkey 6%**		**2. Turkey 6%**		**2. Turkey 7%**	
72	Iron and steel	72	Iron and steel	72	Iron and steel	72	Iron and steel
31	Fertilisers	31	Fertilisers	27	Mineral fuels, oils	31	Fertilizers
84	Nucl. reactors, boilers, machinery	28	Inorganic chemicals	31	Fertilisers	27	Mineral fuels, oils
85	Electrical and electronic equipmnt	44	Wood and articles of wood	28	Inorganic chemicals,	15	Animal, vegetable fats and oils
73	Articles of iron and steel	27	Mineral fuels, oils	44	Wood and articles of wood	28	Inorganic chemicals
3. Belarus 5%		**3. USA 5%**		**3. Italy 6%**		**3. Italy 4%**	
72	Iron and steel	72	Iron and steel	72	Iron and steel	72	Iron and steel
10	Cereals	76	Aluminium	27	Mineral fuels, oils	41	Raw hides and skins
84	Nucl. reactors, boilers, machinery	88	Aircraft, spacecraft and parts	41	Raw hides and skins	27	Mineral fuels and oils
73	Articles of iron and	62	Articles of apparel	73	Articles of iron and	10	Cereals

[61] Author's calculations based on data retrieved from UN Comtrade Online Database.

	steel				steel		
40	Rubber and articles thereof	31	Fertilisers	44	Wood and articles of wood	15	Animal vegetable fats
4. Turkey 3%		**4. Germany 5%**		**4. Germany 4%**		**4. Poland 3%**	
72	Iron and steel	01	Live animals	62	Articles of apparel	72	Iron and steel
28	Inorganic chemicals, precious metal comp.	62	Articles of apparel	27	Mineral fuels, oils	26	Ores, slag and ash
15	Animal vegetable oils and fats	74	Copper and articles	72	Iron and steel	44	Wood and articles of wood
01	Live animals	72	Iron and steel	73	Articles of iron and steel	27	Mineral fuels and oils
12	Oil seed, oleagic fruits, grain nes	35	Albuminoids, modif starches, glues	84	Nucl. reactors, boilers, machinery	12	Oil seed, oleagic fruits etc
5. Germany 3%		**5. Italy 4%**		**5. Poland 3%**		**5. Belarus 3%**	
62	Articles of apparel	72	Iron and steel	72	Iron and steel	72	Iron and steel
74	Copper and articles thereof	27	Mineral fuels, oils	27	Mineral fuels, oils	84	Nuclear reactors, boilers, machinery
72	Iron and steel	31	Fertilisers	26	Ores, slag and ash	72	Articles of iron and steel
35	Albuminoids, modif starches, glues	76	Aluminium and articles thereof	29	Organic chemicals	23	Residues, wastes of food industry
84	Nucl. Reactors, boilers, machinery	41	Raw hides and skins	44	Wood and articles of wood	85	Electrical and electronic equipment

Source: UN Comtrade Database, HS 1996 classification.

3.3.2.2. Commodity diversification by destination markets

In addition, a simple test was conducted of the extent of diversification of exports and imports with different trade partners by taking top ten countries in terms of the number of HS 1996 tariff lines (disaggregated at 6-digit level) they bought from or sold to Ukraine in 1996, 2000 and 2005, as shown in Table 4 and Table 5 below.

Table 4. Diversification of exports, top 10 destination countries

	1996		**2000**		**2005**	**2005/1996**	**% ch. 2005/1996**
Russia	2858	Russia	2295	Russia	2423	-435	-15.2
Belarus	1757	Areas, nes	1892	Moldova	2071	+743	+55.9
Moldova	1328	Moldova	1188	Belarus	1606	-151	-8.6
Areas, nes	1169	Belarus	1102	Germany	1238	+469	+60.9
Lithuania	837	Germany	981	Poland	1230	+533	+69.3
Germany	769	Poland	728	Kazakhstan	1170	+672	+134.9
Poland	697	Lithuania	632	Lithuania	977	+140	+16.7
Latvia	572	USA	573	Azerbaijan	909	+623	+217.8
Uzbekistan	537	Latvia	557	Georgia	899	+619	+221.1
Bulgaria	512	Hungary	501	USA	883	+494	+126.9
World	**3624**	**World**	**3473**	**World**	**3724**	**+100**	**+2.8**

Note: diversification by 6-digit tariff lines in HS 1996 classification.

Source: UN Comtrade Online Database, accessed in February 2007.

Table 5. Diversification of imports, top 10 countries of origin

	1996		2000		2005	2005/1996	% change 2005/1996
Russia	3154	Areas, nes	3189	Germany	3537	+383	+19.8
Germany	2953	Germany	2964	Russia	2824	-330	-10.4
Areas, nes	2504	Russia	2696	Italy	2814	+885	+45.9
Poland	2088	USA	2058	China	2755	+2043	+286.9
Italy	1929	Italy	1983	Poland	2486	+398	+19.1
USA	1824	Poland	1736	France	2411	+898	+59.3
Czech Rep.	1667	France	1686	Netherl.	2162	+761	+54.3
France	1513	Netherlands	1493	Turkey	1912	+896	+88.2
Slovakia	1473	UK	1488	Czech Rep	1863	+196	+11.8
Netherlands	1401	Czech Rep.	1357	Belgium	1708	+851	+99.2
World	**4511**	**World**	**4487**	**World**	**4678**	**+167**	**+3.7**

Note: diversification by 6-digit tariff lines in HS 1996 classification.

Source: UN Comtrade Online database, accessed in February 2007

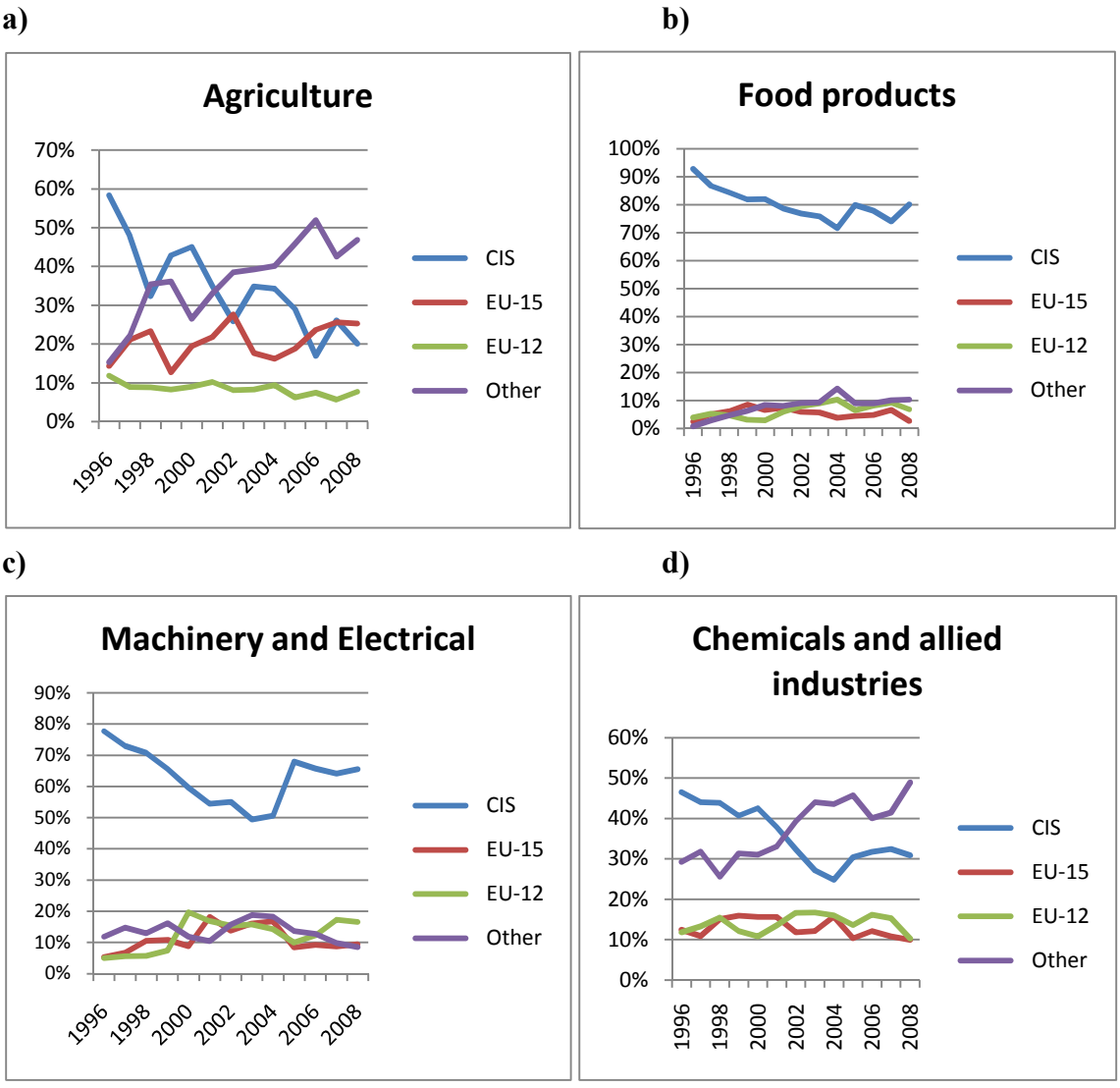
The striking feature of export data is that most of the top ten countries listed in Table 4 are either CIS or former Comecon members (Poland, Latvia, Hungary), with the exception of Germany and USA. While exports to Russia are still the most diversified, the number of products Ukraine sold to Russia in 2005 was 15.2 percent less than it was in 1996. The same negative trend is observed with Belarus. Imports from Russia have also become more concentrated, with the number of tariff lines shrinking by 10.4 percent. In general, changes in overall nomenclature of products in the period 1996-2005 for both exports and imports are not that high - +2.8 and +3.7 percent respectively, but one can see that with many countries Ukraine has experienced more than doubling of export (with Kazakhstan, Azerbaijan, Georgia and USA) and import lines (particularly with China and Belgium, whose role in terms of diversification structure was very low in 1996). Changes in export structure, however, first of all reflect not an East-West reorientation, but rather East-within-East: it is mainly with CIS economies that Ukraine manages to significantly broaden the range of exported products. As far as imports are concerned, the dominating role of non-CIS economies driving the diversification trend, first of all Germany, Italy, China, France, Turkey, the Netherlands, reflects the fact that CIS economies cannot fully satisfy either the consumers' tastes, or the demand for new technologies and capital investment products. Export diversification has been shown to be positively associated with economic growth in transition economies, including Ukraine (Funke and Ruhwedel, 2005), therefore it is an important trend that Ukraine is

undergoing an increase in product variety, in particular with West European economies (Germany, USA), which are more demanding markets.

3.3.2.3. Sectoral dimension

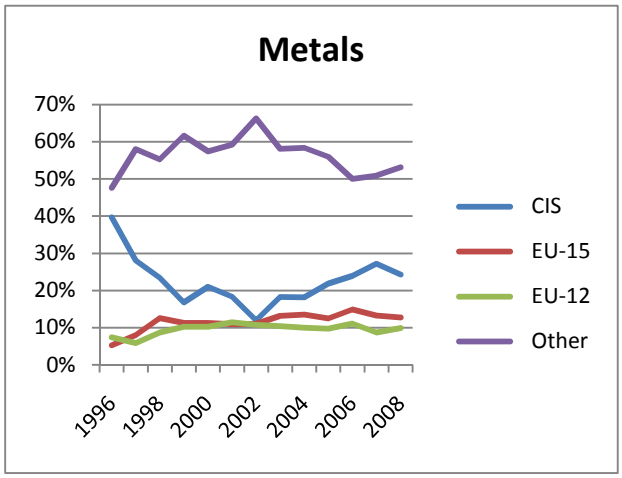
Moving to a sector-by-sector analysis, from Figure 15 below (see Annex 5 for a numerical breakdown) one can immediately notice a clear U-shaped trend of exports to CIS in most sectors.

Figure 16. Geographic distribution of exports by commodity categories, 1996-2008, % of exports of respective commodities[62]



[62] The categories include the following two-digit level HS product lines: a) 01-15; b) 16-24; c) 84 and 85; d) 28-40; e) 72-83; f) 25-27, 68-71; g) 50-67; h) 86-89; i) 44-49.

e)



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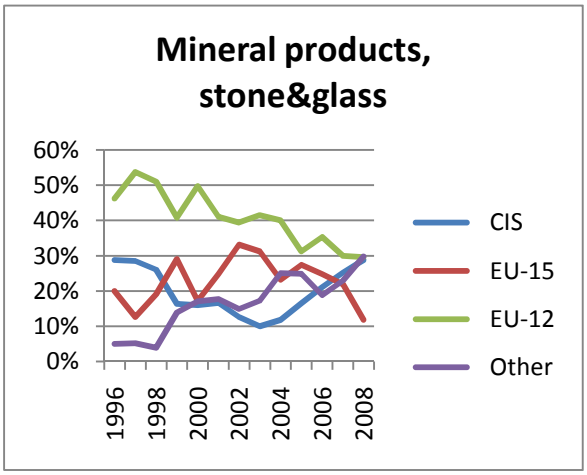

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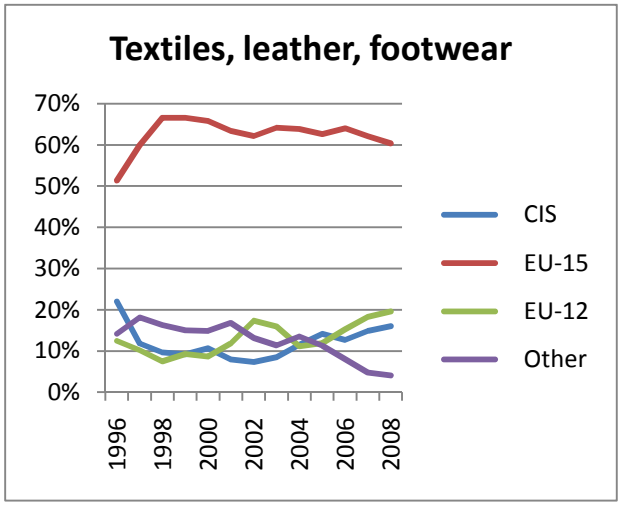
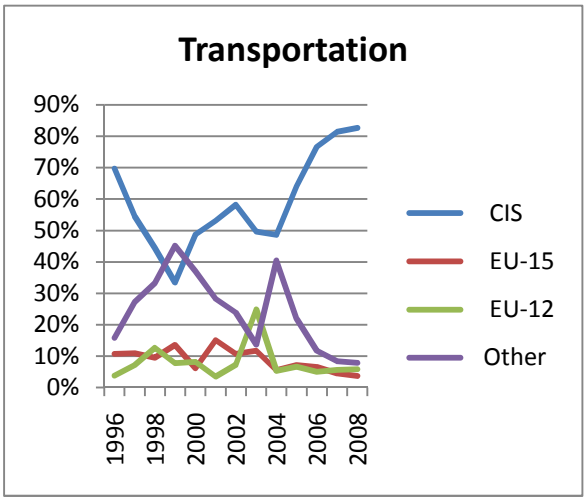
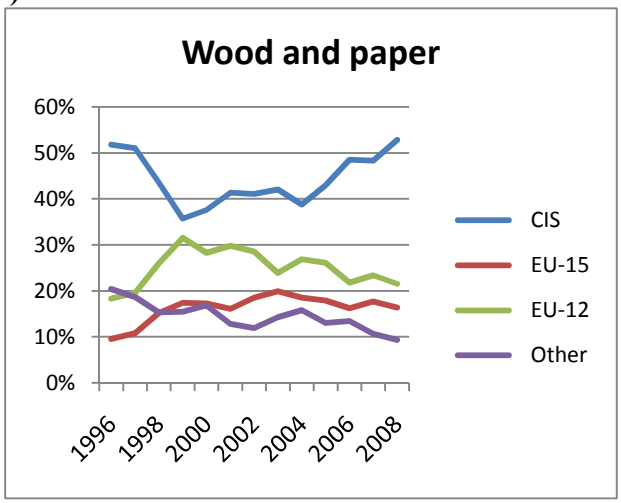


h)



i)



Source: UN Comtrade Online Database. Retrieved in December 2009.

It is important to emphasise that *the share of CIS had been falling in many sectors until 2002-2003*, *but since 2003-2004, almost simultaneously, CIS started to regain its positions across all industries except agriculture*. By 2008 CIS became by far the prevailing market for most Ukrainian exports – food products, machinery and electrical products, wood and paper and more recently transportation. Most remarkable is *a sharp increase in the share of CIS in many product groups in 2005 at the cost of EU-15 and/or EU-12 and the rest of the world* (Other). This is particularly noticeable in food exports, chemicals, machinery and electrical products and transportation. Moreover, since 2005 this trend has not reversed. This year thus marked an important structural change in Ukrainian trade reorientation.

Another striking fact is a high and growing role of 'Other' countries in agriculture, chemicals and minerals, and a dominating role in metals. This is parallel to the trends observed in Figure 3 on p. 45, where ROW (rest of the world) has taken over both CIS and the EU as destination market for Ukrainian exports in 2008. As discussed above, in the past decade the most important ROW export markets for Ukraine have been Turkey, a traditionally important trade partner, but increasingly more so Middle Eastern countries (Egypt, Syria, Iran, Saudi Arabia and United Arab Emirates). The growing global demand for food and agricultural products has been particularly pronounced in the Middle East, which explains the high exports of agricultural products (wheat, barley, sunflower oil) and fertilisers (which are an input for domestic agricultural production) to this region. Iron and steel are also an important commodity for the USA and some Asian markets. Interestingly, the role of China, which had been an important market for Ukraine (over 5 percent of total Ukrainian exports in 1996), has been declining since 2003 and was down to 0.82 percent by 2008. The main reason for this was a virtual disappearance of steel imports from Ukraine.[63]

3.3.2.4. What happened in 2005?

Returning to the issue of CIS *vs.* EU exports, one cannot help but wonder about the causes of the structural change that occurred in 2005. In terms of the political environment, 2005 was a year following the December 2004 Orange revolution with a new pro-Western government coming to power, a year of 'Euro-euphoria' in Ukraine. In recognition of Ukraine's democratic elections and the election of the liberal government, EU-Ukraine Action Plan signed in February 2005 was meant to upgrade European Union's relations with Ukraine and

[63] It is remarkable that China has been increasing imports of iron and steel from most countries, apart from Ukraine and Russia, which have been in decline as a source market for this product group.

deepen its integration into the EU's internal market and institutions (although stopping short of membership). Despite this positive environment, the ensuing political instability and populist economic policies of the Government of the then prime minister Yulia Timoshenko brought about a totally domestically caused economic crisis, whereby Ukrainian GDP growth fell from 12.1 percent in 2004 to 2.7 percent by the end of 2005. Attempts to administratively control prices, threats to re-privatise thousands of enterprises and abolition of free economic zones (even if economically justified) significantly worsened the business and investment climate in Ukraine, causing many enterprises to suspend or cut down production altogether. On the other hand, 2005 was the first full year of EU membership for the ten new member states. They adopted external EU import tariffs and non-tariff requirements, which could potentially cause trade diversion.

Commodity distribution by regions in Annex 6 shows that in fact in absolute value terms there was no visible change in exports to the CIS in 2005. Exports to CIS had indeed been growing more dynamically since 2003 (average annual growth between 2003 and 2008 was 31.6 percent, versus 17 percent for the period 1999-2003), but 2005 saw no particular speeding up of this trend. In contrast, certain exports to the EU-15 and EU-12 experienced a decline not only in relative but also in absolute terms in 2005. In case of the EU-15, *exports of machinery and electrical products went down by 53 percent, chemicals by 27 percent and metals by 1 percent.* In case of the EU-12, *the biggest drop was also observed in machinery and electrical products, by 35 percent, food exports declined by 29 percent, mineral exports by 15 percent, and agricultural exports by 14 percent.*

In principle, EU accession in 2004 could have resulted in higher tariff barriers for Ukrainian products in the new member states. Table 6, however, shows that upon accession tariff protection levels increased only for agriculture and food products, the most sensitive sectors in the EU internal market, which explains the decline of agricultural and food exports in trade with the EU-12. Tariff rates on machinery and electrical products, chemicals and minerals, on the contrary, on average went down in CEECs upon accession. Besides, a parallel decline of machinery and electrical exports to both EU-15 and EU-12 in 2005 rules out enlargement as a reason for the decline of these exports in trade with the EU-12. In terms of individual EU-12 countries, some decline in trade with Baltic countries was expected, as accession entailed abolition of the free trade agreement between these countries and Ukraine. This did take place, especially in trade with Lithuania and Estonia, however significant decline was also

observed in trade with Hungary and Romania. Exports to Poland had experienced the most dynamic growth compared to other EU-12 countries, however in 2005 they were 'flat', before resuming significant growth again since 2006 onwards. The latter fact, and the decline in exports to Romania, which did not join until 2007, suggests that the decline of exports in 2005 was not caused by enlargement-induced trade diversion.

Table 6. Comparison of protection rates on imports in CEECs and EU-15

Agricultural products	CEECs	EU-15[a]
Wheat	-3.9[b]	49
Other grains	-5.8[b]	13.7
Vegetables, fruit, nuts	11.1	4.2
Oilseeds	-6.0[b]	0.0
Beet and cane sugar	0.0	45.5
Other crops	11.3	2.1
Bovine animals	2.1	63.8
Other animal products	3.4	3.5
Raw milk	33.3	93.6
Bovine meat	2.6	63.8
Other meat	4.4	4.9
Dairy	29.0	93.1
Processed sugar	14.1	50.5
Other processed food	10.2	6.5
Extraction	1.4	0.1
Tobacco and beverages	43.7	14.7

Industrial products	CEECs	EU-15 [a]
Textiles	11.6	6.3
Clothing and Leather	13.0	7.3
Furniture and Lumber	7.4	1.3
Petroleum products	7.9	0.5
Chemicals	8.1	2.7
Iron and Steel	7.0	1.9
Non-ferrous metals	3.8	0.8
Motor vehicles	14.4	6.7
Other manufacturers	8.7	1.9
Electrical machinery	8.4	3.4

[a] Post-Uruguay round average MFN tariffs that should be fully in effect by 2005.

[b] Negative tariff protection can take place in case of import subsidies.

Source: Francois and Rombout (2001: 10)

A product-by-product analysis reveals no coherent picture that could point to specific product market developments – different EU-15 and EU-12 countries registered declines in imports of different products from Ukraine. Apart from agricultural and food exports, which most likely declined due to the EU-12 joining the EU customs union, the only other commonalities are a significant fall in exports of mineral products to several EU-12 countries, in particular coke (Romania, Hungary), and a wide-ranging fall of machinery, equipment and electronic and electrical products (HS 84 and 85) in trade with many EU countries.

In 2005 Ukrainian *coke market* was experiencing structural difficulties – deficit of coking coal, lower domestic demand causing coke producers to reduce production, sharply increased prices for railway transportation, plus lower world prices for coke driven down by China – all these put the coke producers under increasing pressure, which reacted by cutting down output.

As a result, total exports of coke from Ukraine, including to the EU-15 and EU-12, fell almost by two thirds, from US$642m in 2004 to US$219m in 2005.

As far as *machinery and electric products* are concerned, in 2005 year-on-year this product group halved in trade with the EU-15 and fell by over a third in trade with the EU-12. There is little symmetry between the products that experienced a decline in trade with the EU-15 and EU-12. Table 7 below shows a snapshot of changes in exports of selected machinery and electric exports from Ukraine to the EU-15 and EU-12. As can be seen, many of the product lines in trade with the EU-15 experienced more than a ten-fold decline. Machinery and electric exports to the EU-12 are much more concentrated, and much sharper decline is observed for the top two exported products. There is also little overlap between products exported to the EU-15 and those exported to the EU-12. Hence, specific structural market changes cannot be blamed for the decline, neither can EU enlargement.

Table 7. Selected machinery and electric exports from Ukraine to the EU-15 and EU-12, 2004 and 2005, US$ thousand

Exports to the EU-15		***2004***	***2005***
84	Nuclear reactors, boilers, machinery etc	311,017	131,261
8471	Automatic data processing machines, optical readers etc	69,603	2,205
8421	Centrifuges	34,053	731
8466	Machinery parts & accessories	28,603	2,245
8417	Industrial, laboratory furnaces, ovens	23,375	423
8410	Hydraulic turbines, water wheels	16,058	127
85	Electrical, electronic equipment	254,041	171,745
8514	Industrial, laboratory electric furnaces and ovens	81,728	1,466
8543	Electrical machinery & apparatus, having individual function	34,504	286
8518	Microphones, loudspeakers, etc	25,445	19,282
Exports to the EU-12			
84	Nuclear reactors, boilers and machinery	169,938	150,361
8473	Parts and accessories of computer and office machinery	17,343	1,404
85	Electric and electronic equipment	261,893	131,135
8537	Board and panels equipped with two or more switches, fuses	130,077	1,972

Source: Intracen Trade Competitiveness Map, retrieved on 10th of July 2010

While the precise reasons for this decline are hard to find out, there can be two hypothetical reasons. On the demand side, the hypothesis can stem from the fact that many of the products listed below are parts or components of machinery and/or equipment. If they are part of value or supply chain management, given the specifics of this industry, which relies heavily on timely and predictable deliveries, political instability could damage the reliability of Ukraine as a supplier, resulting in lower number of orders from Ukraine. Political instability could also

affect the supply side of this process. Anecdotal evidence exists that many enterprises, which were under threat of re-privatization following the announcement of Yulia Timoshenko's Government, suspended production operations during 2005, which could lead to this decline in exports. This is, however, less likely, as exports of machinery and electric products to CIS did not experience any decline in 2005 or afterwards, as Annex 5 shows. Alternatively, there could be a combination of both factors at work, if higher adaptability of CIS partners to political instability and unpredictable business climate in culturally familiar markets partially compensated for the decline of exports to the EU.

At the same time, the analysis in OECD (2007) suggests that the reason for the asymmetry in GDP and exports between 2004 and 2005 could be simply due to data measurement problems and the distorted statistics. Over- or under-reporting of cross-border transactions is a common problem in countries with large shadow economy, which in Ukraine is estimated at as much as 15-25 percent of GDP (OECD, 2007: 24). According to World Bank (2005) exports to the CIS have traditionally been under-reported by some 5-10 percent (between 1996 and 2002), while those to the EU-10 over-reported, in 2000-2002 by as much as 22-33 percent. The picture with the EU-15 has been inconsistent, although more often than not over-reported. As far as machine-building industry is concerned, as Table 8 shows, in 2004 and 2005 significant under-reporting is observed in trade with both CIS and the EU-15. The discrepancy between data for the EU-15 in 2005 – 37.9 percent fall as reported by Ukraine, and 28 percent increase as reported by the EU-15 – is particularly startling.

Table 8. Exports of Ukrainian machine-building, percentage change, US$

Reporting country: Ukraine			
Exports to:	2003	2004	2005
World	33.9	52.2	–11.7
CIS	19.4	54.4	18.1
EU-15	47.8	26.3	–37.9
Reporting countries: trading partners			
Imports from Ukraine of:			
World	34.3	39.4	22.2
CIS	23.3	58.1	22.1
EU-15	44.3	30.7	28.0

Source: OECD (2007: 24) based on data from UN Comtrade Database.

Exports in 2004 and in previous years could have been inflated due to tax-evasion mechanisms employed in many sectors. Many of these mechanisms were brought to a halt due to the abolition of tax privileges for special economic zones in 2005 as well as tightening of customs administration.

As far as *chemicals* are concerned, reorientation towards CIS took place mainly due to an increase of exports of inorganic chemicals (in particular aluminium oxide and hydroxide) to Russia. In trade with the EU there was a decline in 2005 compared to 2004[64], however taking into account the fact that export levels observed in 2004 were rather an above average increase, decline in 2005 represented a return to the trend from previous years rather than a structural change. The same can be said about exports of chemicals to the EU-12 – certain products registered a sharp temporary increase in 2004 (and sometimes in 2003) and fell back to negligible levels as of 2005.[65] This temporary increase in 2004 could mean a beginning of a longer trend which was circumvented by enlargement or the domestic Ukrainian crisis, or could mean pre-emptive increase of exports in the run-up to enlargement aimed at by-passing tariff or non-tariff barriers that would come into force as of accession of the EU-10 countries in May 2004.[66]

Changes described above – in mineral, machinery and electric, and chemical products – explain most of the structural change in geographical distribution of Ukrainian exports that occurred in 2005. It is hard to say that one particular reason caused the reversal of reorientation towards the EU that had been taking place until 2004. In fact, it was a combination of lower demand from the EU, higher demand in the CIS, and lower domestic supply capacity.

[64] Exports of ammonia were down from US$57.2m to US$41m, but then were up again in 2007 and 2008; perfumes and toilet waters fell from US$165.1m in 2004 to US$90,000 in 2005; articles of plastic went down from US$19m to US$607,000. Increase in exports of ammonia in 2004, followed by a reduction in 2005 could be related to the new anti-dumping investigation into imports from Ukraine and Russia, which claimed that in 2003-2004 new forms of ammonium nitrate entered the EU under the different tariff heading. (www.allbusiness.com/legal/international-trade-law-nontariff/9549530-1.html)

[65] Exports of titanium oxides (HS 2823) increased from almost zero to US$23.5m in 2003 and US$28.3m in 2004, but then fell to 44,000 in 2005 and did not recover thereafter. Lubricant preparations (HS 3403) also registered a sharp increase from almost zero to US$19.9m in 2004 and fell to almost zero thereafter. Only albuminoids and casein and casein derivatives experienced a continuous decline on previous years, by 34% and 30% respectively.

[66] At the end of 2005 Ukraine entered a gas row with Russia, which resulted in increased gas prices, significantly undermining competitiveness of producers of chemicals, however this would affect the 2006 performance, not 2005.

However what has been happening since 2006, as seen from Annex 5, is a clear growing demand for Ukrainian products in CIS countries (particularly in Russia, but also growing demand in Belarus, Kazakhstan and Moldova) across most product groups, in particular higher value-added transportation, machinery and electric products. Exports to the EU-15 and EU-12, meanwhile, were growing at a slower pace and the structure became even more dominated by metals, minerals and agriculture. Therefore the more recent U-turn towards the CIS is a sign of growing competitiveness of Ukrainian products on those markets and a sign of an upgrading industrial structure as a result of cooperation with these countries.

3.4. Conclusion

The collapse of the USSR has been associated with a sharp reorientation of trade flows away from the FSU to the rest of the world for most FSU republics. A sharp reorientation of Ukrainian exports towards the EU in early 1990s was primarily caused by three main reasons – the contraction of demand in the CIS, the disruption of old production links and payment distortions. Severe output contraction in Ukraine and slow reform process resulted in a sharp decline of overall trade volumes, and in 1993 exports constituted only 15 percent of the level registered in 1990, by 2008 recovering to only 85 percent.

Further fluctuations in geographic distribution of exports have had a lot to do with aggregate demand trends on the destination markets, global steel and oil prices and exchange rate movements. Thus, the 1998 financial crisis resulted in significant devaluation of hryvnia and improvement in terms of trade with non-CIS countries, while no such improvement was observed relative to Russia and other CIS countries (where devaluation was even stronger). The crisis therefore improved Ukraine's competitiveness on the EU-15 and EU-12 markets and was associated with the growth of exports to these markets in 1999-2003 (both peaking at 38 percent in 2002-2003) and a simultaneous dip in exports to the CIS.

A dramatic continuous increase of global steel prices since 2003 contributed to both growth of Ukrainian exports and a dynamic economic growth.

Trends in aggregate demand, however, seem to have influenced the geographic distribution of Ukrainian exports most. Thus, a dynamic recovery of the share of CIS in total Ukrainian exports seems to have been driven by a robust economic recovery that reached double digits in most CIS economies since 2001 and a simultaneous increase in their demand for steel. At the same time, high economic growth in the MENA countries, often driven by growing oil

prices, also created higher demand for Ukrainian products, in particular steel, grains (mainly wheat and barley), fertilisers and other chemicals. A dynamic growth in China, accompanied by the growing domestic production of steel, on the contrary, crowded out Ukrainian exports.

While this chapter looked at the general picture, CHAPTER 4 contains a more specific analysis of the factor content of Ukrainian exports to the two 'balancing' regions of the EU and CIS, and a relative comparative advantage analysis that takes into account Ukraine's position on these markets relative to other world suppliers. CHAPTER 5, in turn, will contain a more formal test of the effect of aggregate demand mentioned above, as well as the effect of trade blocs, on the Ukrainian exports.

CHAPTER 4. FACTOR CONTENT AND THE REVEALED COMPARATIVE ADVANTAGE OF UKRAINIAN EXPORTS

4.1. Introduction

One of the theoretical departing points of this thesis is the idea of a dynamic comparative advantage, which, if evolving towards more technology-intensive specialisation or specialisation in products of higher degree of processing, has positive implications for the competitiveness and growth of the economy in question. This applies to both developed and developing economies. The reason for this is higher rates of growth of high-technology products, their higher income elasticity of demand and higher value added. Therefore, although from the above analysis the aggregate composition of the Ukrainian trade with the EU does not reveal any particularly positive trends, a more formal analysis of factor-content of exports may help to see whether there are any signs of improvement at a more disaggregated level (at the 3-digit level according to SITC Rev. 3 classification). Using the same factor content classification the author then explores in which products Ukraine enjoys a revealed comparative advantage on the EU and Russian markets. While the former is a Ukraine-centred analysis, the latter is a more relative analysis, which weighs Ukraine's role on the target markets against that of suppliers from the rest of the world.

4.2. Factor content of exports to the EU-27 and Russia

We apply the factor-content classification proposed by Lall (2000), which breaks down commodities depending on their level of processing and technological activities involved in their production into the following categories:

- *Primary products* (PP), with little processing;
- *Resource-based* products (RB), which tend to be either simple or *labour-intensive*, and the distinction is made between agro-based (RB1) and others (RB2);
- *Low-technology (LT)* products include products, which use technologies embodied primarily in capital equipment, that tend to be undifferentiated, and where labour costs comprise a major share of total costs. The distinction is made between textiles and

footwear (LT1) and others (LT2), which include many iron and steel products, which are so important in Ukrainian production.

- *Medium-technology products* (MT) are classified by Lall as products comprising the bulk of skill- and scale-intensive technologies in capital goods and intermediate products, and form an important part of industrial activity in mature economies. They have complex technologies, moderately high R&D and are usually linkage-intensive and harder to relocate. While high-technology products, described below, require a more mature, reliable but still highly flexible economic environment, for recovering transition economies increasing competitiveness in medium-technology products looks like a second-best option. A distinction is made between MT1, automotive products, MT2 – process industries (mainly chemicals and base metals), and MT3 – engineering products.
- *High-technology* products (HT) are R&D intensive products that require complex technology infrastructures, supplier networks and interaction between firms and research establishments. Electronic HT products have become a subject for integrated production systems, with labour-intensive production stages being relocated to countries with lower labour costs, but economic environment still remains a crucial criterion for such relocation.

What follows next is the analysis of the structure of Ukrainian exports, with a view of revealing whether there are any signs of industrial upgrading that can lead to greater international competitiveness. Export flows to Russia are compared with export flows to the EU-27 by their factor content in the period from 1999 to 2008, as this is the earliest available period for trade with the EU-27 as a whole. While the previous section was based on Harmonised System commodity classification, factor content methodology is based on the SITC Rev.3 classification. The 3-digit level data was taken from UN Comtrade Online Database and each tariff line was classified according to one of the above categories. Table 9 below compares an aggregate factor-content composition of exports to the EU-27 and Russia, while Table 10 gives a more detailed picture.

Table 9. Factor content of exports to the EU-27 and Russia

a) Factor-content of exports to the EU-27, percent of total

	1999	2001	2003	2005	2008	% change
Primary products	18.6	24.2	18.2	13.6	21.4	+15%
Resource-based	35.3	35.8	36.8	31.7	24.4	-31%
Low-tech	22.8	21.7	19.9	19.3	16.4	-28%
Medium-tech	**19.2**	**14.8**	**20.8**	**28.4**	**32.6**	**+70%**
High-tech	3.5	3.1	3.5	3.0	4.3	+23%
Other	0.6	0.4	0.9	4.0	0.9	+50%
Total	100.0	100.0	100.0	100.0	100.0	

b) Exports to Russia, percent of total

	1999	2001	2003	2005	2008	% change
Primary products	12.2	9.0	9.6	6.1	5.5	-55%
Resource-based manuf.	30.0	28.6	27.6	29.3	24.1	-20%
Low-tech	16.2	18.4	17.2	21.9	20.4	+26%
Medium-tech	**35.5**	**38.2**	**40.0**	**38.0**	**43.6**	**+23%**
High-tech	5.2	5.7	5.6	4.7	6.2	+19%
Other	0.9	0.0	0.0	0.0	0.1	-89%
Total	100.0	100.0	100.0	100.0	100.0	

Source: Author's calculations based on UN Comtrade Online Database data

Primary products constitute a lower share of exports to Russia than to the EU – 5.5 percent versus to 21.4 percent in 2008 respectively. After an initial decline in 2005, PP exports to the EU rebounded in 2008. This gain can be explained by the growth in world grain prices and exports of wheat, as well as by increased exports of petroleum gases and oils, coal and aluminium.

Resource-based products are equally important in trade with both regions and account for about a quarter of all export flows, although in the case of the EU their share has fallen from about 35 percent registered in 1999, which to a large degree was due to the imposition of restrictions on export of ferrous and non-ferrous waste and scrap.

RB1, agro-based products, are more significant in trade with Russia than with the EU – 19 percent *vs*. 8 percent of total exports respectively. In trade with Russia there has been some reorientation within this category: whereas in 1999 a major share belonged to products of lower level of processing – sugars, wheat flour and cereal preparations, vegetable and fats and oils, rubber tyres and paperboard, in 2005 sugars have declined almost ten-fold, while in food products a bigger role in 2005 was played by products of higher level of processing – cheeses, fruit and vegetable preparations, alcoholic and non-alcoholic beverages, etc. However the

bans that Russia imposed on imports of Ukrainian cheese, meat and other products in 2005 and 2006 reduced the share of the products again. In trade with the EU this group is mainly characterised by increased competitiveness of vegetable fats and oils, which have increased ten-fold (from US$2mln to US$20mln), chocolate and fruit preparations (over 10 times increase), and wood manufactures, the latter category coming from Western Ukraine and mainly driven by foreign direct investment or outward processing schemes. In the future wood manufacturing industry presents opportunities for shifting up the value chain towards furniture and other higher-value added products.

Non-agro-based (RB2) products in trade with the EU are mainly represented by coke, refined petroleum exports, as well as other hydrocarbons, iron ores and electric current. The lion's share has traditionally been accounted for by petroleum and petroleum related products, produced from the crude oil sourced from Russia.

Relative share of **low-technology** exports, which include LT1 – textiles and footwear, and LT2 – mainly steel and chemicals, has declined in trade with the EU-27, whereas that to Russia is on the rise. This is explained by slower than average growth in exports of textiles to the EU (which play almost no role in trade with Russia), an increase in anti-dumping investigations against Ukrainian steel and chemical producers on the one hand, and on the other hand higher growth of exports of several iron and steel lines to Russia.

The fact that **medium-technology manufactures** have been the most dynamic group in trade with the EU (their share increasing by 70 percent between 1999 and 2008) and the dominant group in trade with Russia, as seen from Table 9, reflects a marginal, but an important improvement in Ukraine's role in the global economy, and reflects, as Lall argues, a shift towards products representing a bulk of production in industrial countries. Although this group, as well as all others, is heavily biased towards iron and steel products and more complex chemicals, its growth also reflects upgrading of the level of processing of steel. This is happening partially as a way to overcome EU quotas[67] on iron and steel of low level of processing, and partially due to an increased demand for higher quality Ukrainian steel for automotive industry on the world markets, encouraging producers to reorient away from production of cheap carbon steel predominant in previous years (Doing Business in Ukraine, 2005).

[67] In place until 2008, when Ukraine joined the WTO. Quantitative quotas cannot be applied to WTO members.

In value terms, as shown in Table 10, in trade with the EU the bulk of growth was accounted for by MT2 (process) and MT3 (engineering) product groups, which grew on average by 116 and 115 percent per annum between 1999 and 2008. Process manufacturing exports are roughly of equal importance in trade with both regions, accounting for around a quarter of total exports to Russia and the EU in 2008. In trade with the EU it is mainly comprised of pig iron (over US$1.6bn in 2005), tubes and pipes, various chemicals and fertilisers, and trailers and semi-trailers. Despite some foreign direct investment and 'infant industry protection' strategy of the Ukrainian government, the share of automotive products, MT1, is almost negligible in exports to both the EU and Russia (0.2 percent and, for most of 2000s, 2 percent, respectively). More recently, however, between 2005 and 2008, this group grew more than six-fold in trade with Russia, its share increasing from 2 to 5 percent.[68] This finding is corroborated in Figure 12 on p.59, which shows that automotive products have been the most dynamically growing product group in Ukrainian trade.

In terms of growth rates, group **MT3 (engineering manufactures)**, follows **MT2** as the second most dynamic group in trade with the EU (Table 10, 115 percent compound annual growth rate). The best performers are electric distribution equipment (almost a 30-fold increase), ship structures (7-fold), internal combustion engines (five-fold), domestic electronic and non-electronic equipment (almost 4-fold). However, these growth rates are from a very low base and Table 11 contrasts the (un)competitiveness of Ukrainian engineering products on the EU market with the importance of this group in trade with Russia (5.3 percent *vs.* 14.6 percent respectively), although it seems to be losing positions (compared to 2002-2003) even on the Russian market.

Ukraine does not yet have a pronounced specialisation in high-technology exports, either with Russia, or with the EU. Although the share of HT1 (electric and electronic products) in trade with Russia is higher than that with the EU (5.8 percent *vs*. 3.5 percent respectively), the growth rates have been more dynamic in trade with the EU (130 percent p.a. *vs*. 99 percent). The bulk of exports to the EU consist of telecommunication equipment parts (70 percent of total exports in group HT1). In trade with Russia HT exports are mainly represented by parts of electric power machinery (40 percent of total HT1 exports in 2008), electric machinery and apparatus (34 percent) and transmission shafts (19 percent).

[68] Due to the dynamic growth of automobile exports to Russia, as described in more detail in footnote 58.

Table 10. Factor-content of exports to the EU-25 and to Russia, 1999 and 2008, thous. US$

	Exports to EU-25			Exports to Russia		
	1999	2008	CAGR %	1999	2008	CAGR %
Primary products	593,114	4,157,848	78%	308,399	889,193	32%
RB1: Agro-based	180,528	1,558,905	96%	485,659	2,068,848	47%
RB2: Other resource-based	943,859	3,188,021	38%	274,110	1,825,786	74%
LT1: Textile and footwear	436,887	827,731	21%	40,351	164,084	45%
LT2. Other low-tech	290,832	2,357,704	90%	368,565	3,128,137	94%
MT1: Automotive	10,027	46,519	52%	**45,622**	**789,836**	**192%**
MT2: Process	**500,198**	**5,243,448**	**116%**	**429,973**	**3,896,313**	**101%**
MT3: engineering	**100,039**	**1,036,950**	**115%**	421,630	2,359,434	62%
HT1: Electronic and electrical	57,423	671,786	130%	104,834	933,277	99%
HT2: Other high-tech	52,998	166,079	35%	27,623	74,370	30%
Other	20,260	170,229	93%	21,590	11,997	6%
Total	**3,186,165**	**19,425,220**	**68%**	**2,528,356**	**16,141,274**	**71%**

Source: author's calculations based on UN Comtrade Online Database

The above has been a Ukraine-centred analysis, looking at trends in Ukrainian exports only. It has shown some positive trends in the commodity structure of exports to the EU, which have not been revealed in the more general analysis in CHAPTER 3.

While important, this analysis does not take into account the dynamics on the world markets in general and does not allow assessment of how Ukraine keeps up with these trends and maintains its positions on the EU and Russian markets. The next section attempts to answer this question.

Table 11. Factor content of Ukrainian exports to Russia and the EU-27, 1999-2008, %

Exports to Russia

	1999	2000	2001	2002	2003	2004	2005	2008
HT1 – electronic and electrical	4.1	3.9	4.1	4.5	4.0	4.0	3.8	**5.8**
HT2 – other high-technology	1.1	1.4	1.6	1.6	1.6	1.0	0.9	0.5
LT1 - textiles and footwear	1.6	2.3	1.6	1.0	1.0	1.0	1.1	1.0
LT2 - other, incl steel	14.6	16.2	16.8	14.2	16.2	19.5	20.9	19.4
MT1 – automotive	1.8	2.5	2.8	2.2	1.7	1.5	1.6	**4.9**
MT2 – process	**17.0**	**19.1**	**18.5**	**17.6**	**20.8**	**23.4**	**22.1**	**24.1**
MT3 – engineering	**16.7**	**16.9**	**16.9**	**20.2**	**17.5**	**14.9**	**14.3**	**14.6**
Other	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.1
PP	12.2	10.4	9.0	10.1	9.6	7.8	6.1	5.5
RB1 - agro-based	19.2	16.4	17.8	18.9	20.2	18.8	19.0	12.8
RB2 - other, incl steel and chemicals	10.8	10.4	10.9	9.7	7.3	8.1	10.3	11.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Exports to the EU-27

	1999	2000	2001	2002	2003	2004	2005	2008
HT1 – electronic and electrical	1.8	1.9	1.7	1.3	2.4	1.8	1.9	**3.5**
HT2 – other high-tech	1.7	1.9	1.4	1.2	1.1	1.7	1.1	0.9
LT1 – textiles and footwear	13.7	12.9	12.1	10.7	10.9	9.0	7.9	4.3
LT2 - other, incl steel	9.1	9.2	9.6	8.7	8.9	10.6	11.4	12.1
MT1 – automotive	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.2
MT2 – process	**15.7**	**12.6**	**12.3**	**11.0**	**17.0**	**23.1**	**23.6**	**27.0**
MT3 – engineering	**3.1**	**3.0**	**2.3**	**2.7**	**3.6**	**3.6**	**4.6**	**5.3**
Other	0.6	0.5	0.4	0.7	0.9	3.8	4.0	0.9
PP	18.6	20.0	24.2	27.8	18.2	15.3	13.6	**21.4**
RB1 - agro-based	5.7	5.8	5.8	7.4	9.5	7.5	7.8	8.0
RB2 - other, incl steel and chemicals	29.6	32.1	29.9	28.5	27.3	23.5	23.8	16.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: author's calculations based on UN Comtrade Online Database.

4.3. Revealed comparative advantage

The term comparative advantage has been introduced by a British economist David Ricardo, who argued that countries (as well as economic agents, people, firms) are most efficient when they do the things that they are best at doing. By exporting goods and services that they can produce most efficiently and at a lower cost, and using export revenues to import goods that are more costly to produce domestically, the economies would thus maximise national production and consumption.[69] As was discussed in CHAPTER 2, specialisation in technology-intensive exports may be more conducive to economic growth through efficiency and productivity gains. Specialisation in exports of primary products, on the contrary, was found to have an adverse effect on economic growth in the medium- to long-term. However, even with initial specialisation in low value-added products a country may shift its comparative advantage towards more value-adding products by means of industrial development, technological upgrading, inward FDI, etc., thus demonstrating a *dynamic comparative advantage*, as proposed by Redding (1999).

We now proceed to analysing the revealed comparative advantage of Ukraine, first at 2-digit SITC (Rev. 3) level, comparing Ukraine's RCA in trade with the EU with that it has with Russia, to see how Ukraine's quality of trade differs between the traditional and the newer markets. Then, pulling out good performers in medium- and high-technology clusters from the factor content analysis, a more detailed analysis is conducted of the Ukrainian RCA with the EU and Russia in these groups at the 3-digit level. The reasoning for this is to find out whether there is a case for potential improvement of Ukraine's trade structure with developed economies, and thus for the dynamic comparative advantage.

The traditional Balassa index of revealed comparative advantage (Balassa, 1965), although being said to be biased due to omission of imports (Greenaway and Milner, 1993), suits the line of inquiry in this study, as it is mainly focusing on upgrading of the competitiveness by means of exports. The index takes the form[70]:

$RCA = (X_{ij}/X_{it}) / (X_{wj}/X_{wt})$,

[69] World Bank *Beyond Economic Growth* Student Book, Glossary http://www.worldbank.org/depweb/english/beyond/global/glossary.html , retrieved on 23rd of July 2010.

[70] One of the formulations. Another equivalent is: $RCAij = (X_{ij}/X_{wj}) / (X_{it}/X_{wt})$.

where the share of a product *i* in country *j*'s total exports is compared to the share of the same product in comparators' total exports. The formula can be used to compare Ukraine's export structure with the international structure of exports, as well as with the global structure of exports to the EU and Russian markets. This analysis can be done on any level of tariff-line aggregation, and a country is considered to have a comparative advantage in a certain product if the RCA index is higher than 1. Unlike Ukraine-centred analysis undertaken in the previous sections, RCA analysis will show how Ukraine's relative position is evolving compared to world's exports to Russia and EU-27.

Table 12 and Table 13 show Ukraine's RCA in trade with Russia and EU-27 in 2000, 2005 and 2008. As the totals show, Ukraine is competitive in an approximately equal number of tariff lines on both markets, although it is slightly higher in trade with the EU. The bad news is the declining number of products that exhibit comparative advantage with both regions – down from 18 to 14 in trade with Russia, and from 19 to 16 in trade with the EU. Another striking difference is more intensive RCA indices in trade with the EU than those in trade with Russia. This can partially be explained by higher complementarity of Ukraine's and Russia's trade. As noted in IER (2006), high index of complementarity of trade between Ukraine and CIS countries (in the range of 70-90 percent) implies that Ukraine's export structure is very similar to CIS countries' import structure. While this is interpreted as being good for the trade potential, complementarity is effectively inversely related to the RCA index, as the latter will be higher when a comparator country's import structure is more dissimilar to Ukraine's export structure.[71] Besides, Russia is specialising in production of many product lines similar to those exported by Ukraine (e.g. food preparations or iron and steel), reducing Russia's demand for imports of those products.

In terms of product composition, on the Russian market Ukraine's comparative advantage is most pronounced in iron and steel, fertilizers, dairy products and eggs, but also some technology intensive products – power-generating machines, metalworking and electric machinery, as well as transport equipment. Some structural shift is notable. As of 2008 Ukraine has lost comparative advantage in many technology-intensive products (shown

[71] E.g. since EU's imports are more concentrated in intra-industry trade with developed economies in technology-intensive products, the share of primary or resource-based imports from Ukraine, such as cereals or fertilizers, will be relatively higher. In contrast, if Russia's world imports contain many product lines that are important in Ukraine's exports, e.g. it might be importing wheat or food preparations from other CIS countries, the share of Ukraine is likely to be relatively lower, reducing Ukraine's RCA on the Russian market

towards the bottom of the table) and gained it in resource-intensive products (towards the top of the table). As such, this dynamics cannot be interpreted as a sign of positive structural change. The only positive development in terms of technology-intensive products seems to be the emergence of a relatively strong RCA in transport equipment. This gain was, however, was offset by a falling RCA in power-generating machines, and a disappearing RCA in electric and metalworking machinery.

Table 12. Ukraine's RCA in trade with Russia at a 2-digit level, 2000, 2005, 2008

Commodity	SITC	2000	2005	2008
Meat, meat preparations	01	1.53		
Dairy products, bird eggs	**02**	**2.21**	**3.84**	**2.99**
Cereals, cereal preprtns.	04		1.12	2.69
Coffee, tea, cocoa, spices	07		1.08	1.62
Beverages	11		1.91	1.57
Crude fertilizer, mineral	**27**	**2.43**	**3.00**	**5.72**
Metalliferous ore, scrap	28	1.26	2.04	1.74
Coal, coke, briquettes	32		1.14	
Petroleum, petrol. product	33			3.38
Electric current	35		2.66	
Fixed veg. fats and oils	42	1.70	1.53	3.16
Inorganic chemicals	52		1.19	1.17
Dyes, colouring materials	53	1.29		
Leather, leather goods	61	1.12		
Rubber manufactures, nes	62	2.63	0.97	
Paper, paperboard, etc.	**64**	**1.35**	**1.36**	**1.77**
Non-metal. mineral manfct	66	1.24		
Iron and steel	**67**	**4.83**	**4.77**	**4.90**
Non-ferrous metals	68	1.80		1.64
Power generatng. machines	**71**	**2.89**	**1.69**	**1.31**
Metalworking machinery	**73**	**1.65**		
Elec mch appar, parts, nes	**77**	**1.00**		
Othr. transport equipment	**79**		**3.27**	**6.88**
Furniture, bedding, etc.	82	1.10		
Footwear	85	1.11		
TOTAL PRODUCT LINES WITH RCA		**18**	**16**	**14**

Note: Only groups where Ukraine has a comparative advantage are represented here.

Source: author's calculations based on UN Comtrade data in SITC V.3 classification.

Trade with the EU is characterised by a lack of RCA in foodstuffs and almost absent in manufactures, apart from metals manufactures (which was only observed in 2005) and clothing and footwear, both of which were no longer competitive in 2008. Strong and growing comparative advantage is observed in cereals, oil seeds, fixed vegetable fats and oils and iron and steel. Still strong, but either stable or falling, RCA has been observed in cork and wood,

fertilizers, metalliferous ores and scrap, electric current and leather / leather goods. *In 14 out of 19 product groups the scale of RCA has been falling.* In contrast, although the strength of RCA in trade with Russia is lower across the board, *in 10 out of 18 cases it has grown,* which, coupled with a falling number of product groups that exhibit RCA, *indicates an increasing specialisation in trade with Russia.*

Table 13. Ukraine's RCA in trade with the EU-27 at 2-digit level, 2000, 2005, 2008

Commodity	SITC	2000	2005	2008
Dairy products, bird eggs	02	7.33		
Cereals, cereal preprtns.	**04**	**2.44**	**14.49**	**13.30**
Animal feed stuff	08		1.09	1.17
Hides, skins, fur skins, raw	**21**	**8.31**	**6.12**	
Oil seed, oleaginous fruit	**22**	**5.87**	**1.40**	**12.39**
Cork and wood	**24**	**4.04**	**5.35**	**5.05**
Crude fertilizer, mineral	**27**	**5.56**	**7.39**	**4.79**
Metalliferous ore, scrap	**28**	**9.17**	**5.17**	**3.42**
Coal, coke, briquettes	32	3.70	2.70	2.41
Electric current	**35**	**12.76**	**4.76**	**4.64**
Fixed veg. fats and oils	**42**	**1.75**	**6.01**	**6.73**
Animal, veg. fats, oils, nes	43			1.46
Organic chemicals	51		1.15	
Inorganic chemicals	52	4.02	1.17	
Dyes, colouring materials	53			1.40
Fertilizer, except grp272	**56**	**13.88**	**4.51**	**3.60**
Chemical materials nes	59	2.42	2.04	1.14
Leather, leather goods	**61**	**6.36**	**4.23**	**3.63**
Cork, wood manufactures	63	1.20	2.51	2.75
Iron and steel	**67**	**12.69**	**15.52**	**10.51**
Non-ferrous metals	68	1.77		
Metals manufactures, nes	69		1.02	
Clothing and accessories	84	1.76	1.17	
Footwear	85	1.13		
TOTAL PRODUCT LINES WITH RCA		**19**	**19**	**16**

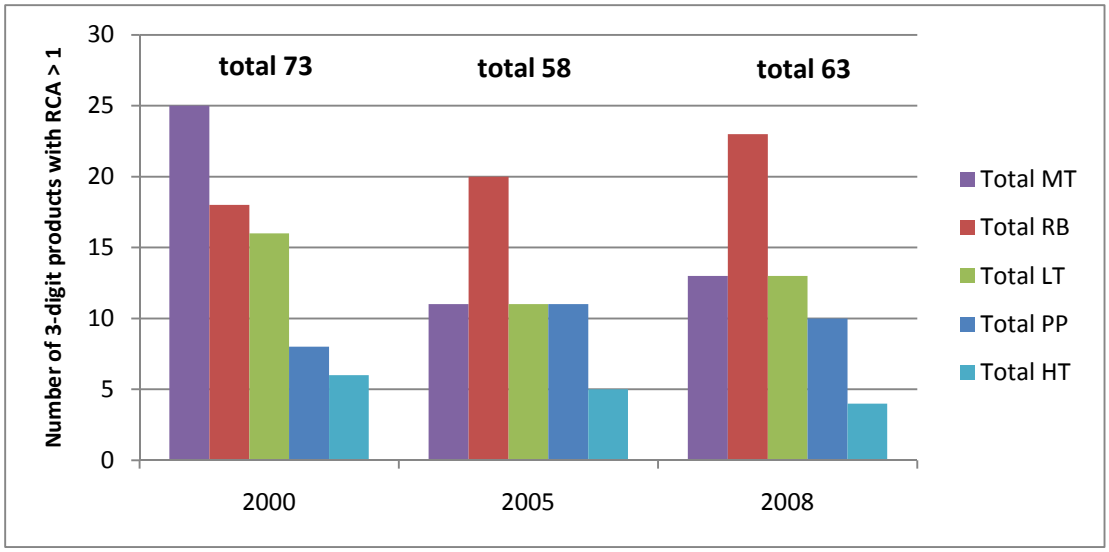
Source: Author's calculations based on UN Comtrade Online Database data.

In order to distinguish between various products in terms of their factor content, as discussed above, a revealed comparative advantage at a more disaggregated, 3-digit level, is analysed next.

Figure 17 reveals the redistribution in RCA in trade with Russia away from medium-technology towards resource-based exports. The number of low-technology products with comparative advantage also fell in 2005 and 2008. The number of high-technology products with RCA is higher than in trade with the EU, but also fell from 6 to 4 between 2000 and 2008. The total number of exports with RCA in trade with Russia fell significantly between

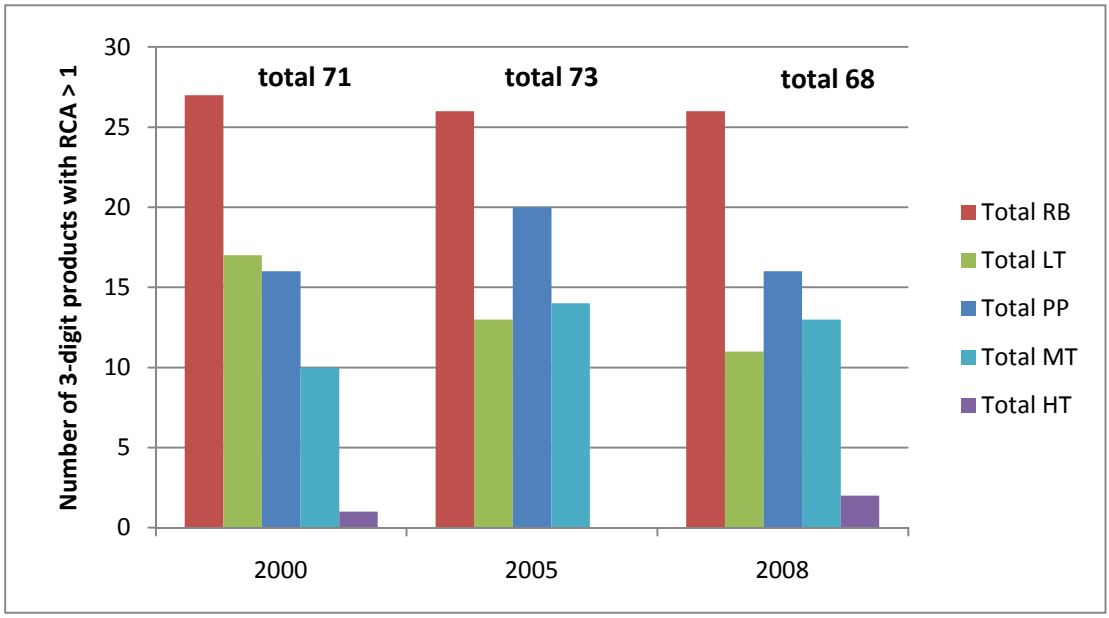
2000 and 2005, from 73 to 58, but recovered to 63 in 2008 on account of resource-based, medium- and low-technology exports.

Figure 17. RCA by factor content in trade with Russia, 2000, 2005, 2008



Source: Author's calculations based on UN Comtrade Online Database.

Figure 18. RCA by factor content in trade with EU-27, 2000, 2005, 2008



Source: Author's calculations based on UN Comtrade Online Database.

The structure of Ukraine's comparative advantage on the EU market is similar to that of Russia – dominated by resource-based exports, and an even higher number of primary products. While in 2000 the number of Ukrainian products with RCA was higher on the

Russian market, by 2005 the situation reversed and there were 11 more products with RCA on the EU market than on that of Russia. In 2008 this gap narrowed down to 5 products, but was still in favour of the EU. However, the average intensity of the comparative advantage across all products (with RCA>1) has somewhat declined in trade with the EU – from 6.8 in 2000 to 4.4 in 2008, and increased slightly in trade with Russia – from 2.6 to 3.5, though still remaining lower than on the EU market. The fact, however, that these averages are based on a smaller number of competitive product lines makes them less relevant estimates. Still, these contradicting trends make it hard to make a straightforward judgment as to the dynamics of the overall comparative advantage of Ukraine on the Eastern and Western markets. Besides, it is important to bear in mind that unlike in the preceding analysis, RCA analysis takes into account the dynamics on a destination market and its imports from the rest of the world, thereby showing the relative rather than absolute performance of Ukrainian products on those markets.

In exports of *primary products* to the EU Ukraine has an exceptionally high comparative advantage in barley (in 2000 almost half of all barley imported by the EU came from Ukraine, though declining to 38 percent in 2008, resulting in the RCA of 100 and 42 respectively, the former being the highest RCA in the whole sample), unmilled wheat and maize (RCA of 28.6 and 12.8 respectively in 2008), oil seeds (12.8 in 2008), fuel wood (12) and other crude minerals. In trade with Russia the highest RCA in primary products was observed in stone, sand and gravel (8.5 in 2008), unmilled maize (6.6) and milk and cream (4 in 2005, down to 2.5 in 2008). Liquefied propane and butane emerged with a strong RCA in 2008 (8.5), but it had not been competitive in 2000/2005.

In group RB1 – *agricultural resource-based products* – a notable difference is that on the Russian market Ukraine has a comparative advantage in food preparations (cheeses, cereal flours and preparations, chocolate and cocoa preparations), which are absent in trade with the EU, which is understandable given the high level of protection of the European market for these products, the problems with compliance to quality standards of the EU, and not least the difference in tastes. In trade with the EU the most pronounced RCA in this group was in fixed vegetable fats and oils and wood.

Although the total number of products with RCA in resource-based products remained more or less constant throughout the period under observation, it is masking large losses on the EU

market in RCA intensity in group *RB2* (from 9.3 in 2000 to 2.3 in 2008), which includes energy, base metals, inorganic chemicals and other minerals. Ukraine has been loosing positions across the majority of products that were competitive in 2000 – in iron ore, ferrous and non-ferrous waste and scrap, coke, residual petroleum products, electric current and inorganic chemicals. While exports of scrap metal have been curbed by Ukraine and its producers unilaterally, to meet the domestic demand, other product lines seem to have lost comparative advantage due to higher imports of those products from the rest of the world. The same group has undergone relatively few changes on the Russian market, apart from growing RCA in coke/semi-coke and miscellaneous non-ferrous base metals. Average RCA in this group increased slightly, reaching the same level in 2008 as that observed in the EU (2.3).

In *low-technology exports* to the EU Ukraine has been loosing competitiveness in textile products[72] and in certain metallurgy products – iron and steel bars and shapes (RCA halved from 18.3 to 9.8), railway track iron and steel (down from 42 to 7.9), wire of iron and steel (from 17 to 6.8). In Russia, on the contrary, similar products have slightly gained in competitiveness.

To see whether there are any signs of dynamic comparative advantage in higher-value added products, the medium- and high-technology products are looked at in more detail in Table 14. The number of *medium-technology products* with comparative advantage on the EU market is low but growing (from 10 in 2000 to 13 in 2008). In trade with Russia, in contrast, although this group accounted for over a third of all products with RCA in 2000 (25 out of 73), Ukraine has lost many of its positions by 2008, the number of competitive positions evening out with those observed on the EU market at 13. Hence, even if there are some positive trends on the Western markets, there is clearly a more important loss of competitiveness on the Russian market.

[72] Women's/girls clothing except knit – RCA down from 4.2 in 2000 to 1.22 in 2008, fur skins – from 5.1 to 2.6, and a disappearing RCA in knit women clothing, footwear, and special yearn and textile fabrics in 2008.

Table 14. Revealed comparative advantage in medium- and high-technology exports to Russia and the EU-27, 2000, 2005, 2008

			Russian Federation			EU-27		
			2000	**2005**	**2008**	**2000**	**2005**	**2008**
MEDIUM-TECHNOLOGY EXPORTS								
783	mt1	ROAD MOTOR VEHICLES NES				2.0		
782	mt1	GOODS,SPCL TRANSPORT VEH	1.2					
784	mt1	PARTS,TRACTORS,MOTOR VEH	1.4					
Total MT1: Automotive manufactures			*2*	*0*	*0*	*1*	*0*	*0*
Average MT1			*1.3*	*0.0*	*0.0*	*2.0*	*0.0*	*0.0*
265	mt2	VEGETABLE TEXTILE FIBRES			3.3	2.5	6.3	
512	mt2	ALCOHOL,PHENOL,ETC.DERIV	1.7					
513	mt2	CARBOXYLIC ACIDS,DERIVTS	1.3			2.2	3.3	3.0
533	mt2	PIGMENTS, PAINTS, ETC.	1.4				1.9	2.4
562	mt2	FERTILIZER,EXCEPT GRP272				**13.9**	**4.5**	**3.6**
572	mt2	POLYMERS OF STYRENE	2.1					
579	mt2	PLASTIC WASTE, SCRAP ETC	**1.6**	**2.2**	**6.4**		4.7	1.1
671	mt2	PIG IRON,SPIEGELEISN,ETC	6.4	5.8	6.2	7.8	12.7	8.6
672	mt2	INGOTS ETC.IRON OR STEEL	6.7	5.0	7.8	**45.8**	**43.5**	**38.8**
679	mt2	TUBES,PIPES,ETC.IRON,STL	4.3	4.6	5.0	6.2	11.8	5.4
786	mt2	TRAILERS,SEMI-TRAILR,ETC				1.7	2.4	1.5
791	mt2	RAILWAY VEHICLES.EQUIPNT	**3.6**	**8.1**	**11.7**	**4.0**	**8.2**	**12.0**
598	mt2	MISC.CHEMICAL PRODTS.NES					1.4	1.1
Total MT2: Process manufactures			*9*	*5*	*6*	*8*	*11*	*10*
Average MT2			*3.2*	*5.1*	*7.4*	*10.5*	*9.2*	*7.7*
711	mt3	STEAM GENER.BOILERS,ETC.			1.2			
713	mt3	INTRNL COMBUS PSTN ENGIN	1.9					
714	mt3	ENGINES,MOTORS NON-ELECT	**4.8**	**4.8**	**7.3**			
722	mt3	TRACTORS	3.1	2.9	1.7			
735	mt3	PARTS,NES,FOR MACH-TOOLS	1.0	1.1				
737	mt3	METALWORKING MACH. NES	2.3	1.5	1.0	**2.5**	**2.6**	**3.5**
742	mt3	PUMPS FOR LIQUIDS,PARTS	1.3	1.0				
746	mt3	BALL OR ROLLER BEARINGS	2.5	1.7	1.5		1.5	1.3
749	mt3	NON-ELECT MACH.PARTS,ETC	1.0					
772	mt3	ELEC.SWITCH.RELAY.CIRCUT	1.0					
773	mt3	ELECTR DISTRIBT.EQPT NES	1.1		1.2		**4.1**	**4.9**
775	mt3	DOM.ELEC,NON-ELEC.EQUIPT	1.4					
812	mt3	PLUMBNG,SANITRY,EQPT.ETC	1.1		1.3			
813	mt3	LIGHTNG FIXTURES ETC.NES	1.1					
891	mt3	ARMS AND AMMUNITION	7.1					
Total MT3: Engineering manufactures			*14*	*6*	*7*	*1*	*3*	*3*
Average MT3			*2.2*	*2.2*	*2.3*	*2.5*	*2.7*	*3.2*
Total MT			**25**	**11**	**13**	**10**	**14**	**13**

			Russian Federation			EU-27		
			2000	2005	2008	2000	2005	2008
HIGH-TECHNOLOGY EXPORTS								
716	ht1	ROTATING ELECTRIC PLANT	2.2					
718	ht1	OTH.POWR.GENRTNG.MACH.	1.5	1.8	1.5			
748	ht1	TRANSMISSIONS SHAFTS ETC	1.3	1.5	1.8			1.0
771	ht1	ELECT POWER MACHNY.PARTS	**2.5**	**2.3**	**4.4**			
778	ht1	ELECTRIC.MACH.APPART.NES	1.2					
Total HT1: Electronics and electrical			*5*	*3*	*3*	*0*	*0*	*1*
525	ht2	RADIO-ACTIVE MATERIALS		1.6				2.5
712	ht2	STEAM TURBINES	**6.1**	**7.7**	**4.9**	1.7		
Total HT2: Other high-technology			*1*	*2*	*1*	*1*	*0*	*1*
Average HT			**2.5**	**3.0**	**3.1**	**1.7**	**0.0**	**2.5**
Total HT			**6**	**5**	**4**	**1**	**0**	**2**

Source: Author's calculations based on UN Comtrade Online Database.

This finding is in contrast with the trends described earlier in sections 3.2 and 3.3, showing a U-turn in the overall share of CIS in Ukrainian exports, and an increase both in relative and absolute terms of technology-intensive exports to the CIS, in particular in 2005, the year when many medium-technology products lost their RCA. Recalling that the denominator of the RCA index is measuring the supply of a particular product to the comparator market (EU or Russia) by all countries of the world, the loss of competitiveness on the Russian market by Ukraine can be explained by Russia importing even larger volumes of certain products supplied by Ukraine from the rest of the world. This, in turn, relates back to the economic recovery in Russia, which started in 1999 and gained momentum throughout the first decade of 2000s, generating high aggregate demand which seemingly had to be met by expanding the range of suppliers, thus diminishing the role played by Ukraine.

It is notable from Table 14 that in trade with the EU the RCA in medium-technology products is mainly represented by the group MT2 "Process manufactures", while in trade with Russia – by group MT3 "Engineering manufactures". The latter contains products of higher added value; hence once again Ukraine fails to show competitiveness in this category on the EU market. One positive trend on the EU market is a growing RCA in railway vehicles and equipment (from 4 in 2000 to 12 in 2008), and the emergence of two new product groups with RCA in MT3 category – ball or roller bearings and electrical distribution equipment.

In high-technology exports Ukraine has even less RCA, on both markets. The situation is slightly better with the Russian market, where in 2000 Ukraine had 6 competitive product groups, but by 2008 this number was down to 4, a trend similar to the medium-technology exports.

4.4. Conclusion

This section revealed trends that are different from those described in CHAPTER 3. CHAPTER 3 showed that the role of the EU as a destination market for Ukrainian products, in particular for more technology-intensive products, has been diminishing recently giving way to the CIS. The factor content analysis, in contrast, showed that the share of medium-technology products in total exports to the EU has been growing; in fact it was the most dynamically growing group, while the share of resource-based and low-technology products declined. At the same time medium-technology exports to Russia were growing less dynamically, but still constituted a higher share than that in trade with the EU (44 percent *vs.* 33 percent).

As far as competitiveness is concerned, in 2000 Ukraine had more product lines competitive on the Russian market than those on the EU market. However, by 2005 Ukraine lost competitiveness in a fifth of products on the Russian market, and although it regained some of the positions by 2008, the number of products with an RCA was anyway higher in trade with the EU. Moreover, wherever present, Ukraine's comparative advantage is more intense in trade with the EU than that in trade with Russia. This can be explained partially by high complementarity of trade with Russia and CIS countries in general[73] and by the similarity of production structures in Russia and Ukraine, which diminishes the demand for Ukrainian substitutes.

Although in 2000 Ukraine enjoyed a comparative advantage across many technology-intensive products in trade with Russia, by 2008 some of it has been lost (in particular in power-generating machines and in electric and metalworking machinery). In contrast, in trade with the EU[74] apart from steel almost no manufactures enjoyed a revealed comparative advantage.

[73] Whereby CIS countries' import structure is similar to Ukraine's export structure, thus making it more difficult for Ukraine to 'stand out' relative to competing suppliers.
[74] Measured on a two-digit level in SITC commodity classification.

Breaking down the RCA analysis further, to a 3-digit level, to focus on the medium- and high-technology exports, the data shows that in trade with the EU there was a positive trend – the number of medium-technology products with RCA has increased, in line with the factor content analysis. In trade with Russia, on the contrary, the seeming increase in the importance of MT exports from the factor content analysis was not pronounced in the RCA analysis. The latter showed that between 2000 and 2008 Ukraine lost competitiveness in 12 out of initial 25 medium-technology products. This implies that even though Russia was importing more medium-technology products from Ukraine in absolute terms, it was at the same time importing even higher volumes of similar products from other countries, causing Ukraine to lose its positions and some of the RCA.

The lower number of product lines with the RCA on the Russian market, lower intensity of competitiveness indices and a simultaneous loss of RCA in many products come as a stark contrast with the analysis in CHAPTER 3, which showed a persistent increase in the role of CIS for both overall exports and technology-intensive exports in particular. The likely reason for this is a size of the Russian market. A rate of growth comparable to that of Ukraine translates into a much higher increase in the absolute demand (in particular for technology-intensive products that are needed for further industrial upgrading), which Ukraine finds hard to keep up with. This negative trend in relative competitiveness on the Russian market serves as a warning for Ukraine for the medium- to long-term. It does not, however, change the fact that CIS and Russia in particular have become more important export partners for *Ukraine* in the past several years. The ongoing catching up in growth in these countries is likely to continue driving higher demand for imports from Ukraine and from the rest of the world. At the same time Ukrainian exporters need to be aware of the dynamics on the global markets and of a fiercer competition they are facing on the traditional markets of CIS and Russia.

As far as trade with the EU is concerned, while the analysis in CHAPTER 3 showed a negative evolution in the share of the EU in certain sectors, the factor content and the RCA analysis on a more detailed product level revealed some positive trends. The number of product groups with the RCA has increased in medium-technology products (both process and engineering), although the average intensiveness of RCA indices has fallen in the former group.

Bridging the findings from CHAPTERS 3 and 4, it appears that while Ukraine is clearly struggling to compete on the EU market, it would be a mistake to say that it is losing its positions there. On the Russian market, on the other hand, while in absolute terms there is a strong positive trend, the medium- to long-term perspective is posing risks to Ukraine in view of the dynamically developing demand and competition on the Russian market.

CHAPTER 5. MACRO-LEVEL DETERMINANTS OF UKRAINIAN EXPORTS IN 1996-2004: STEEL MATTERS

5.1. Introduction

Analysis in CHAPTERS 3 and 4 showed that until recently Ukraine had been experiencing a considerable reorientation towards the European Union. As of 2005, however, CIS has seen a U-turn in Ukraine's export portfolio and recovered its position as a leading destination market for Ukrainian products.

On the backdrop of this variable dynamics in geographic distribution of exports, the study is focusing on regional trade blocs as determinants of Ukraine's export performance. Applying a traditional tool for analysing regional trade effects, the gravity model, this chapter is trying to explore the role of traditional macro-level factors that have been used in the trade literature. The main focus of this analysis is the effect of the various regional trade agreements (RTAs) that Ukraine's trade partners are members of, on Ukraine's exports, paying particular attention to the trade blocs in closest proximity – the old EU – 15 member states that formed European Union prior to 2004, Central European Free Trade Area, which until 2004 included 10 new EU members (or candidates prior to 2004) as external trade blocs, and the network of free trade agreements within the CIS, as an internal trade bloc. Another important determinant is the evolution of aggregate demand in the partner countries. As suggested in Chapter, it may have determined both the absolute changes of Ukrainian exports and the changes in the revealed comparative advantage, in particular on the Russian market. Controlling for aggregate demand and for natural geographic characteristics (proximity, common border, size and access to the sea), this analysis is trying to capture to what extent belonging to an (internal) trade bloc increases exports from Ukraine, and to what extent being excluded from an external trade bloc, or being left out from an enlarging trade bloc, may result in trade diversion for this country.

This exercise appears to be more accurate in a single-country setting employed here, as it allows decomposing regional effects in a way that would be difficult to explore in a multi-country gravity model, not least due to better data quality. This is done in order to clarify the conflicting findings in the literature about over- or under-performance of Ukrainian trade with

Western or Eastern trade blocs and to point out aspects in external trade policy of Ukraine, which require early attention of policy makers.

Given the specifics of the commodity composition of Ukrainian exports, where steel accounts for about 40 percent of total exports, analysis herein distinguishes between aggregate and non-steel exports to reveal any bias that the high share of one commodity could generate in aggregate results. Besides, steel is a sensitive commodity to trade, and often faces high tariff and non-tariff restrictions in the destination countries, thereby potentially causing a downward pressure on the effects of certain regional trade agreements on Ukrainian exports.

Section 5.2 provides the background information on trade, economic growth and exchange rate dynamics in Ukraine and their possible interaction. Section 5.3 presents the theoretical approach and the model, followed by data description in section 5.4. Section 5.5 includes the discussion of the results, which are further summed up in the Conclusion section.

5.2. Background information

Geographic distribution of exports

As discussed extensively in previous chapters, the trends in geographic reorientation of Ukrainian exports since the start of transition have not been consistent. The initial shock created by the collapse of the USSR was associated with a sharp decline of trade among FSU republics and an increase in the role of the rest of the world and, for Ukraine, the EU in particular (see Figure 3 on p.45). The role of the EU has been on the rise and by 1999 the EU-15, along with the twelve EU candidate countries, was the top destination region for Ukrainian exports. In 2005, however, the trend reversed and CIS regained its position as a dominant market for Ukrainian products. Since then the share of the EU has not recovered, while that of the CIS has been continuously rising. Among the rest of the world some of the most important trade partners are China, Turkey and the United States (see section 3.2.3 on p. 52 for a more detailed discussion). While the primary focus of this chapter is to explore the role of regional trade agreements in determining Ukraine's exports, the effect of China and Turkey as significant partners is also controlled for.

Commodity composition and high resource-dependence

The commodity composition of Ukrainian exports is dominated by resource-intensive products, in particular iron and steel. As Figure 7 on p. 51 shows, the share of base metals and

articles thereof consistently comprises 35-40 percent of total world exports. The commodity structure of exports is not analysed in this chapter, as this is done in detail in Chapter 3, but given the domination of the steel industry, it is important to distinguish between total and non-steel exports in this analysis, in order to avoid generalising the results where they may be distorted by one commodity. The study therefore compares the effects of external and internal regional trade agreements for total and for non-steel exports.

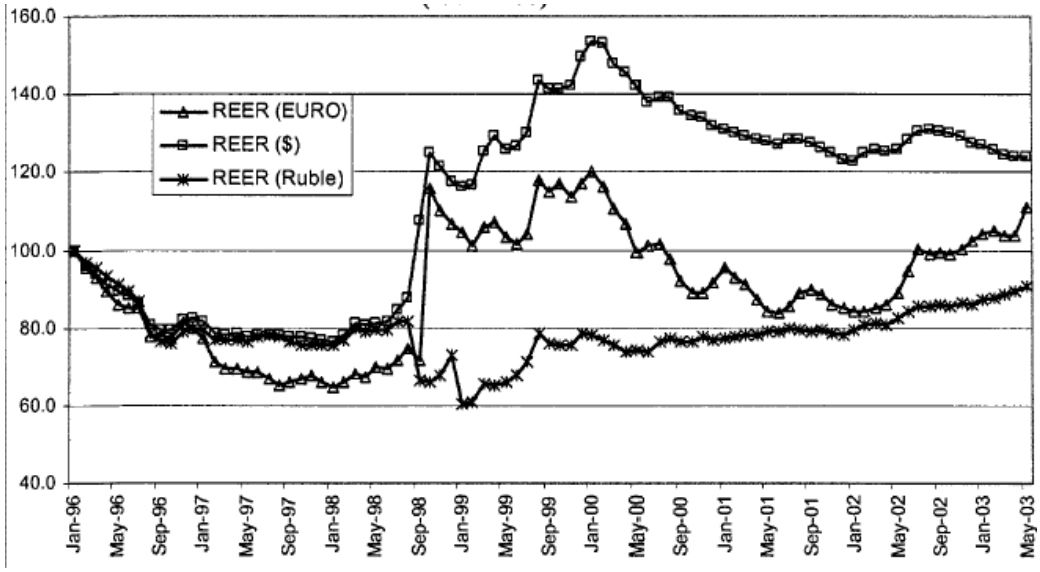
1998 financial crisis, exchange rate and external sector

In 1998 both Russia and Ukraine were hit by financial crises, which had an impact on the subsequent evolution of their external sectors, and economies in general.

The negative investor sentiment in the aftermath of the 1997 Asian financial crisis resulted in massive capital outflows from Russia and Ukraine, which had been pursuing unsustainable government debt levels (mainly in high-return short-term treasury bills). In order to restructure and repay where possible this debt Ukrainian government had to borrow heavily from the National Bank (NBU). At the same time the NBU was selling foreign exchange on the market to support hryvnia. This was unfeasible for the foreign exchange reserves and in September 1998 the NBU stopped its interventions and allowed hryvnia to float. Russian rouble, however, depreciated even further (see Figure 19 below – while depreciating against the US dollar and the euro, hryvnia appreciated relative to the Russian rouble). This relative appreciation of the Ukrainian currency against the Russian rouble, combined with the negative economic growth and the fall in aggregate demand for imports in Russia, triggered a partial redirection of Ukrainian exports towards countries offering better terms of trade. Thus, exports to the EU-27 and to Asia and the Middle East continued to grow.

Although being a strong shock for the economy, in the medium-term the depreciation of the hryvnia improved Ukraine's external competitiveness and spurred exports. Given the need to diversify exports, which were highly concentrated on the CIS market and Russia in particular, the shock was also beneficial for the geographic export structure. At the same time, since 2002 the National Bank of Ukraine has been following a policy of *de facto* fixed exchange rate, which, as theories promoting stable exchange rates would predict, may have had a positive effect on the growth of exports.

Figure 19. Real effective exchange rates of Ukrainian hryvnia (CPI-based), 1996=100



Note: downward trend means appreciation of the REER, and increasing – depreciation.

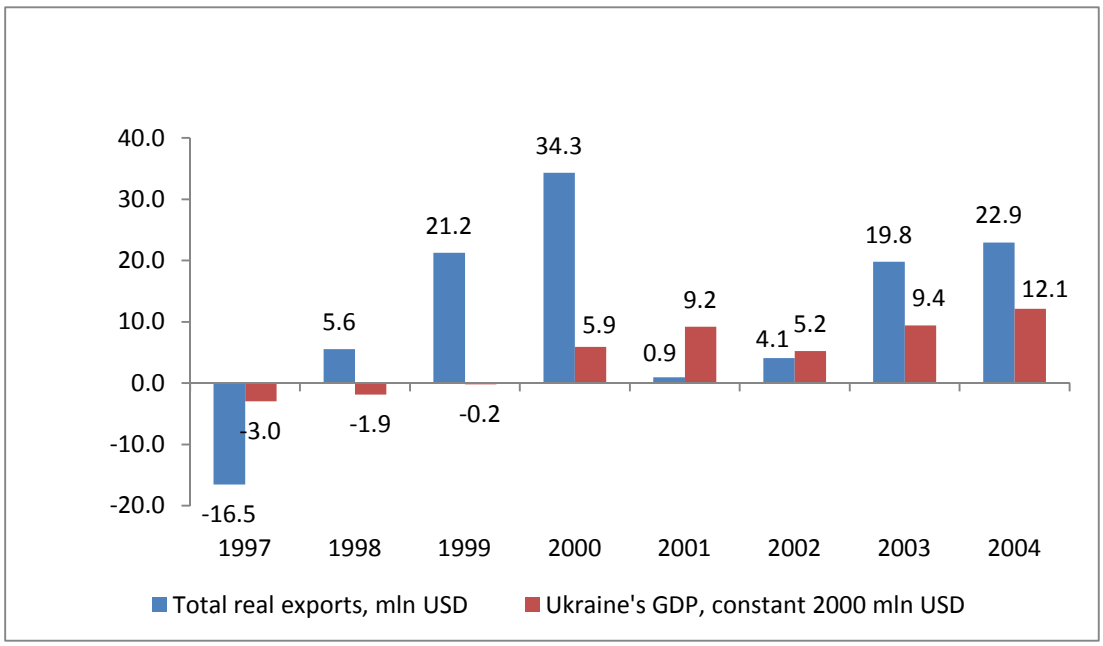
Source: World Bank (2004)

Exports and GDP

Since one of the main explanatory variables in gravity-type models is GDP, the growth rate of real exports is compared below to the growth of real GDP (in constant 2000 US dollars). Some correlation between exports and GDP can be observed, and although in recent years growth has been mainly due to the increased consumption and investment, growth in 2002-2006 was also boosted by the terms of trade improvement, due to higher global steel prices and improved competitiveness due to real exchange rate depreciation (OECD, 2007). [75]

[75] However, as will be explained below, in our model we do not explore the causality between exports and Ukrainian economic growth and vice versa, primarily because in one-country setting the variance is mostly explained by the demand-side growth, i.e. growth of partner countries' GDP.

Figure 20. Growth rates of real exports and GDP, % change year-on-year



Source: WB World Development Indicators for GDP data, IMF DOTS for exports

The period under analysis

The analysis in this chapter was undertaken in 2005/2006, when the latest available cross-country data was up to 2004. The fact that the data-set was manually created by the author makes it too time-consuming to update the analysis to include later years during the course of writing up this thesis. This will be done, however, should publication of this study be considered.

Global steel market developments as a factor in Ukrainian export performance

Before passing on to the discussion of the model and the results it is worth outlining briefly the developments on the global steel market, as the distinction between steel and non-steel exports is an important part of this analysis.

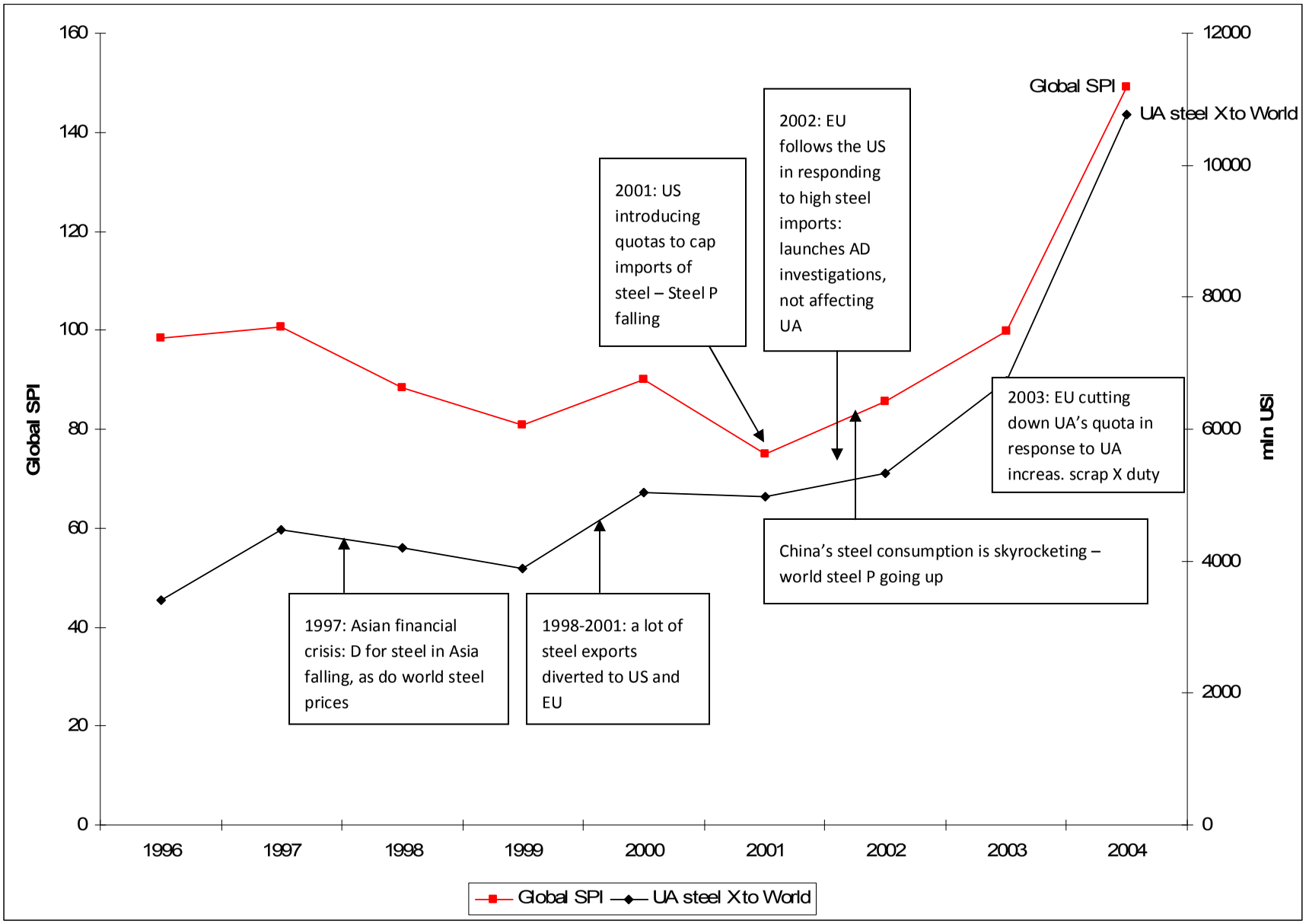
Figure 21 roughly outlines the main events from 1996 to 2004. The kick-off point to much of the recent steel prices dynamics was the 1997 Asian financial crisis – it decreased the demand for steel in the affected countries[76] and consequently the world steel prices. Ukrainian exports of steel in value terms were respectively declining between 1997 and 1999.

[76] Thailand, Indonesia, South Korea were the countries where initial securities defaults started, Hong Kong, Malaysia, Laos, Philippines followed. China, Taiwan and Singapore were relatively unaffected.

Besides, in 1998-1999 Ukraine had to cope with a financial crisis of its own. The reaction of the markets to the price drop was to divert a lot of steel exports to the US and Europe. US reacted promptly by opening safeguard investigations in 2001 on 33 products and imposed high additional duties on 14 products in 2002, which was against WTO rules and was subject to criticism by the international community (Bendini, 2007). Therefore Ukrainian steel exports declined again slightly in 2001 (not significantly, due to relatively low share of the US). Besides, in 2001 the EU, fearing being flooded with products that could no longer be exported to the US, also took safeguard measures, which did not, however, concern Ukraine, as with Ukraine, Russia and Kazakhstan the special regimes apply, with quotas being negotiated annually (European Commission, 2002).

Since 2001-2002 the world steel market, and particularly price movements became defined by the Chinese economy – while its steel consumption had been growing by 2.6 percent per year in the period 1995-2002, since 2002 it has been growing by some 25 percent per year. To compare, in the rest of the world since 2001 the average annual growth of steel consumption has been 2.1 percent per year.

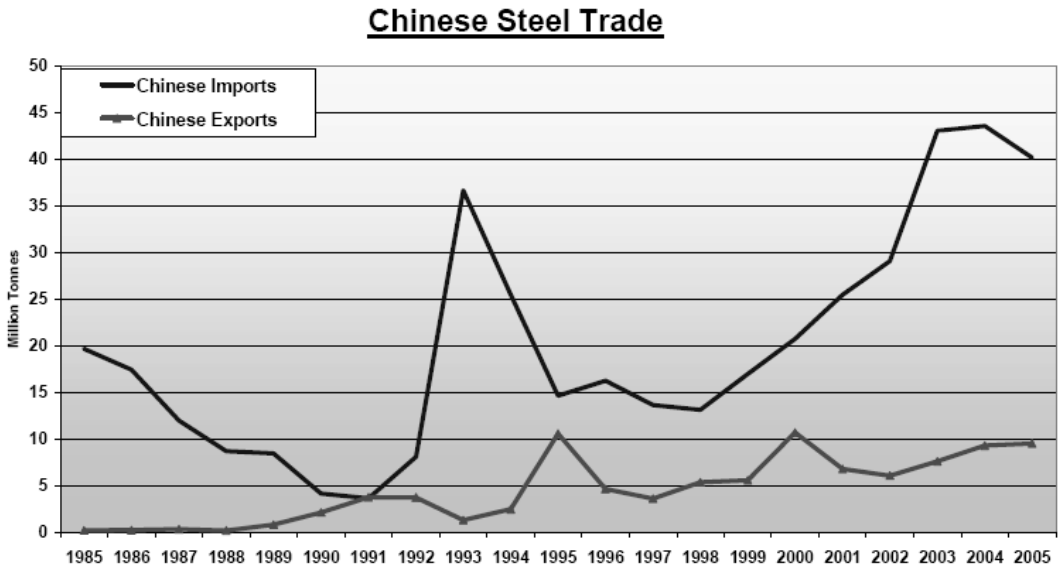
Figure 21. Global steel market developments and Ukrainian exports of steel to the World



Source: Steel prices: www.cruspi.com , Ukraine's steel exports – UN Comtrade Database, author's research

Figure 22 shows the acceleration of China's steel imports since 2002 (OECD, 2004). Partially because of this, when in 2003 the European Union cut down Ukraine's quotas on certain steel products by 30 percent to 184,500 tonnes per annum, it did not affect Ukraine's aggregate steel exports. The steel exports to China doubled in 2003, but other markets, in particular South East Asia and Middle East, were dynamically gaining importance for Ukraine as well (See Annex 7).

Figure 22. Chinese Steel Trade



Source: OECD (2004)

Below follows the description of the theoretical foundation of the analysis, which aims to disentangle the effects on exports of regional trade groupings of immediate concern to Ukraine – the CIS, with its network of bilateral free trade agreements, and the EU, as a big neighbouring bloc granting duty-free access to the insiders, and potentially causing a trade diversion effect to the outsiders.

5.3. Theoretical approach and the model

The main focus of this analysis is the role of regional trade groupings in determining the evolution of Ukrainian exports, focusing on the EU as the most important external trade bloc, and on CIS with its network of bilateral free trade agreements as an internal trade bloc. With internal trade blocs the expectation is to find a positive association with Ukraine's exports, while with the external bloc, without strong expectations, the effect of an increasing EU internal market on Ukraine as a non-member is explored. On the one hand, there should be a positive association due to restoration of more natural levels of trade after the collapse of the

Soviet system, given the geographic proximity and economic mass of the EU. On the other hand, as the Vinerian customs theory (Viner, 1950) posits, when the enlargement of a customs union takes place, trade may either be created, if accessing countries are more efficient than non-members, or diverted from non-members, even if the latter had been more efficient producers prior to the creation of a customs union.

In applied trade literature the effect of trade blocs on trade flows has traditionally been investigated by means of gravity models. Gravity models are used in various social sciences to predict and describe certain behaviour that mimics gravitational interaction as per Newton's law of gravity.[77] In relation to trade it was first applied by Tinbergen (1962).

Gravity model has been one of the most proliferate approaches to modelling trade flows, both due to its simplicity and empirical success. It gained its name from Newton's gravity law that states that the gravity between two bodies is proportional to their masses and inversely related to the distance between them. Therefore, in its basic form the model in relation to trade looks like:

$$F_{ij} = G\frac{M_i^{\alpha} M_j^{\beta}}{D_{ij}^{\theta}},$$

where Fij is a trade flow between countries i and j (varies in different studies, either the total average trade turnover, or imports and/or exports separately), M are the economic sizes of countries i and j (usually measured by GDP or GNP), and D is the distance between them (usually measured from capital to capital) and G is a gravitational constant (as specified in Head (2003)).

In log-linear form the gravity equation takes the form:

$$F_{ij} = G + \alpha M_i + \beta M_j - \theta D_{ij} + \varepsilon_{ij},$$

where all variables are as defined above, α, β, θ are the parameters of interest, and ε_{ij} is the normally and independently distributed error term. Hence a trade flow will be positively and proportionately related to the countries' GDP and negatively related to the distance between them. There are various opinions on whether the GDPs should be specified as a sum or as a product. Product of GDPs allows for a multiplicative effect of size, whereby two (economically) medium countries will trade more than a small and a large country. Helpman

[77] (http://en.wikipedia.org/wiki/Gravity_model)

(1987) and Helpman and Krugman (1985) were the fundamental works that provided the theoretical rationale for the idea that bilateral trade depends on the product of GDPs. The same approach is taken here.

The distance represents not only the hampering effect of the geographical distance, but serves as an estimate of a range of trade costs: transportation and customs clearance costs, perishability of goods and hence impossibility of selling certain goods at high distances, transaction costs of searching for trading opportunities in distant territories, "cultural costs", also known as "psychic distance" following Johanson and Vahnle (1992), and, as noted by Krugman, communication costs (Head, 2003). Hence, the distance variable in this specification of the model could incorporate a wide range of factors, which would tell us a lot in general and nothing in particular. Therefore more specific variables are usually added to the analysis to disaggregate this effect, the most popular ones – common language, common border and landlockness as fixed country effects. Thus, common language, common border and landlockness controlled for, the distance variable would retain: the effects of actual distance and transport costs associated with it; tariff and non-tariff barriers imposed by a country's trading partners; and the remaining transaction costs. More variables were also added to the effect of size: land size and income per capita.

In the case of our analysis common language would coincide with the CIS as a trade bloc dummy, as all former Soviet Union countries are bilingual with Russian either the main or a second language. Therefore only the CIS dummy is left in this regression analysis, incorporating common language effects, as well as cultural, historical and social effects.

The GDP per capita is added to gauge for the effect of development, rather than mere economic size. The effect of this variable is however ambiguous. The standard gravity model predicts that countries with higher levels of income (measured by GDP per capita) will have a higher demand for imports and will thus tend to trade more. In the formal theoretical trade literature, however, it has been treated differently.

Using GDP per capita as a proxy capital-labour ratio, the neoclassical (Heckscher-Ohlin) trade theory suggests that countries with dissimilar per capita incomes are likely to have different resource endowments, will offer different goods for trade, and will therefore be likely to trade more with each other. This implies a positive sign on the product of GDP per capita in the gravity model. At the same time, Linder (1961), being among the first ones to suggest that demand also plays a role in international trade patterns, proposed a hypothesis

that countries with similar levels of GDP per capita will have similar demand structures and will develop similar industries, and will therefore trade more with each other, particularly in similar products (e.g. Pagoulatos and Sorensen, 1975). This would imply a negative sign on the product of GDP per capita. Helpman and Krugman (1985) also used income per capita as a proxy measure of capital-labour ratio, and found that countries with similar levels of per capita GDP will trade more. In a related discussion, Deardoff (1998) argued that capital-rich countries will trade more with other capital-rich countries than with capital-poor countries and vice versa (see a more detailed discussion in Frankel, 1997: 60-61). This issue will be raised again during the discussion of the results.

As regional trade agreements were proliferating in the late 1980s and 1990s, the gravity model became a very popular tool for exploring the effects that trade groupings had on either members or those left-out, as well as for predicting trade potentials. The main questions usually posed in such studies are: (1) Are regional blocs natural in a way that neighbours tend to trade more and therefore form RTAs? (2) After controlling for the 'neighbour' effect, are RTAs increasing trade further? (3) Is there a potential for an increase in trade after an RTA is formed? (4) Does an RTA result in trade diversion away from non-members, thereby making it logical for them to join the RTA as well? (See Greenaway and Milner, 2002, for review). This study attempts to answer the *first two questions* with regard to Ukraine, and to draw conclusions as to the *fourth* question. Although the language often used in making inferences from the estimated point coefficients on regional trade agreement dummies includes "trade creation / trade diversion effects", these inferences are also rather empirical, as none of the theoretical justifications of the gravity model has so far focused on the Vinerian customs theory as such. So these reservations are made in this analysis as well.

The model

The study employs an extended version of the outlined above gravity model, including some of the mentioned additional variables.

$$X_{ijt\ aggr} \text{ or } X_{ijt\ non\text{-}steel} = \alpha + \beta_1 LPGDP_{ijt} + \beta_2 LPGDPCAP_{ijt} + \beta_3 LDIST_i + \beta_4 BORDER_{ij} + \beta_5 LPLAND_{ij} + \beta_6 LANDLOCK_j + \beta_7 CIS_{ij} + \beta_8 EU\_15_{jt} + \beta_9 CEFTA_{jt} + \beta_{10} CHINA + \beta_{11} TURKEY + \varepsilon_{ijt}$$

where all continuous variables are in natural logarithms, i – in this case is Ukraine, j – a partner country, t – year from 1996 to 2004, ε_{ijt} - independently and normally distributed with zero variance error term, and

X_{ijt} – exports from Ukraine, *i*, to its partner *j* at time *t,* first aggregate, then non-steel;

$LPGDP_{ijt}$ – log of pair-wise product of GDPs in year *t*;

$LPGDPCAP_{ijt}$ – log of pair-wise product of GDP per capita in year *t*;

$LDIST_{ij}$ – log of distance between partners' capitals;

$LPLAND_{ij}$ – log of pair-wise product of land areas;

$BORDER_{ij}$ - a dummy variable that takes a value of 1 if the two countries share a common land border, 0 otherwise;

$LANDLOCK_j$ – whether Ukraine's partner has access to the sea;

CIS_{ij} – 1 for a country *j* that is a member of the CIS and has a free trade agreement with Ukraine, 0 otherwise;

$EU\text{-}15_{jt}$ –1 for a country *j* that is a member of the 'old EU' at time *t,* 0 otherwise;

$CEFTA_{jt}$ – 1 if a partner country is a member of CEFTA at time *t,* 0 otherwise;

CHINA – a dummy variable for China;

TURKEY – a dummy variable for Turkey.

Thus, the model is a single-equation gravity model, analysing bilateral trade flows from Ukraine to most of its partners (170) in years 1996-2004[78]. Although gravity models are usually performed in a multi-equation setting, where data is for trade flows for all countries in the sample to most of their trading partners, in order to consequently extrapolate trade potentials for certain countries, a single-equation approach is valid as well and has been applied for analysing trade of a single country of interest (Lissovolik and Lissovolik, 2006 for Russia; Buckwalter, 1998 for Hungary). Also, since the coefficients of interest (on RTAs) exhibit little or no time variance, panel data with fixed effects model does not suit this model, as it would drop the time-invariant regional trade dummies. Therefore a simple econometric specification is adopted – yearly cross-sectional OLS regressions. Despite its simplicity, it allows to see the dynamics of the explored effects over time.

Exports, rather than aggregate trade flows, have been chosen as a dependent variable, because the primary aim of this study is to explore the determinants of Ukraine's export performance.

[78] In total 22 countries were excluded, exports to which were very low. These were mainly poor African countries and island states.

Besides, such specification has been argued to be a proper one in the literature (e.g. Matyas, 1997).

A word of caution needs to be made – the big role of the exchange rate fluctuations in 1998-2000 might be expected to decrease the goodness of fit of the model.

Recalling what was said above, the following research questions are posed in this analysis:

- Do neighbours tend to trade more with each other, accounting for other geographic characteristics, and therefore form RTAs?
- After accounting for the neighbour effect and other geographic factors, do RTAs further increase trade?
- Does an RTA result in trade diversion away from non-members, thereby making it logical for them to join the RTA as well? and
- Do different commodities (in Ukraine's case - resource-intensive goods, particularly steel) behave differently with regard to the above questions?

In order to answer these questions the following hypotheses for β_n coefficients of the equation are tested. Ukrainian exports are:

H1: Positively and proportionately related to the bilateral interaction of the GDPs and GDPs per capita, i.e. the coefficient on the product of GDPs should be around 1;

H2: Negatively and proportionately related to distance, with the coefficient around 1;

H3: Higher with the country that Ukraine shares a common border with;

H4: Negatively related to the bilateral product of geographical areas – bigger countries tend to be more self-sufficient and thus less dependent on imports;

H5: Lower to the landlocked countries;

The above are traditional gravity model hypotheses. The main focus of the analysis is, however, on the regional trade arrangement of immediate concern for Ukraine: (1) bilateral free trade agreements within the *CIS,* (2) The EU-15 bloc, (3) *CEFTA* and (4) controlling for *China and Turkey* as significant individual trade partners. Although Turkey is a member of the EU Customs Union, for demonstration purposes a specification separating the effects of the EU Customs Union and that of Turkey is reported here. The hypotheses tested in this respect are:

H6: The *CIS* dummy is expected to have a positive effect on Ukrainian exports;

H7: With respect to the *EU CU* the model is testing the hypothesis of potential trade diversion caused to Ukraine as a non-member, due to increased self-sufficiency of the EU-centred bloc, i.e. a *negative* effect;

H8: With regard to *CEFTA* no specific hypotheses are made, as greater integration with the EU could have a negative effect, while former common past within the Comecon[79] could imply a positive association;

5.4. The data

Data on exports was taken from the IMF Direction of Trade Statistics (DOTS), GDP data – from the World Bank World Development Indicators database. In line with Bergstrand (1985), the model accounts for the effect of growing prices, and the GDP deflator (also taken from WB WDI database) was applied to reach real GDP, and was also used to deflate nominal exports from DOTS.

Distance was derived from the US Department of Agriculture web-site. Land area was taken from the CIA World Factbook.

As far as regional trade bloc dummies are concerned, a few words are in order. Formally, CIS is not a regional trade bloc, as there is no multilateral free trade area among the members. Although the process of creating a free trade area within the CIS was initiated in 1994 with the conclusion of the Agreement on the Free Trade Area, it was never finalised – Russia's failure to ratify it was critical. But since all CIS members have bilateral free trade agreements among themselves, though some of them non-ratified, for the purpose of this analysis CIS is treated as a regional trade bloc. As shown by Cyrus (2002), informal trade groupings (such as Western Europe, Asia Pacific Economic Cooperation) tend to exhibit even stronger effects than formal trade blocs. On similar premises, after running the specification with EU customs union as an explanatory variable, which yields this variable insignificant throughout the years, the exercise is re-run with the EU-15 instead, primarily to distinguish the effect of Turkey, which has become Ukraine's major export partner recently. In this alternative specification EU-15 variable turns out significant in most years under the analysis. The breakdown of regional dummies is given in Annex 9.

[79] Council for Mutual Economic Assistance that USSR had with the Central and East European countries.

5.5. Discussion of the results

Cross-sectional OLS regressions with robust standard errors, to adjust for heteroskedasticity, were performed in STATA 9.1.

The analysis first looks at the effect that the economic mass and the level of output, as well as natural geographic country characteristics, have had on Ukraine's aggregate and non-steel exports (Table 15 and Table 16 respectively), and then, having controlled for the latter effects, introduces regional trade agreement effects, again distinguishing between steel and non-steel exports (Table 17 and Table 18). In order to reach non-steel exports groups 72 "Iron and Steel" and 73 "Articles of iron or steel" in HS-1992 classification were deducted from total exports.

Basic gravity variables: income and fixed-country effects

Table 15 (with aggregate exports as a dependent variable) and Table 16 (non-steel exports) show the effect of GDP, GDP per capita and of fixed country-specific characteristics – distance, common border with Ukraine, access to the sea and geographic size. In both specifications the *H1* and *H2* are confirmed – exports are positively related to partner's *GDP* and negatively related to the *distance* between them. Ukraine seems to exhibit a proportionally stronger relationship between exports and GDP in the later years of the analysis, approaching and even surpassing a one-to-one change, which may imply a growing absorption capacity in the importing countries.[80] Some authors (Davis and Weinstein, 1998) treat such a disproportionately large response of trade to income as evidence of economies of scale. Magnitude aside, the finding is important in a broader context – geography (fixed effects) and demand in partner countries explains from 51 to 67 percent of the variation in value of real exports from Ukraine between 1996 and 2004 (R^2 0.51 to 0.67 in Table 15). As will be shown below, adding regional trade blocs explains only a fraction of additional variation. This is consistent with findings for OECD countries. Thus, Baier and Bergstrand (2001) find that GDP growth explains 67 percent of the average trade growth in OECD countries in the period between late 1950s and late 1980s.

The increasing hampering effect of distance is remarkable. In the era of globalisation this effect is expected to decrease over time, which does not seem to happen in this case. Buch et

[80] In order to decompose the effect of Ukraine's GDP growth from that of the importing partners' GDP we ran a separate regression, leaving only natural logarithm of importing partners' GDP instead of the product of GDP. The results confirmed that the coefficient on the product of GDPs is driven by the variation in partner countries' data, since Ukraine's GDP is constant in each annual regression.

al (2004) note that the distance coefficient over time cannot be interpreted in terms of the rising or falling distance costs. Rather, an increasing distance coefficient indicates that trade with countries far away decreases relative to trade with countries closer to the home country.

Unlike hypothesised, *GDP per capita* is of a negative sign. Following the discussion above, two competing hypotheses can be considered when interpreting this negative sign. The Heckscher-Ohlin trade theory would predict a *positive* sign, as countries with dissimilar endowments, or capital/labour ratios (proxied by GDP per capita), would tend to trade more with each other, implying a positive sign on the difference between per capita incomes[81]. On the other hand, another perspective proposed by Linder (1961), and related to the developed later Krugman's new trade theory, suggests that countries with similar levels of income will have similar preferences for analogous, but differentiated products (i.e. causing more intra-industry trade), thereby predicting a negative sign – the bigger the difference between partners' GDP per capita, the lower will be the trade between them.

Therefore the negative sign on per capita income most likely reflects the confirmation of the Linder hypothesis – *ceteris paribus* Ukraine sells less goods to countries with higher level of income (and of economic development) and more to countries of similar level of income. This seems plausible, given the high share of CIS and Asian countries in total Ukrainian exports, and relates back to the analysis of trade patterns in CHAPTER 3, which showed little reorientation of Ukrainian exports towards European Union and other advanced economies.

Passing on to the *'Neighbour effect'* (*H3*), the effect of common border is indeed positive and significant, increasing Ukrainian export performance by 145-300 percent (exp(.9)-1=1.45 and exp(1.4)-1=3.00). Thus, neighbours do tend to trade more than otherwise equal countries not sharing a common border and therefore will be interested in forming regional trade agreements to increase this trade further. The fact, however, that this positive effect declines from 1996 to 2001 suggests that Ukraine has somewhat diversified its trade away from immediate neighbours – Central and East European countries and bordering CIS members (Russia, Belarus and Moldova; trade with Moldova, however, has increased, therefore only Russia and Belarus could have exhibited a negative effect).

As to the other fixed country effects, the hypothesis of *larger countries* being more self-sufficient (*H4*) cannot be rejected only in three years out of nine (Table 15). The hypothesis of lower trade with *landlocked countries* (*H5*) also finds little support in the basic specification.

[81] In our case, although we have products of GDPs per capita, and not difference, higher values of our observations are analogous to bigger difference from Ukrainian GDP per capita.

Basic gravity variables: income and fixed-country effects – non-steel exports

When steel exports are taken out from the above specification (Table 4), the magnitude of the negative effect of the GDP per capita is less pronounced and is significant only in the last three years. This means that the higher the level of income of Ukraine's trading partners, the less steel-containing products Ukraine will sell there. This result could relate to the finding of Bergstrand (1989), who suggested that traded commodities tend in an average sense to be more labour-intensive or necessities, if the sign on per capita income of the importing country enters the equation with a negative sign[82]. Besides, among countries with higher income USA and the EU account for the biggest share, and precisely these countries have very protectionist policies for steel imports, which could have determined this result.

The coefficients on *distance* are 15-30 percent higher for non-steel products, depending on the year, which is logical, given the fact that non-steel products contain 'perishable' goods, such as agricultural products and dangerous to transport chemicals, on which distance will have a stronger negative effect.

The 'neighbour effect' is even stronger for non-steel exports than for steel-containing exports, as it is significant in all but one year under analysis. This most probably reflects higher competitiveness of Ukrainian manufactured products on CIS markets due to similar tastes, standards and quality requirements.

The effect of being *landlocked* is still insignificant, as with aggregate exports. The effect of geographic *size,* although slightly significant for steel-containing exports, for non-steel products is not significant at all.

Having explored the natural geographic effects and the effect of economic mass, the chapter proceeds to look at how, on top of these, regional trade agreements can further increase trade.

Regional trade agreements

CIS

What can be noted with respect to the *regional trade groupings* is first of all the strongest positive effect of the *CIS* dummy, which boosts Ukraine's export performance by 360-1500 percent.[83] And this effect goes beyond the 'neighbour effect' – it is always significant and much higher in magnitude. This answers one of the above research questions – free trade

[82] And this is similar to our specification, as in a one-equation setting the product of incomes per capita captures constant Ukrainian GDP per capita, and variable importers' GDP per capita.
[83] Exp(1.53)-1=3.6 in 2003 and exp((2.82)-1=15.8 in 1996.

agreements signed between neighbours (CIS members) do increase trade further than their economic masses and fixed country-effects would predict.

The strong positive coefficient on the CIS dummy, however, incorporates factors other than 'neighbour effect' and free trade regimes. Similar tastes, quality and technical standards, common language and low level of cultural barriers account for a fair share of this positive effect.

The positive CIS effect was declining between 1998 and 2003, but picked up again in 2004. A possible explanation for the decline can relate to what was said above – Russian economy, the single most important partner in the CIS, started to grow buoyantly since 1999, to some extent crowding out products of similar quality from Ukraine. Besides, Russian economy became more competitive also in terms of its exchange rate, due to higher devaluation of the ruble relative to hryvnia. The pick-up since 2003 could reflect the adjustment of Ukrainian producers to the new market conditions in the CIS economies, and diversifying away from the more competitive Russian market to other CIS markets. Thus, in the period under investigation, Russia's share in total exports reduced from 38.6 percent in 1996 to 17.83 in 2004, that of Belarus – from 5 percent to 1.7 respectively, while the share of Moldova grew from 1.6 to 2 percent, and Kazakhstan – from 0.6 to 1.9 percent.

The coefficients on the CIS dummy for the aggregate exports regression are over 2 until 2001 and are declining thereafter. Freinkman et al. (2004: 37) obtain similar coefficients for overall CIS trade, however their coefficients are increasing from 1.52 in 1994 to 1.92 in 2001. The years after 2001 are not covered in their analysis.

Non-steel exports to CIS

The effect of CIS membership on non-steel exports is also consistently positive, does not exhibit a declining trend as with aggregate exports, and is stronger than the latter, suggesting that non-steel products have been more competitive on the CIS market. Moreover, more recently the positive difference has become bigger than before (in 2001-2004 the coefficients on CIS dummy were 40-80 percent higher in non-steel regression than in the aggregate one, while until 2001 this difference did not exceed 30 percent). This means that Ukraine has diversified the commodity structure of CIS exports away from steel, which fact, most probably, is chiefly explained by Russia's growing self-sufficiency in production of steel pipes since 2001. On the other hand, such a reduced access for one major commodity can be positive in the medium- to long-term as it exerts a competitive pressure on producers to

diversify production, and not only within the same product group, but to other products as well, which eventually reduces the vulnerability to external price shocks.

The strong performance of non-steel exports, in fact the strongest among the controlled RTAs, is due to the effects other than aggregate demand growth and relative income per capita, as these are captured in the GDP and GDPCAP variables. Therefore the positive effect of the CIS is likely to be due to similarity in the markets, consumer tastes, and preserved integrated production processes in certain industries (e.g. in aviation and military production).

Aggregate exports to the EU-15

The European Union is an external trade bloc, with which Ukraine enjoys a preferential trading regime under the Generalised System of Preferences, which reduces import tariffs on non-sensitive products. Steel and agricultural products fall outside this regime – they are protected by high import duties and other non-tariff restrictions. It is worth noting that while with the rest of the world the EU applies ad hoc steel quotas (such as those introduced in 2002), with Ukraine, Russia and Kazakhstan it applies a regular quota regime on the basis of annually concluded agreements.[84] Quotas, as a restrictive measure running against WTO rules, clearly inhibit a potentially positive effect that the EU given its proximity and high level of income could have.

From the regression analysis in Table 18 one can see that throughout the period in question the EU-15 has a negative sign, which turns statistically significant as of 2000. Therefore, the observed positive trends in absolute volumes of exports to the EU are not supported by the statistical analysis – there are some, especially recently, barriers to deeper economic integration. Comparing aggregate and non-steel exports can help to reveal the roots of these barriers.

As to the findings in the literature on trade creation / diversion effects of the EU customs union, it has been found that the EU customs union has generated substantial increase in intra-regional trade, often *at the expense* of the rest of the world (e.g. Carrere, 2006; Soloaga and Winters, 2001; Frankel et al., 1997). A similar negative sign on trade between the EU and CIS countries has also been found by Kalyna (2001) – CIS countries under-trade approximately by 15 percent with the EU. Hence, there is a "domino effect" for Ukraine – the incentive for countries left out of the customs union to join as well, or at least to obtain a free trade regime with the latter. Some studies, done however in a multi-equation setting, have found a positive

[84] Until Ukraine's accession to WTO in 2008.

sign on the EU dummy in trade (not exports) with Ukraine (e.g. Maryanchuk, 2005) or with CIS (e.g. Fidrmuc and Fidrmuc, 2003), although the latter study did find a negative effect in the period 1990-1994. As far as Maryanchuk's result is concerned, the finding is that average trade is positively related, not exports – therefore this effect could be driven by growing imports from the EU, not exports.

Non-steel exports to the EU-15

The most striking difference between aggregate and non-steel exports to the EU is that EU-15 dummy in the latter case does not have a statistically significant negative effect during most of the period under analysis, except 2004. This means that Ukraine is under-exporting particularly steel exports to the EU. Therefore, it can be assumed that if it were not for the dampening effect of quotas, the effect of the EU could be positive.

The direct reason for the significantly negative effect on exports that include steel must be the quotas on steel imported from Ukraine, and their reduction in 2003 by 30 percent. This was done in response to Ukraine's imposition of a substantial export duty on scrap metal, doubling the existing 15 Euro/tonne to 30 Euros (World Bank, 2005).

On the other hand, absence of a significantly positive effect of the EU-15 with non-steel exports shows that these products are not yet competitive on the EU market. Part of the suppressed positive effect could be due to high protection in agriculture, but until Ukrainian products comply with the standards and sanitary and phyto-sanitary requirements of the EU it is hard to say whether only tariff protection is holding back Ukraine's positive performance in this sector. Sectors other than steel and agriculture are not that highly protected by the EU, therefore it is most probably not due to trade diversion. However, in order to be more specific a more disaggregated analysis of non-steel exports would be needed.

CEFTA

As far as CEFTA countries are concerned, no significant effect is observed when aggregate exports are taken as a dependent variable.[85] This as well could be taken as evidence of a suppressed positive effect, as CEFTA countries are neighbouring Ukraine and due to previously close economic integration within Comecon could be expected to be positively associated with Ukraine's export performance. On the other hand, the positive effect could be suppressed by preparation to the EU accession, accompanied by trade liberalisation with the

[85] Although CEFTA variable has a 0.51 correlation with border, when an alternative regression is run without border, no significant change of coefficients on CEFTA is observed.

EU since early 1990s, and by the tendency of economic agents to reorient their trade away from the former Soviet Union bloc. However, before making such a conclusion, the study looks more closely at the possible reasons for this effect, comparing the total and non-steel export results.

Non-steel exports to CEFTA

What is seen with non-steel exports is that here CEFTA has a significantly positive effect in most years under observation. It declines however since 2002, as the accession gets closer. The differential on the coefficients is quite strong as well – Ukraine tends to sell 200-400 percent[86] more non-steel products to CEFTA than to an otherwise equal country.

The following reasons can account for the underperformance of steel products:

- First of all, CEFTA countries, in particular Hungary, Czech Republic, Poland and Slovakia have their own steel industries, manufacturing products of a quality/price range similar to that of Ukrainian steel products.
- Secondly, steel products are mainly transported by sea, and land transportation increases the cost of exported products. This is confirmed by the significant negative effect of *landlockness* dummy in the steel-containing specification – lack of access to the sea makes Ukraine sell on average 40-70 percent less steel products to that country. At the same time this factor is insignificant in the non-steel specification.

At the same time membership in CEFTA is positively associated with non-steel exports. The most dynamically growing groups in trade with CEE were wood and articles of wood and paper, machinery and equipment, textile and clothing, mineral fuels, some organic chemicals and plastics. Partially this positive effect could be explained by the same factors that play a role in trade with CIS – similarity in tastes, preserved business links from the past, lower language barriers. On the other hand, foreign direct investment (e.g. in wood processing, or outsourcing in textile and clothing industries) is one of the driving forces as well.

Why could this positive CEFTA effect cease since 2002? Looking at the dynamics of exports from CEFTA countries as a share of respective exports to the world Annex 8, it occurs that the main non-steel category that experienced a decline since 2002 is "Mineral fuels, lubricants and related materials" (mainly represented by refined petroleum products and coal/coke exports) – while in 2000 around 44 percent of total exports of this category went to CEFTA

[86] The coefficient varies in the range 1.15 – 1.9, exp(1.15) -1 = 2.15 and exp(1.65) – 1 =4.20

countries, in 2001 – 33 percent, since 2002 this figure has been down to around 27 percent. In this group the biggest decline was observed in exports of coal and coke to Bulgaria – it accounted for 34.2 percent of exports of this category in 2001, and only for 9.4 percent in 2004, and Slovakia – down to 2.8 percent from 9.7 percent respectively.[87] Whereas no decline in absolute terms was observed with exports of petroleum products to CEFTA, this region's share decreased due to significant increase of petroleum exports to Singapore (from 0.43 percent in exports of refined petroleum to the world to 5.14 percent), Switzerland (from 1.34 to 10.62 percent), Turkey (from 0.3 to 4 percent).

As already mentioned in CHAPTER 3, the decline in exports of coal and coke to CEE countries was due to the domestic structural issues in the sector, not due to a protection or a lower demand on the East European markets. Therefore it cannot be concluded that the disappearing positive CEFTA effect in non-steel specification is an early trade diverting effect of an enlarging EU customs union. The reasons for the disappearing positive effect were of structural nature.

Total and non-steel exports to CHINA and TURKEY

Table 17 shows that China used to have a very strong positive effect from 1996 until 2001, but since then there has been a clear trend of its declining importance. Besides, the trend is almost the same for non-steel exports. Hence it is not the growing China's capacity in steel production that is accountable for this. Arguably the reason can be China's import substituting growth, as the whole economy is booming, plus the weaker Chinese currency, renminbi, making imports to China less competitive. Ukraine is losing its competitive advantage on this market, and the share of China in the Ukrainian exports fell from 5.3 percent of total exports in 1996 to 2.5 percent in 2004.

The Turkey dummy has also shown a strong positive effect on Ukrainian export intensity, which, however, has also disappeared since 2001 in both aggregate and non-steel exports. The extent of the positive effect is also higher with non-steel exports.

5.6. Conclusion

Based on the above analysis several conclusions can be made.

[87] Decline of exports of coke was also discussed in Chapter 3, section 3.3.2.

Firstly, regional trade agreements do increase trade beyond the naturally higher levels observed between neighbours, controlling for other geographic characteristics.[88]

Secondly, as far as specific RTAs are concerned, the internal trade bloc (CIS) clearly boosts Ukrainian export performance most. This does not come as a surprise given the common economic, historical and cultural legacies. There is a slight trend, however, of falling positive effect in steel exports and increasing in non-steel exports, which is a positive sign in terms of lower concentration and lower exposure to external price or policy shocks.

In terms of external trade blocs, Ukraine seems to under-export to the bloc of EU-15. Given the economic mass and proximity of the EU, Ukraine would be expected to export more. Underperformance on the EU market is, however, significant primarily with steel. The special quota regime applied by the EU in steel trade with Ukraine, Russia and Kazakhstan in the period under analysis appears to be suppressing a potentially strong export performance of these countries. With non-steel exports the EU-15 effect was statistically insignificant throughout most of the years under analysis, turning negative and statistically significant only in 2004.

The effect of the second external trade bloc, CEFTA, is also asymmetrical – insignificant for steel exports and significantly positive for non-steel exports. Ukraine demonstrates good export performance with non-steel products with CEFTA countries, suggesting that there is a good potential for achieving a higher share on this market, but this positive performance is disappearing since 2002. The reason for this was geographic diversification of exports of minerals and fuels, and not necessarily related to trade liberalisation between CEFTA and the EU-15. Hence, a trade diverting effect from candidate countries' forthcoming accession to the EU customs union cannot be ascertained.

Thirdly, steel products perform less well than non-steel products on most markets. A general conclusion seems to emerge that due to Ukraine's high production capacity in steel and steel being a sensitive product (sold in a very competitive global market), it on average tends to under-sell – to CIS (positive effect of CIS on steel exports is declining), to the EU (quotas and anti-dumping investigations limiting the volume of exports), and to China more recently.

[88] Thus, the effect of having a common border with the economic partners is very positive for Ukrainian export performance, but not as strong as the partners' membership in the CIS, which among themselves have bilateral free trade agreements. Membership in CEFTA, where with most countries Ukraine shares a common border, has a positive effect on aggregate Ukrainian exports, but it is not statistically significant.

In sum, Ukraine faces a number of challenges with its merchandise exports, the main ones being high exposure to external shocks and the need to diversify the commodity composition away from 'sensitive' products. This would allow increasing the share of quality-competing *vs.* price-competing products in its export portfolio. This would in turn increase the competitiveness on the more advanced markets and facilitate the geographic reorientation of exports. This need is universally acknowledged by the Ukrainian policy makers and increasingly by producers themselves[89].

The limitations of this analysis should be acknowledged. Firstly, the single-equation gravity model does not allow comparing the observed levels of exports from Ukraine to the "normal" or "potential" levels, which is done in multi-equation studies. Secondly, although gravity model explores macro-level determinants, it should be remembered that it only captures overall economic mass and relative income per capita, overlooking many other macro-economic factors. It does not explore the direction of causality between growth of exports and economic growth either. This is, however, the specifics of the methodology of gravity models, and more in-depth analysis of the relationship between exports and macro-economic variables is usually the subject of the time series analysis, which falls outside the scope of this thesis.

Thirdly, although this study tried to minimise the bias created by a high concentration of exports in one industry (metallurgy), more detailed industry-level analysis may have given additional insight. Next chapter attempts to compensate for these shortcomings and enrich the findings of the gravity model by looking at firm-level determinants of export performance of Ukraine, further breaking it down by industries.

[89] Large financial industrial groups built around steel diversify their portfolios to other goods, such as machinery and equipment, and services.

Table 15. Income and geographic characteristics, dependent variable – total real exports, 1996-2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004
LPGDP	.628***	.702***	.77***	.796***	.857***	.855***	1.13***	1.12***	1.07***
LPGDPCAP	-0.216	-0.275	-0.25	-.273*	-.421***	-.371***	-.824***	-.812***	-.546***
LDIST	-1.12***	-1.04***	-1.02***	-.934***	-1.25***	-1.43***	-1.57***	-1.83***	-1.64***
BORDER	1.4***	1.37***	1.16***	1.19**	.9**	.887**	0.557	0.265	0.523
LANDLOCK	0.418	0.327	0.491	0.0594	-0.143	-0.516	-.724*	-0.667	-0.592
LPLAND	0.0152	0.00807	-0.14	-.223***	-0.0827	-0.0581	-.224*	-.277**	-0.116
_cons	-2.37	-5.55	-5.44	-4.61	-6.35**	-6.12*	-7.23*	-3.5	-10.8***
N	114	117	124	132	136	145	146	144	146
r2_a	0.513	0.537	0.562	0.571	0.619	0.609	0.64	0.63	0.668
Rmse	1.61	1.56	1.48	1.42	1.49	1.66	1.64	1.78	1.69

Table 16. Income and geographic characteristics, dependent variable – total real non-steel exports, 1996-2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004
LPGDP	.459***	.498***	.531***	.626***	.712***	.64***	1.27***	1.13***	.932***
LPGDPCAP	-0.121	-0.11	0.217	-0.167	-0.0986	0.142	-.759**	-.569**	-.286*
LDIST	-1.33***	-1.67***	-1.27***	-1.5***	-1.47***	-1.75***	-2.08***	-1.6***	-1.74***
BORDER	1.44***	1.1**	1.38**	0.793	1.02**	1.28**	0.684	1.18**	.868*
LANDLOCK	0.459	0.233	1.17**	0.244	0.619	0.0297	-0.179	-0.0703	-0.142
LPLAND	0.0917	0.0703	-0.0143	-0.0599	-0.0155	0.118	-0.214	-0.22	-0.0367
_cons	3.51	4.56	-2.91	1.66	-4.92	-6.3	-12.9**	-12***	-9.87**
N	113	113	122	127	135	142	146	140	139
r2_a	0.421	0.482	0.444	0.486	0.565	0.433	0.45	0.583	0.632
rmse	1.92	1.97	2.17	1.87	1.82	2.77	3.02	2.06	1.87

Source: Author's calculations using STATA 9.1

Table 17. Controlling for RTAs, dependent variable – total real exports, 1996-2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004
LPGDP	.644***	.744***	.786***	.811***	.888***	.905***	1.17***	1.18***	1.17***
LPGDPCAP	-0.119	-0.173	-0.143	-0.177	-.327**	-.296**	-.768***	-.734***	-.465***
LDIST	-.978***	-.961***	-.919***	-.812***	-1.15***	-1.37***	-1.55***	-1.91***	-1.75***
BORDER	0.712	0.683	0.269	0.287	-0.155	-0.184	-0.0475	-0.412	-0.51
LANDLOCK	-0.472	-0.272	-0.206	-0.466	-0.647	-.964**	-.979**	-.914**	-.917*
LPLAND	-0.0217	-0.0379	-0.162	-.244***	-0.0943	-0.0797	-.239*	-.299**	-0.144
eu_15	-0.24	-0.691	-0.498	-0.562	-.732*	-1**	-.83*	-1.31***	-1.89***
cis	2.82***	2.36***	2.52***	2.43***	2.3***	2.22***	1.64***	1.53***	1.93***
cefta	0.872	0.375	0.863	0.786	0.988	0.797	0.021	-0.181	-0.202
china	2.48***	2.17***	2.16***	2.14***	1.02***	.68*	-0.021	0.508	-0.583
turkey	1.33***	1.38***	1.63***	1.72***	1.12***	.834**	0.336	-0.57	-0.338
_cons	-4.9	-8.52**	-8.08**	-7.19**	-9.69***	-9.55***	-9.82**	-6.19	-14.7***
N	114	117	124	132	136	145	146	144	146
r2_a	0.587	0.597	0.626	0.639	0.661	0.642	0.652	0.645	0.708
rmse	1.48	1.45	1.37	1.3	1.4	1.58	1.62	1.75	1.58

Source: Author's calculations using STATA 9.1.

Table 18. Controlling for RTAs, dependent variable – total real non-steel exports, 1996-2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004
LPGDP	.424***	.507***	.536***	.625***	.721***	.646***	1.28***	1.17***	1.01***
LPGDPCAP	-0.074	-0.050	0.29	-0.141	-0.025	0.225	-.72**	-.524*	-0.207
LDIST	-.995***	-1.43***	-1.01***	-1.26***	-1.26***	-1.46***	-1.81***	-1.42***	-1.75***
BORDER	0.817	0.266	0.258	0.013	-0.155	-0.166	-0.329	0.119	-0.043
LANDLOCK	-0.579	-0.53	0.147	-0.326	-0.014	-0.772	-0.676	-0.576	-0.654
LPLAND	0.059	0.028	-0.044	-0.079	-0.026	0.010	-0.229	-0.237	-0.071
eu_15	0.901	0.231	0.262	0.373	-0.116	-0.159	0.058	-0.387	-1.35***
cis	3.12***	2.83***	3.37***	2.47***	2.81***	3.53***	2.98***	2.75***	2.48***
cefta	1.71**	1.14	1.67**	1.15*	1.51**	1.86**	1.07	0.928	-0.023
china	2.68***	2.25***	1.82***	0.795	1.15***	1.84***	0.466	-0.32	-0.21
turkey	1.38***	.863*	1.83***	1.47***	1.47***	1.97***	1.08	0.448	-0.0848
_cons	2.34	2.24	-5.82	-0.378	-8.08**	-9.89*	-15.9**	-15.6***	-13.9***
N	113	113	122	127	135	142	146	140	139
r2_a	0.492	0.522	0.491	0.513	0.603	0.46	0.455	0.604	0.667
rmse	1.8	1.9	2.07	1.82	1.73	2.7	3.01	2.01	1.78

Source: Author's calculations using STATA 9.1

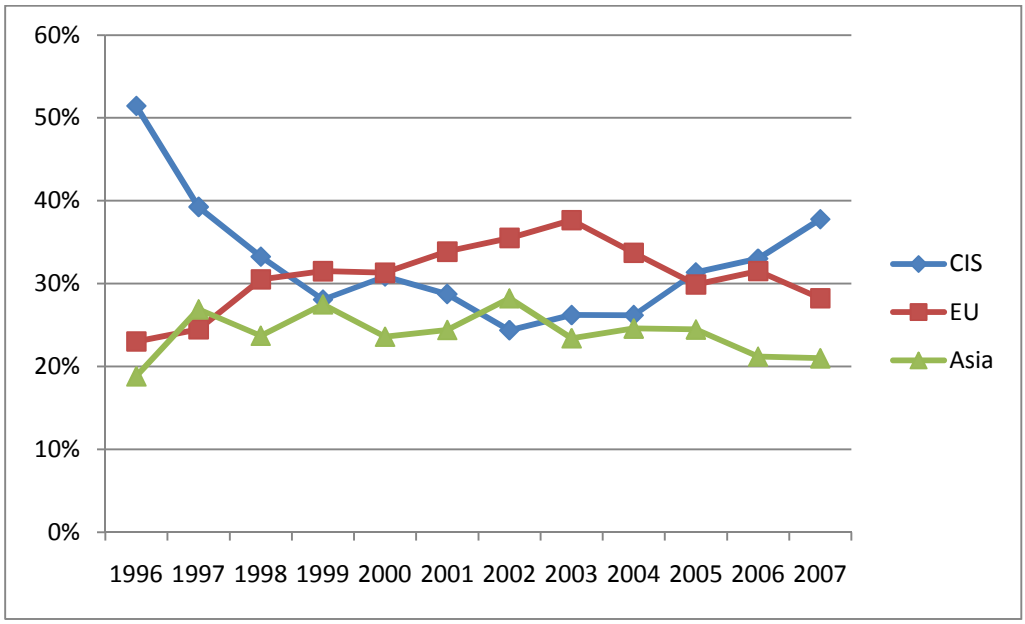
CHAPTER 6. MICRO-LEVEL DETERMINANTS OF THE UKRAINIAN EXPORTS: FIRM-LEVEL EVIDENCE FOR 2000-2006

6.1. Introduction

The previous chapters looked at the premises for trade reorientation of Ukrainian exporters (CHAPTER 2), at the quality of exports from Ukraine to the EU and its evolution (CHAPTER 3), and at the macro-level factors that determine the existing degree of trade reorientation (CHAPTER 5). Departing from the initial idea that reorienting trade flows from previously relatively isolated region towards more advanced neighbouring markets was a logical route for Ukraine, the study proceeds with exploring whether this is taking place, and whether commodity composition is improving in trade with the EU. This chapter aims to shift the focus from macro factors and trends to the firm-level analysis.

Ukraine, as all other former Soviet Union republics, from the first days of independence had to cope with the consequences of disintegrated common market, collapsed demand in FSU countries and falling domestic industrial production. The fall of demand in former Comecon (Council for Mutual Economic Assistance) area necessitated reorientation of exports to other global markets. In terms of geographic proximity and the size of aggregate demand, European Union was the most logical destination for reorientation of exports. As discussed at length in CHAPTER 3, and as is seen from Figure 23, indeed this reorientation was steadily gaining momentum between 1996 and 2003. The post-Orange revolution period, however, was marked by CIS regaining importance as a destination market for Ukrainian exports, although never reaching the scale it had earlier – 51 percent in 1996.

Figure 23. Geographic composition of Ukrainian exports – major partners, 1996-2007



Note: Since 1996 EU recalculated as EU-27.

Source: Ukrainian State Statistics Agency (2009). http://www.ukrstat.gov.ua/

The macro-level reasons for a slow reorientation include delayed structural and regulatory reforms, which did not set off until mid 1990s, low level of inward FDI and, respectively, low degree of industrial upgrading that would make Ukrainian products more competitive on the advanced markets, and obsolete infrastructure. At the same time, the gravity model analysis in previous chapter has also shown that one of the most important determinants of export performance is demand (measured by GDP) in the partner countries, which partially explains the growing share of CIS since early 2000s, as this is when the region entered into a phase of robust recovery. There is also econometric evidence that Ukraine is under-exporting steel products to the EU-15, most likely due to quantitative restrictions that had been in place until 2008. These and other macro-level reasons are discussed in CHAPTER 1, CHAPTER 3 and CHAPTER 5 of this thesis, but this chapter aims to explore the micro-foundations of this reorientation, to identify the specific characteristics that made *firms* more or less likely to export to the EU.

Arguably, the shock of transition, with its deteriorating institutional, financial and macro-economic conditions, unstable political and regulatory environments, makes it difficult for firms in former Soviet Union to enter external markets at all, or to maintain existing external links. Exporting is associated with significant sunk costs that are not easy to meet even for

firms in advanced economies, which enjoy more favourable conditions. Entering more advanced markets, while starting from a below-optimal position and facing stringent competition from more efficient and established suppliers already serving those markets, is a double challenge for Ukrainian enterprises. The challenge was further reinforced by the deep and fast integration of the EU-15 with Central and East European economies, which offered similar geographic proximity, labour skills/costs and industrial structure. On top of early removal of trade barriers and significant EU-funded infrastructure investment, they enjoyed a first-mover advantage, which can be no less important than all the other factors. Therefore, in order to enter European markets, effectively Ukrainian firms would have to offer better products at better conditions than their East European and other global competitors.

This process is looked at from two angles here. On the one hand, the determinants of the *internationalisation* process as such are explored, i.e. of capacity of Ukrainian firms to serve external markets. Secondly, it is argued that in the context of economies in transition the process of internationalisation can be *destination-specific*, and will refer to trade reorientation from previously highly integrated and isolated from the global economy markets towards more advanced and competitive markets.

6.2. Literature review

6.2.1. Internationalisation

On the theoretical plane, the analysis starts with the issue of *internationalisation* of a firm, as reflecting increased competitiveness on a firm-level in particular and ultimately of the economy at large in a transitional context. Internationalisation process is usually considered as starting with an entry to the export market, gradually leading to the establishment of subsidiaries or wholly owned ventures in the destination country (Andersen, 1993). For firms originating in the economies in transition the latter stage is particularly challenging as it requires a rather high level of competitiveness and purchasing power, especially if the destination market is that of advanced economies. In fact, it is typically the first stage that already constitutes a substantial challenge, as firms in transition first of all need to start exporting to the developed markets, provided they can meet the requirements in terms of price, quality, design and post-sale service (Zloch-Christy, 1998). In the case of Ukraine it is only metallurgy enterprises that managed to establish downward or outward subsidiaries in

Western Europe, as discussed in CHAPTER 7. on the political economy of business mobilisation.

The issue of firm-level internationalisation determinants and strategies originally entered into focus in business and international marketing literature[90], where managerial behaviour is taken as a major determinant of export performance. In trade economics for a long time the dominant approach to analysing export determinants had been to focus on sectors and countries rather than firms, trying to explain the commodity specialisation of trade and/or determinants of cross-country specialisation. Firms, the actual entities that are producing goods and are trading, had long been ignored. In new trade theory firms are first explicitly present, however they are not the subject of research. More recently new theories of the firm and international trade, mostly built on the model of heterogeneous firms first developed by Melitz (2003), incorporated the micro-level approach to internationalisation into trade theory/globalisation literature (see Greenaway and Kneller, 2005, or Greenaway, 2004, for a survey). In this literature, *productivity* and *efficiency* feature as the main determinants of a firm's ability to enter foreign markets. The direction of causality between productivity and internationalisation has been a key issue – whether more productive firms self-select into becoming exporters, or whether there is a 'learning-by-doing' effect at work. There has been an increasing body of literature failing to find the learning-by-doing effect in either developed (US, Canada, Spain) or developing economies (Mexico, Colombia, Taiwan) instead finding that firms tend to self-select into being exporters, which implies that more productive firms are more capable of bearing the fixed costs related to entering the external markets. There was also consistent cross-country evidence that only a fraction of firms export, and exporters are larger than non-exporters, as well as more productive.[91]

This approach was expanded to embrace endogenous growth theory postulates.[92] Applied to trade, the main premise of this literature is two-fold: openness to trade fosters product market competition and creates an incentive for a firm to innovate; in turn, innovation is a

[90] See Aaby and Stanley (1989), Anderson (1993), Zou and Stan (1998) and Leonidou et al. (1998) for reviews.
[91] See Sofronis K. Clerides, Lach, and James R. Tybout (1998) for Colombia, Mexico, and Morocco; Bernard and Jensen (1999) for the United States; Bee-Yan Aw, Sukkyun Chung, and Mark J. Roberts (2000) for Taiwan; Miguel A. Delgado, Jose C. Farifias, and Sonia Ruano (2002) for Spain; and John R. Baldwin and Wulong Gu (2003) for Canada.
[92] Endogenous growth theory argues that economic growth is enhanced by the development of the nation's human capital by means of development of new forms of technology and efficient and effective means of production. The main implication being that policies that promote openness, competition, change and innovation will promote growth.

prerequisite for firms to gain access to foreign consumer markets via exports (Becker and Egger, 2007). Along these lines, continuous efforts to sustain internal growth – *innovation, R&D, international technology transfer* – and *foreign links* are expected to be positively associated with export propensity (Baldwin and Gu, 2004; Nassimbeni, 2001; Kneller, 2007; Alvarez, 2007).

Innovation, measured in various ways, has been generally found to have a positive effect on the likelihood of firms to export (Baldwin and Gu, 2004; Bernard and Jensen, 1999; Lachenmaier and Wößmann, 2006), although Wakelin (1998) finds that it is larger innovative firms that are more likely to export than smaller innovative firms, whereas given the same size non-innovative firms will be more likely to export. *Product* rather than *process innovation* has been found to be more important in increasing export propensity (Becker and Egger, 2007; Bernard and Jensen, 2004). Along the same lines, skill intensity can capture the potential for technological or research activities, and can therefore also be positively associated with export propensity, a hypothesis confirmed by Bernard and Jensen (2004) and Alvarez (2007).

By extension, the effect of *product diversification* or *specialisation* has also been featuring prominently in the literature, being of particular relevance to the economies in transition as their products from planned economy times would be uncompetitive in free market conditions. Hottop et al. (2005) consider the link between trade and industrial upgrading in Central and East European economies, as measured by product specialisation versus product diversification in countries of Central and Eastern Europe. Increased scale – higher volume of export transactions – is taken as a proxy for the *learning-by-doing effect*, whereas increased product diversification – as a reflection of *product innovation*. They find that in early years of transition the dominant mode of learning is scope based – countries that opened up to world markets start to experiment with selling additional products, while in the later years scope-based learning (diversification) is complemented by an increase in the scale of exports. Baldwin and Gu (2004) find that product specialisation (i.e. lower diversification) is positively linked to productivity and that exporters tend to be more specialised after entering export markets. In a more general context, the literature on the relationship between trade and growth provides evidence for the positive impact of both product *variety* and *specialisation* on economic growth. Amable (2000), Laursen (2000) and Peneder (2002) find evidence for an impact of trade specialization on economic growth, which stems in particular from

specialisation in technology-intensive sectors. Funke (2000), for OECD economies, and Funke (2005) for East European transition economies, including Ukraine, finds that export diversification matters for growth, in particular variety of capital-intensive products as opposed to labour-intensive.

Other potential determinants of export propensity were drawn from corporate governance or industrial organisation literature, and among others include: access to finance, capital intensity, structure of ownership, foreign links, exposure to domestic or foreign competition, and age of the firm.

Capital intensity has not yielded consistent results – Bernard and Jensen (1999) find that American exporters have higher capital intensity; Zhao and Li (1997), on the contrary, find that for Chinese firms capital intensity is negatively associated with export propensity; and Wakelin (1998) reports a positive but statistically not significant effect for the UK firms. *Foreign ownership* is often found to have a strong positive effect (e.g. Aitken et al., 1997), although Baldwin and Gu (2004) fail to find a statistically significant positive effect, after controlling for size, age and productivity. In particular, it has been argued in corporate governance literature that the type of ownership has a crucial impact on access to the investment capital and technological upgrading: insufficient internal finance, combined with poor access to credit, makes foreign partners almost the only source of financing such investments (Cantwell and Piscitello, 1997). At the same time, the privatisation strategy in Ukraine, discouraging majority foreign ownership, limited this channel as foreign partners would not commit large amounts of money without having a substantial control (Filatotchev *et al.*, 1999). *Competition* is, rather classically, also believed to be conducive to innovation and productivity growth, and hence potentially improving the ability of a firm to export, and this effect was confirmed by Nickel (1996), while Baldwin and Gu (2004) find that competition is an important factor after entering the foreign markets, but not before. It also seems that the *older* the firm, the more likely it is to export (e.g. Roberts and Tybout, 1997).

Greenaway *et. al.* (2005) found that *financially healthiest* firms find it easier to enter export markets, making it easier for them to meet the fixed costs related to exporting.

Formal micro-level research into this issue in Ukraine is very scarce, as is the available firm-level data. Most of the research has been concentrated in corporate governance literature. The central premise of this literature is that enterprises in transition economies would first have to

undergo a substantial internal restructuring before they can become competitive on external markets, and therefore corporate governance practices were at the centre of the attention. At the same time, they also explore the role of some traditional trade theory determinants. Wright et al. (2002) and Filatotchev et al. (2001) find a strong positive relationship between the presence of foreign partners and export intensity in Belarus, Russia and Ukraine. The latter study also finds positive effect of new product development and previous export experience, whereas non-export-oriented acquisitions seem to exert the opposite effect. This finding suggests that operational restructuring needs to be targeted, and that not any expansionary policy will yield positive results in terms of internationalisation. Filatotchev et al. (1999) also find a strong positive effect of an increase in the share of new products in sales (i.e. diversification), foreign links and management turnover.

6.2.2. Destination-specific internationalisation

As has been mentioned above, apart from starting to serve foreign markets, at the start of transition Ukrainian enterprises were faced with at least two challenges with regard to internationalisation: on the one hand, collapsed demand in the former Soviet Union economies (accompanied by so-called disorganisation – the break-down of industrial links between formerly SOEs, including intra-USSR links), and on the other, a potential to start supplying to the rest of the world – in particular geographically close Western European economies – which were previously inaccessible. Therefore in the Ukrainian context it is impossible to discuss the issue of internationalisation without reorientation, or destination-specific internationalisation.

In trade-related literature this issue has received relatively little attention. Falvey, Greenaway and Yu (2003) focus on the size of an exporting economy and find that the smaller the exporting country and the lower its average efficiency, the less likely its firms are to survive in the more efficient markets. When a country faces higher trade costs on a given market than another country, its firms will need even higher efficiency to withstand competition on that export market. This hypothesis was confirmed in Damijan et al. (2004) on the example of Slovenia, who found that productivity is higher for firms entering *advanced* markets, but not necessarily to economies with the same level of efficiency frontier. Graner and Isaksson (2007) explore the destination-specific export determinants for Kenyan enterprises, and suggest that entry costs in trade with non-African (North) countries are going to be higher

than those in trade with Africa (South), and hence size and efficiency would be expected to have a positive effect on the likelihood to export to the North versus South, a hypothesis confirmed in their analysis. They also explore the role of human and physical capital intensity and find that it is higher in South-South trade than in North-South trade.

Indeed, in terms of trade costs of exporting to the EU, smaller economies outside of the EU internal market and/or with no preferential agreement, are effectively facing twice the challenge, first having to meet the fixed costs related to entering more advanced export markets, and then having to compete with numerous competitors that enjoy preferential terms of trade with the EU. Thus, Central and East European economies that joined European Union in 2004 and 2007 had relatively similar production structures, resource endowments, and labour skills and costs to those of Ukraine from the start of transition, but were granted free trade regimes in early 1990s and thus enjoyed a first mover advantage. Hence reorientation towards the EU for Ukrainian enterprises has been complicated even further by the vast competition from CEE economies. Moreover, most neighbouring countries of the EU (apart from Ukraine, Moldova, Belarus and Russia) enjoy some form of free trade arrangement with the EU.

6.3. Empirical analysis: general hypotheses

In what follows, first the determinants of general internationalisation strategy of Ukrainian enterprises ('internationalisation model') are explored, and then the destination-specific export determinants are looked at – comparing specific characteristics of enterprises exporting to the EU and CIS ('trade reorientation model'). This is done based on two different datasets, as no single comprehensive dataset that would allow exploring both angles is available for Ukraine. The World Bank/EBRD Business Environment and Enterprise Performance Survey (BEEPS) offers a distinction between exporters and non-exporters, while data provided by the European Commission project on the Economic and Social Consequences of Industrial Restructuring in Russia and Ukraine allows us to differentiate between exporters to the CIS versus exporters to the EU.

In line with the literature reviewed above, the study is focusing on the following determinants, some of which are common to both models, while others were only available in either of the datasets. Thus, determinants present in both models are:

Size. Larger firms are expected to be more capable of meeting the fixed costs of entering foreign markets, and, respectively, the costs of entering more advanced market of the EU, which are assumed to be higher than those of traditional markets of FSU republics. In the internationalisation model the size is measured by the number of full-time employees and in the trade reorientation model – by the total value of exports.[93]

Foreign ownership, which is expected to be positively associated with both export propensity and the likelihood to export to the EU, as foreign contacts might be beneficial for finding export partners, may facilitate the transfer of more advanced technology and/or ease access to finance.

Innovation is expected to result from competitive pressure and may in turn increase the competitiveness of the firm on both domestic and external markets. Different measures of innovation are used in each of the models. In the internationalisation model innovation is measured by whether a firm introduced new products or product lines in the past 3 years (which is effectively product innovation), while in the trade reorientation model it is measured by the value of expenditures on new technologies and ICT (information and computer technologies), which is more reminiscent of *process innovation*. This difference needs to be borne in mind when interpreting the results.

In addition to these common variables, in the trade reorientation model product diversification was added, which, combined with the scale effect, may provide an insight into the pattern of industrial upgrading, as suggested by Hottop et al. (2005). On the other hand, product diversification may serve as a measure of product innovation.

The data availability in the internationalisation model allows to control for other factors as well – the age of the firm (we distinguish between those established prior to 1991, and after 1991 – usually referred to as *de novo* enterprises); skill intensity (number of employees with university degree), capital intensity and upgrading, access to finance, role of competition from overseas suppliers, and imports of inputs and raw materials.

[93] We tried running the model with the dummy variable for size (1 if large, 0 if small enterprise), but since the overwhelming majority of firms in the dataset were large, the results were distorted. This, however, is consistent with the literature - e.g. Helpman (2006) highlights that exporters are more productive, and size is positively associated with productivity, therefore the very fact that the majority of exporters in our dataset are large is an expected result.

Below the two models are described, as well as the respective datasets, and the results of these models.

6.4. Empirical analysis: Internationalisation of Ukrainian enterprises

6.4.1. Data description and stylised facts about exporters

The data was taken from the World Bank/EBRD Business Environment and Enterprise Performance Survey (BEEPS), which covers a panel of Ukrainian enterprises in 2002, 2005 and 2009.

In 2002 444 firms responded to the interview, in 2005 – 524, and in 2009 – 668. Exporters constituted 26 percent of all respondents in 2002 and 2009, and 19 percent in 2005, or 24 percent on average. Unfortunately, the questionnaire did not include the question on the destination of exports, therefore only export propensity can be analysed in this section in this section.

Regional distribution of exporters (reported only in 2005 and 2009), was as follows: North and Kiev had the highest proportion of exporters – 30 percent and 27 percent respectively; East and Crimea had the lowest proportion of exporters – 16 percent and 17 percent respectively. However, Eastern region had the highest number of respondents, and in absolute terms ranks the third in terms of exporting firms – with 55 firms, versus 71 in the North and 57 in Kiev.

Between 2005 and 2009, the share of exporters in the total sample grew most in the Northern and Western regions – from 18 percent to 37 percent, and from 16 percent to 25 percent respectively. The share of exporters also grew in the East – from 15 percent to 20 percent, but fell in Kiev from 27 percent to 26 percent, and in the South – from 33 percent to 22 percent.

In terms of the *legal status*: publicly traded companies have the highest proportion of exporters – 42 percent. 26-27 percent of partnerships and privately traded companies are engaging in exporting activities, while sole proprietorship and limited partnership companies have the lowest share of exporters – 10 percent and 14 percent respectively.

Most of the enterprises that responded to the question about the *origin* of their firm were *de novo* enterprises – 1045 of 1518, or 69 percent; 21 percent were privatised enterprises, 6 percent - joint ventures with foreign partners, and 3 percent - private subsidiaries of formerly state-owned firms. Only 5 of 1518 were state-owned enterprises (SOEs), of which 4 were

exporters. In general, joint ventures were most actively engaging in exporting activity – 42 percent of total, followed by privatised former SOEs – 33 percent. Interestingly, *de novo* enterprises are much less active as exporters – only 18 percent of them engage in foreign trade. The same proportion of private subsidiaries of ex-SOEs were exporters.

In terms of the type of ownership, mirroring the above findings on joint ventures, companies with private foreign ownership have the highest export propensity – 46 percent of total firms in this category. On the contrary, of enterprises with private domestic ownership, only 19 percent were exporters.

Table 19. Type of ownership and exporter status, average for 2002, 2005 and 2009

	Private domestic	Private foreign	State	Other	Total
Non-exporter	1,090	104	8	46	1,248
Exporter	263	87	10	28	388
Total	1,353	191	18	74	1,636
Exporters share	19%	46%	56%	38%	24%

Source: Author's calculations based on BEEPS dataset

The share of exporters among enterprises with private foreign ownership increased from 37 percent in 2002, 48 percent in 2005 and to 56 percent in 2009. Whereas among enterprises with private domestic ownership the share of exporters varied from 22 percent in 2002 and 2009, down to 13 percent in 2005.

As can be expected, enterprises with internationally recognised quality certification (IQC) are more likely to be exporters – 48 percent of respondents with such a certification are engaging in exporting activities, while only 20 percent of those without international certification do. Although it should be noted that this is quite a substantial proportion anyway – therefore international quality certification is not a prerequisite for exporting certain products.

Table 20. International quality certification and exporter status

	Has IQC	No IQC	Total
Non-exporter	109	1,134	1,243
Exporter	99	285	384
Total	208	1,419	1,627
Exporter share	48%	20%	24%

Source: Author's calculations based on BEEPS dataset

6.4.2. Model description

In this model the following research questions are explored:

1) What specific characteristics distinguish Ukrainian exporting firms from non-exporting firms?

2) Does size (measured by the number of full-time employees) and age affect the firm's export propensity?

3) Does foreign ownership increase the likelihood of a firm to export?

4) Does product innovation increase the chances of a firm to export?

5) Does skill-intensity increase the likelihood of internationalisation?

6) Does capital-intensity increase the likelihood of internationalisation?

7) We also reiterate the above model controlling for: the presence of international quality certification, directly imported inputs, perceptions of the importance of foreign pressure for the development of new products, the need to provide collateral for the loans (the only measure of access to finance that had sufficient data for the model to run), or the cost of existing machinery and buildings.

A random-effects probit panel data regression model is run, consistent with Clerides et al. (1998) and Winker (1999). In the first model the dependent variable is the exporter status dummy, and the explanatory variables as per points 1-6 above (age – established pre- or post-1991, private foreign ownership, number of full-time employees, new product in the last 3 years, number of employees with university degree, new land or buildings in the last 3 years). Then variables from point 7 (international quality certification, directly imported inputs, foreign pressure for the development of new products, financing for loan/credit line, cost of repurchasing machinery and buildings) are consecutively added, rendering five additional estimations. The number of firms in each of the models varies between 133 and 249, covering two years – 2002 and 2005.[94] The correlation matrix of the variables used in the regression is presented in Annex 10.

[94] The 2009 data was of poor quality and therefore had to be omitted from the regression analysis.

6.4.3. Results

The results of the six estimation models are shown below in Table 21.

Table 21. Random effects probit panel data estimation of export propensity

Variable	1	2	3	4	5	6
Exporter						
Established pre-1991	0.081	0.072	0.077	0.048	0.303	0.309
Private foreign Ownership	0.015***	0.015***	0.014***	0.013***	0.013	0.014**
ln FT employees	0.676***	0.684***	0.679***	0.591***	0.777***	0.804***
New product in the last 3yrs	-0.777**	-0.784**	-0.792**	-0.620**	-0.485	-0.886**
ln nr of empl. w/uni degree	0.386***	0.389***	0.381**	0.341**	0.723***	0.330*
New land/build. in 3yrs	-0.549**	-0.545**	-0.568**	-0.461**	-1.043***	-0.392
Int. Quality certif.		0.12				
Directly imported inputs			-0.127			
For. Pressure for new products				0.216**		
Financing for loan/credit line					-0.054	
Cost of repurch. Mach/build.						-0.114
Constant	-2.762***	-3.022***	-2.644***	-2.991***	-3.892***	-2.484**
lnsig2u						
Constant	-0.452	-0.44	-0.443	-1.178*	-0.296	-1.122*
Statistics						
N obs	287	287	286	284	144	195
N firms	249	249	248	247	133	173
Ll	-125.02	-124.95	-124.54	-122.21	-62.26	-84.66
df_m	6	7	7	7	7	7
chi2	47.391	48.038	47.668	59.54	28.711	43.531
Rho	0.389	0.392	0.391	0.235	0.427	0.246

Note: Statistical significance * p<0.1; ** p<0.05; *** p<0.01 confidence level.

Source: author's calculations using STATA 9.1

In line with the findings of most of the international literature, e.g. see Helpman (2006) for a review, size has a very strong positive effect on export propensity. Unfortunately no measure of productivity or efficiency was available in our dataset. A mitigating general knowledge however, is that exporters not only tend to be large, but also more productive than non-exporters (Helpman, 2006). Moreover, using a sample of Ukrainian enterprises, Pavlenko and Vakhitova (2008) find that larger firms are more likely to be continuous innovators and indeed are more productive, while smaller firms might be more likely to start innovating in a recent past.

Also consistent with the theoretical literature is the positive effect of foreign ownership, although it is not as strong as that of size. Lutz *et al.* (2006) obtain similar results for Ukrainian firms. They find that foreign presence positively affects firms' output and exports; moreover, this effect is stronger for large firms, and producers of durable *vs.* non-durable goods.

Somewhat contrary to the predictions of the endogenous growth theory, the measure of innovation – product upgrade in the past 3 years – has a consistently negative effect on the likelihood that a firm exports. Skill-intensity, however, increases export propensity of the firms in our sample. Upgrading of capital – acquisition of new land or buildings – also has a negative effect. However it must be noted that this variable represents a relative measure of increase in capital, not its absolute measure. When we include the cost of repurchasing of the existing machinery and buildings, this variable proves to have no significant effect. Age of the firm – whether it was established pre-1991 – appears to have a slight positive effect, but it is also statistically insignificant.

Of all the additional variables tested in models 2-6, only one variable proved significant – foreign pressure for introduction of new products is positively associated with export propensity. It is somewhat counter-intuitive, as introduction of new products as such has a negative effect on internationalisation of firms in our sample. It might mean that in general enterprises whose products are exposed to foreign competition tend to be exporters.

Quality certification has a positive but statistically insignificant effect. None of the measures of access to finance had sufficiently good data to yield meaningful results in our estimations. The need to provide collateral for loans has a small negative, but statistically insignificant effect. Direct import of inputs, another measure of foreign links, also is not significant.

What can we conclude from these results? The profile of a typical Ukrainian exporter, judging from this analysis, seems to be – *a large firm with foreign ownership and educated labour, but which does little product innovation and upgrading of capital.* Hence, it seems that it is well established, large and less dynamic firms that tend to export, albeit with a higher number of educated staff. Although in part running contrary to expectations, these results do not come as a surprise if one thinks about the commodity composition of Ukrainian exports, dominated by resource-intensive and low-value added products.

Similar findings were made in other studies. Rankin *et al.* (2006) find that size, foreign ownership and skills are also a strong determinant of internationalisation of African firms. While, although theory predicts the contrary, Wakelin (1998) found that non-innovative UK firms are more likely to export than innovative firms. She also finds that the number of past innovations (something that our data lacks, beyond the past 3 years), has a positive impact on the likelihood of a firm to export.

These findings mask sectoral differences, and suffer from insufficient dynamics, which could potentially reveal positive signs of change. Future improvements in the available data might shed more light on these and other firm characteristics that we could not uncover in this analysis.

The second dataset offers an advantage of exploring destination-specific determinants, detailed sectoral distribution and covers seven years instead of two. So next we move on to describing the trade reorientation model and its results.

6.5. Empirical analysis: Trade reorientation model

6.5.1. Data description

The data was provided by and collected within the European Commission project on the Economic and Social Consequences of Industrial Restructuring in Russia and Ukraine, and is based on the Ukrainian Customs data and official financial reports of the enterprises. It included: firm-level export transactions data at 4-digit level (in HS1996 commodity classification), amount of the transaction in US dollars (in current prices), country of destination (rather than contract country), innovation, measured by expenditures on technological innovations and ICT expenditures, and presence of FDI – 1 if foreign ownership was present in that firm in a particular year, 0 – otherwise. Although this innovation data is not the best measure of innovation, as it does not provide information on the introduction or discontinuation of products or product lines, or separate R&D and technology expenditures, ICT expenditures are, however, the best measure available at the moment on Ukrainian firms. From the available data we also constructed new variables – total amount of exports per firm per year per destination country, and total number of commodities per firm per year per destination country. The former is meant to reflect the trends in the scale of exporting activity of a firm, and the latter – the scope, or commodity diversification. We also tried including the competitiveness variable, defined as a share of exports by firm *i* of product *j* (at 4-digit level)

to the total exports of product j by all firms in Ukraine (in the sample), but it proved to be correlated with the "scale" variable (+0.46), which would cause multi-collinearity in the regressions, and therefore was left out of the analysis.

The firm-level exports dataset is based on the Ukrainian customs data and includes all Ukrainian exporting enterprises. However when the availability of dependent variables is taken into account we result with 1956 enterprises in pooled regressions (2000-2005), and from 477 to 974 in cross-sectional annual regressions. Although the difference in the number of observations across years may create a selection bias, one has to bear in mind the scarcity of such data on Ukraine – such coverage of Ukrainian enterprises already represents a unique dataset. Annex 12 shows the distribution of exports by regions and commodities in the original dataset. The data covers seven years – 2000-2006 – however the FDI data in 2006 was found to be problematic, and therefore in annual 2006 regressions FDI is absent and pooled regressions are run only on data from 2000 to 2005.

6.5.2. Model description

In this model we follow the approach of Hottop *et al.* (2005), who explore the mechanisms that link trade and restructuring in transition economies through a learning and industrial upgrading perspective. They use product-level export data to derive diversification versus specialisation trends that may explain restructuring in East European economies. We change the level of this analysis by looking at the firm-level diversification and specialisation trends, adding a destination-specific and sectoral dimension in export performance. We also look at the variables explored in the internationalisation model – foreign ownership (FDI) and innovation. We measure diversification as the number of 4-digit (HS 1996 classification) products exported by a firm, in each year, to each of the partner countries, and specialisation – by total value of exports, respectively by each firm to each of the partner countries. The latter variable can also be interpreted as a measure of size.

After exploring the general regional and sectoral effects, this section takes a somewhat unconventional approach – it compensates the lack of explanatory variables by going back to the detailed trade data to try and see what industries are driving the results.

In this model we are asking the following research questions:

1) Is there a systematic difference between Ukrainian firms exporting to the EU and those serving the CIS markets?

2) Is an increase in the scale of exports associated with higher or lower probability of exporting to the EU market? Or, in other words, do economies of scale help a firm to enter the EU market?

3) Is higher product diversification associated with higher or lower probability of exporting to the EU?

4) Are firms serving the EU market more innovative, judging from either product or process innovation?

5) Are firms with foreign links more likely to internationalise? Enter the EU market?

This section is based on cross-sectional, rather than panel data analysis, in order to explore to the maximum the limited possibilities offered by the dataset – panel data analysis would envisage a single observation per each firm, thus losing *country-specific product diversification and specialisation*, which proved more accurate than general, non-country-specific approach.

Cross-sectional bivariate logit regression with robust standard errors was run with the following binary *dependent variables*[95]*:*

- EU-15 (1 or 0)
- EU-12 (1 if a country was an EU candidate or one of the 12 new members in the period 2000-2006, 0 otherwise)
- CIS (1 if a country was a member of the Commonwealth of Independent States in the period from 2000-2006, 0 otherwise)

Explanatory variables:

- Total value of exports per firm per year per destination country, as a reflection of scale effects (Scale defined as: a sum of exports of all products by firm i in year t to country a.)
- Total number of commodities per firm per year per destination country, as a proxy for commodity diversification or scope effects.

[95] Multinomial logit model was used by Becker and Egger (2007), bivariate logit – by Zhao and Li (1997), Nassimbeni (2001)

- FDI – dummy variable, 1 if the firm had foreign ownership in a particular year, 0 – otherwise.
- Innovation expenditures – expenditures on technological innovations and ICT expenditures.

6.5.3. Results

From the first aggregate (pooled over 2000-2005)[96] regression shown in Table 22, based on data from 1956 firms, some corroboration of the results obtained in the first part of this chapter can be observed – innovation has a negative effect on the export propensity with regard to all regions – EU-15, EU-12 and CIS. Foreign ownership, which had a pronounced positive effect in the first exercise, here seems to have a positive effect only in trade with the EU-15. Also consistent with the internationalisation model, the scale effect, which can be approximated with size, has a positive effect in trade with most regions, apart from EU-12.

Some asymmetry can be observed by regions: EU-15, EU-12 and CIS. In trade with the CIS the **scale effects** are positive, whereas with the EU-15 they are only marginally positive. Commodity diversification (in a firm's trade with a specific country) has a positive effect in trade with CIS only. Innovation is negative in trade with all regions, while FDI has a strong positive effect on exports to the EU-15. A somewhat unexpected result is the negative effect of all explanatory variables for the EU-12. However, in order to interpret these effects correctly, the time and sectoral dimensions are looked at next.

The finding about the negative effect of both innovation and diversification in trade with the EU, at the risk of generalisation, can be paralleled with the results of Pavlenko and Vakhitova (2008), who study the effect of innovation on productivity in Ukrainian enterprises. Using firm's main market as one of the controls, they find negative association between productivity and exporting to non-CIS countries status. This is an important observation, since it echoes a more general fact – little improvement in the quality of exports from Ukraine to the EU, as reflected in the commodity composition described in detail in CHAPTER 3.

[96] No data on FDI is available in 2006, this variable is therefore omitted and this should be borne in mind when interpreting the coefficients on the remaining variables.

Table 22. Dependent variables: EU15, EU12, CIS dummy variables, 2000-2005

Variable	EU-15	EU-12	CIS
Scale	**0.010***	-0.065***	**0.079*****
Diversification	-0.097***	-0.025***	**0.024*****
Innovation	-0.050***	-0.013***	-0.011***
FDI	**0.495*****	-0.160***	-0.059**
Constant	-1.389***	-0.272***	-1.472***
N	1956	1956	1956
N	50199	50199	50199
ll	-25,600	-25,600	-32,800
df_m	4	4	4
chi2	582.977	291.773	459.552

Note: Statistical significance * p<0.1; ** p<0.05; *** p<0.01 confidence level. Pooled cross-sectional logit regression with robust standard errors.

Source: author's calculations using STATA 9.1.

Time and sectoral dimension

EU-15

Starting with the EU-15, what can be noted first of all from the sectoral regressions in Table 23 is a strong positive effect of FDI across many sectors: Minerals, Textiles, apparel and leather, Wood, Machinery and transport equipment and Other. At the same time, Table 24 shows that FDI gains a consistent positive effect as of 2002. **Scale** effects are positive for agriculture and textiles, although on aggregate this effect was pronounced between 2000 and 2002 and disappeared since then. Ukraine is known to be a major outsourcing destination for textiles and clothing industries, and it seems that Ukraine has achieved a degree of specialisation in this area in trade with the EU.

Innovation, although negative on aggregate, has a positive effect on Machinery and equipment and Other products. In order to see which precisely products are driving these effects, the analysis is done at 2- or, when this is not informative enough, at 4-digit level.

As far as **FDI** is concerned, it produces a positive effect on the likelihood to export to the EU across a number of sectors – minerals, textiles, wood, machinery and transport equipment and other products.

The most important products in group Minerals are "Minerals fuels" and "Ores, slag and ash", whose share of total exports to the EU-15 has grown considerably between 2000 and 2005 –

from 9.5 percent to 22 percent, and from 0.62 percent to 6.55 percent respectively. Indeed, in case of both mineral fuels and ores, there has been a lot of Russian (or Russian originating) and other foreign direct investment in oil refineries and ore enrichment plants, which seems to have been at least in part export-oriented.[97]

Textiles are traditionally an FDI-intensive sector in emerging markets, and Ukraine is no exception, and the biggest share in this group has been accounted for by product 62 "Articles of apparel and clothing, not knitted or crocheted", whose relative share has somewhat fallen from 6.6 percent to 3.8 percent between 2000 and 2006.

Ukraine had the largest wood-processing sectors in the former Soviet Union, and as a dynamically growing industry, wood-processing, including furniture manufacturing, has attracted a lot of FDI, particularly in forest-rich Western and Central Ukraine. Furniture is one of the important product lines in the category Other, where FDI also has a positive effect on the likelihood of exporting to the EU-15. And although a lot of FDI into furniture is market-seeking, supplying Ukrainian and neighbouring CIS market, a fair amount of re-export into the European Union is taking place. As mentioned in Terterov (2005: 117-118), in 2001 of 3,653 companies operating in the wood-processing and furniture industry in Ukraine, 10 percent are joint ventures or foreign-owned companies, and these and the majority of other enterprises were using foreign, mainly EU-made equipment. The main export destinations have also been EU countries – Germany, Italy, Poland, Hungary, Spain, as well as Turkey.

Machinery, equipment and transport equipment is also positively affected by FDI, and is dominated by categories 85 "Electrical machinery and equipment and parts, TV and sound recorders and reproducers" and 89 "Ships, boats and floating structures".

Ship-building industry is mainly represented by the Mykolayiv plant "Okean", which was bought by the Dutch group Damen Shipyards in 2000, since when the share of exports of ships to the EU-15 has grown significantly (from zero in 2000, to 1.7 percent in 2001 and 4.6 percent in 2004).

As far as commodity group 85 is concerned – the largest share of exports to the EU in this category has consistently been accounted for by insulated wires and cables / optical wires and

[97] E.g. "Zaporizhya Iron Ore Industrial Complex" – FDI from the Slovak firm MINERFIN. "Ukrtatnafta" (Kremenchug Oil Refinery) – Russian Tatnafta; "Lukoil- Odessa Refinery" – Lukoil (Russia); "Kherson Oil Refinery" – 40% by off-shore British Virgin Islands-registered Rayholt Invest S.A. and Faymarsh Company Ltd., both controlled by Ukrainian investors.

cables (HS commodity 8544), its share of commodity-line 85 has varied between 33 percent and 69 percent from 2000 to 2005. Indeed, Ukraine, along with Poland and Turkey, is considered one of the key markets for insulated wire in emerging Europe, with key players being foreign-owned companies, which explains the positive FDI effect.[98] Another well performing industry in Machinery, equipment and transport equipment was "Audio-electronic equipment, except recording devices" (HS 8518), which has comprised 10-30 percent of exports of group 85 to the EU-15, falling to 10-11 percent in 2003-2005. The FDI link here could be related to the implementation of a radio-electronic equipment production project in the Special Economic Zone "Porto-Franko" in Odessa region in 2002.

Another promising finding with regard to Machinery and Equipment is a positive effect of **innovation**. It is hard to tell which products are behind this effect – it would have to be products, which are not assembled from imported parts or materials, and ship-building could be one of them – but the important thing already is to know that there are signs of innovation leading to higher exports to the EU-15 – a very competitive market. Group "Other" in trade with the EU-15 is dominated by three 2-digit commodities: Optical, photographic, measuring, precision and other instruments (HS 1996 90), Furniture (94), and Toys, games and sports requisites and parts (95). It has already been mentioned that furniture has attracted a lot of FDI, which proves to be at least in part export-oriented, but little information on FDI into the other two groups is available.

[98] Draka Holding N.V. (The Netherlands) and Tele-Fonika Kable Handel S.A. (Poland), Leoni AG (Germany) http://www.electronics.ca/publications/products/Insulated-Wire-And-Cable:-A-Global-Strategic-Business-Report.html accessed on 19/09/2009.

Table 23. Sector-by-sector logit regression, pooled cross-sectional 2000-2005

EU-15	**Agriculture**	**Food**	**Minerals**	**Chemicals**	**Textiles_l~h**	**Wood**	**Metals**	**Mach_transp**	**Other**
Scale	**0.09*** **	-0.22***	-0.03	-0.02	**0.21*** **	0.01	0.01	-0.05***	-0.01
diversification	-0.02	0.03	-0.18***	0.01	-0.37***	-0.15***	-0.15***	-0.16***	-0.19***
Innovation	0	0.01	0.02	0.02	-0.14***	-0.13***	-0.07***	**0.08*** **	**0.03** **
FDI	0.03	-0.22	**0.36** **	-0.08	**0.76*** **	**0.61*** **	-0.15**	**1.24*** **	**0.65*** **
Constant	-2.53***	0.45	-1.33***	-1.54***	-2.44***	-0.58**	-0.93***	-1.79***	-1.30***
Nr of firms	337	248	267	616	424	462	647	857	545
N	3031	3787	2447	6715	4851	3900	10621	11212	4704
Ll	-1477.4	-1235.16	-1078.11	-2797.04	-5163.65	-2368.98	-4515.22	-5837.46	-2540.1
df_m	4	4	4	4	4	4	4	4	4
chi2	11.96	80.39	21.4	**3.81**	429.36	179.56	110.62	327.41	103.51
EU-12	**Agriculture**	**Food**	**Minerals**	**Chemicals**	**Textiles_l~h**	**Wood**	**Metals**	**Mach_trans~p**	**Other**
Variable									
Scale	-0.12***	-0.16***	**0.08*** **	-0.05***	-0.07***	-0.05***	-0.11***	-0.09***	-0.10***
diversification	**0.33*** **	-0.03	-0.12***	**0.05** **	-0.03	-0.15***	0	**0.05** **	0.05
Innovation	-0.13***	**0.05*** **	-0.01	-0.02**	**0.02** *	-0.03*	0.01	-0.05***	-0.03**
FDI	-0.33*	-0.08	-0.55***	-0.35***	-0.12	0.21	-0.04	**0.36*** **	0.06
Constant	0.15	0.14	-1.04***	-0.54***	-0.37	-0.37	0.11	-0.62***	-0.24
Nr of firms	337	248	267	616	424	462	647	857	545
N	3031	3787	2447	6715	4851	3900	10621	11212	4704
ll	-1266.86	-1755.3	-1540.22	-3358.6	-2503.21	-2137.14	-5675.22	-5254.92	-2250.07
df_m	4	4	4	4	4	4	4	4	4
chi2	86.36	103.08	51.2	43.82	27.06	57.74	120.71	146.95	59.32

Continued overleaf.

CIS Variable	Agriculture	Food	Minerals	Chemicals	Textiles_l~h	Wood	Metals	Mach_trans~p	Other
Scale	-0.05**	**0.45*** **	-0.07***	**0.11*** **	-0.03**	**0.15*** **	**0.08*** **	**0.19*** **	**0.18*** **
diversification	-0.28***	-0.42***	**0.12*** **	-0.20***	**0.24*** **	0.04	**0.16*** **	-0.11***	-0.11***
Innovation	**0.07*** **	-0.00	-0.07***	-0.08***	**0.08*** **	**0.19*** **	-0.05***	-0.07***	-0.03***
FDI	**0.32** *	0.09	0.17	**0.51*** **	0.15	-0.41***	**0.21*** **	-0.69***	-0.60***
Constant	-0.72**	-4.59***	0.04	-0.92***	-1.75***	-3.29***	-2.07***	-1.39***	-1.58***
Nr of firms	337	248	267	616	424	462	647	857	545
N	3031	3787	2447	6715	4851	3900	10621	11212.00	4704.00
ll	-1660.07	-2271.61	-1451.19	-4483.89	-2765.04	-2144.75	-6592.82	-7260.69	-3034.94
df_m	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
chi2	30.28	494.43	54.19	328.85	162.75	333.27	161.83	638.60	217.63

Note: Statistical significance * p<0.1; ** p<0.05; *** p<0.01 confidence level.

Source: Author's calculations using STATA 9.1.

EU-12

Although in the general pooled regression in Table 22 the EU-12 dummy showed a puzzling result – all variables having a negative aggregate effect, on a cross-sector and year-by-year basis some pronounced positive effects can be seen.

Thus, **scale** – i.e. both the volumes of exports and, as a proxy, the size of an enterprise, increases the likelihood of *minerals* to be exported to the EU-12, while **commodity diversification** is positive for *chemicals and machinery and transport equipment*.

The scale effect is driven by a very high share of ores, coke and mineral fuels in both exports of minerals and total exports to the EU-12, which has been growing between 2000 and 2005: ores – from 14.3 percent to 24.5 percent, mineral fuels – from 9.7 percent to 20 percent. It is rather unsurprising to observe that bigger size of an enterprise is conducive to higher exports of these products.

As far as the effect of commodity diversification on chemicals is concerned, group 29 "Organic chemicals" (in particular acyclic hydrocarbons and halogenated derivatives) and group 31 "Fertilisers" are driving the results.

Machinery and transport equipment exports to the EU-12 are positively affected both by **commodity diversification** and **FDI**. Exports in this group are represented by groups 84 (Nuclear reactors, boilers, machinery and mechanical appliances) and 85 (Electrical machinery and equipment and parts thereof). In order to understand better which exactly products could be driving the effect of commodity diversification and FDI, products at 4-digit level and the most important products in groups 84 and 85 are looked at next.

In group 85, as in trade with the EU-15, insulated cables and wires are the top exported product, whose share in the group grew from 1 percent in 2000 to 48 percent in 2005. It has already been mentioned that this industry is highly exposed to FDI. The next top performers are group 8531 "Electric sound or visual signal equipment", which on average constituted 19 percent of group 85 exports from 2000 to 2005, and group 8537 "Electrical power, etc, control and distribution boards" – 16 percent on average. Both of which are likely to represent some FDI-exposed producers (e.g. UK firm Schneider Electric in case of the latter, which works both for the domestic and export markets, while electric and sound equipment is likely to represent re-export of assembled parts, imported from Asian countries).

Products in group 84 are less concentrated and perhaps this is what is driving the commodity diversification effect. The top performers have been: 8419 "Machinery, non-domestic,

involving heating or cooling" (11 percent of group 84 on average for 2000-2005); 8482 "Ball or roller bearings", of which Ukraine is one of the top producers in Europe (8 percent on average); 8471 "Automatic data processing machines (computers)" (grew to 29 percent in 2005, 7 percent on average); 8414 "Air, vacuum pumps, compressors, ventilating fans", 6 percent on average; 8455 "Metal rolling mills and rolls" (8 percent); as well as 8410 "Hydraulic turbines etc", 8409 "Parts of internal combustion spark ignition engines"; 8473 "Parts, accessories, except covers, for office machines" (all 5 percent on average). In industrial machinery Ukraine has traditionally had a relative competitive advantage, and little FDI (unless it is of Ukrainian origin re-diverted through Cyprus, as is very often practiced) is present there, whereas office equipment and computers are most likely produced as part of an international value chain, with either majority or minority foreign presence, which would explain the positive FDI effect.

Innovation has a positive and significant effect on the likelihood of a firm to export to the EU-12 in 2002, 2003 and 2006, in particular *food* and *textiles & leather*, with a weaker statistical significance for the latter.

Food products are mainly represented by group 21 Miscellaneous edible preparations, 19 Preparations of cereals, flour, starch/milk etc. and 20, Preparations of vegetables, fruit, nuts etc. Textiles include group 61 Articles of apparel and clothing access, knitted or crocheted and 62 Articles of apparel and clothing access, not knitted or crocheted.

CIS

In the aggregate CIS regressions **scale** and **diversification** have a positive effect on the likelihood of a firm to export to the CIS. In the sectoral breakdown one can see that the **scale** effect is positive for most commodity groups – Food, Wood and articles of wood, Base metals, machinery and transport equipment and other products, which suggests that bigger enterprises or enterprises with bigger production capacity (export production capacity, as only exporting enterprises are compared) are more successful in entering CIS market rather than European markets.

Diversification is positive for three groups – minerals, textiles and metals. Although slightly surprising, the diversification in minerals must be driven by the groups 28 "Inorganic chemicals, organic and inorganic compounds of precious metals, or rare earth metals" (5.24 percent of total exports to CIS from 2000 to 2005) and 27 "Mineral fuels, oil and product of their distillation" (which amounted to 4 percent of total exports on average).

Textiles, leather and footwear products only comprised from 1 percent to 3 percent of total exports to CIS in our sample, falling from 3.6 percent to 1.96 percent between 2000 and 2005. Within this group the most important products have been carpets and other floor coverings, raw hides and skins, and wool and other yarn and hair.

Metals include groups 72 "Iron and steel" – the share of which grew from 6 percent in 2000 to 22 percent in 2005, and 73 "Articles of iron and steel", which grew from 0.7 percent in 2000 to 9 percent in 2005. Group 72 represents goods of lower level of processing, therefore they are likely to be less diversified than goods in group 73. Besides, the share of the latter has grown much faster than that of group 72 – by 67 percent vs. 31 percent (CAGR) respectively.

Interestingly, **innovation** is positive not for technology intensive products, but for agricultural products, textiles, and wood. This may relate to the fact that even in lower added value categories Ukraine tends to export goods of higher level of processing to CIS than to the EU markets.

FDI is positive and significant for chemicals and metals. In chemicals the most important products are: rubber and articles thereof (on average accounting for 5.4 percent of total exports to CIS in our sample), Plastics and articles thereof (1.4 percent of total exports to CIS), and Miscellaneous chemical products. The positive effect of FDI on exports of chemicals can be explained by the fact that the main producers of polymers in Ukraine are enterprises with foreign participation – Karpatneftekhim (Russian Lukoil-Neftekhim Group), Linos (Russian TNK-BP Group) and JSC Stirol (with partial US and Canadian ownership).[99] A similar situation is observed in metallurgy, where Russian presence has been substantial – Evraz Group (controlled by the Russian oligarch Roman Abramovich) owes part of the metallurgical assets of Privat Group; Smart Holding has merged assets with Metinvest, the biggest metallurgical producer in Ukraine controlled by Rinat Akhmetov; Rusal (owned by the Russian oligarch Oleg Deripaska) also owns aluminium production capacities in Ukraine.

[99] Market Report Company (2007) "Rynok polimerov v Ukraine 2007". Available at http://www.mrcplast.ru/reports/polymers-in-ukraine-2007.html , retrieved on 23rd of March 2010.

Table 24. Dependent variable – exporting to the EU-15, 2000-2006

Variable	2000	2001	2002	2003	2004	2005	2006
Scale	**0.055*** **	**0.042*** **	**0.048*** **	0	0	-0.007	-0.021***
Diversification	-0.313***	-0.109***	-0.094***	**0.078*** **	-0.147***	-0.124***	-0.199***
Innovation	0.021	-0.054***	-0.037***	-0.108***	-0.041***	-0.051***	0.006
FDI	0.519	0.058	**0.937*** **	**0.475*** **	**0.603*** **	**0.700*** **	
Constant	-1.884***	-1.333***	-2.295***	-1.225***	-1.278***	-1.407***	-1.110***
n	477	654	754	795	948	974	n/a
N	3448	6391	7831	8742	11599	12188	49510
ll	-1811.324	-3280.55	-3952.051	-4598.661	-5878.415	-5903.613	-20500
df_m	4	4	4	4	4	4	3
chi2	84.208	51.591	156.16	131.329	225.788	176.506	476.442

Note: This regression and below – cross-sectional logit with robust standard errors.

Statistical significance: * p<0.1; ** p<0.05; *** p<0.01 confidence level.

Source: Author's calculations using STATA 9.1.

Table 25. Dependent variable – exporting to the EU-12, 2000-2006

Variable	2000	2001	2002	2003	2004	2005	2006
Scale	-0.108***	-0.112***	-0.062***	-0.040***	-0.071***	-0.052***	-0.111***
Diversification	-0.043	-0.016	-0.245***	-0.032	-0.005	0.019	-0.020*
Innovation	-0.094***	-0.002	**0.071*** **	**0.019* **	-0.051***	-0.043***	**0.009** **
FDI	0.518	-1.003***	0.085	**0.206** **	-0.188***	-0.025	
Constant	-0.205	0.987***	-0.582***	-1.036***	-0.079	-0.444***	-0.158***
	477	654	754	795	948	974	
N	3448	6391	7831	8742	11599	12188	49510
ll	-1666.548	-3349.802	-3879.342	-4495.637	-5727.103	-6238.526	-23300
df_m	4	4	4	4	4	4	3
chi2	83.063	228.764	170.448	26.898	119.725	75.192	529.167

Note: Statistical significance * p<0.1; ** p<0.05; *** p<0.01 confidence level.

Source: Author's calculations using STATA 9.1

Table 26. Dependent variable – exports to the CIS, 2000-2006

Variable	2000	2001	2002	2003	2004	2005	2006
Scale	0.024	**0.074*** **	**0.052*** **	**0.086*** **	**0.132*** **	**0.047*** **	**0.099*** **
Diversification	**0.167*** **	0.006	**0.139*** **	-0.031*	**0.049*** **	0.011	-0.097***
Innovation	**0.039*** **	**0.024** **	-0.060***	0.005	-0.017**	-0.005	-0.045***
FDI	-1.251***	**0.548*** **	-0.365***	-0.138**	**0.128** **	-0.343***	
Constant	-0.081	-2.142***	-0.866***	-1.471***	-2.279***	-0.806***	-1.004***
N	477	654	754	795	948	974	
ll	3448	6391	7831	8742	11599	12188	49510
df_m	-2247.02	-4062.77	-5058.74	-5661.38	-7547.42	-8024.58	-33700
chi2	4	4	4	4	4	4	3

Note: Statistical significance * p<0.1; ** p<0.05; *** p<0.01 confidence level.

6.5.4. Trade reorientation model: Findings and conclusions

Based on the above detailed analysis, and theoretical considerations outlined earlier in the chapter, the following conclusions can be made, focusing on CIS and EU-15.

To recall – Hottop et al. (2005) argue that the link between trade and economic growth will be stronger, when a country (and its enterprises) manages to establish strong positions with foreign markets both in terms of product specialisation (higher scale) and product variety (diversification). Higher specialisation signifies the learning-by-doing effect, while commodity diversification – product innovation. On top of that, we are exploring FDI and innovation effects as additional indicators of industrial upgrading, innovation and higher competitiveness on the external markets. What has the empirical analysis shown in this regard?

Exports to the **CIS** are positively affected by both scale and commodity diversification. In terms of timing, Table 24 shows that the scale effect has been consistently pronounced since 2001, while diversification has been positive on and off between 2000 and 2006, suggesting a continuous learning-by-doing effect and an intermittent product innovation effect. Innovation also had a positive effect on exports to the CIS, but for a more limited range of products. FDI, on the other hand, had no positive effect on exports to the CIS.

At the same time, in trade with the **EU**, specialisation (scale) is only marginally positive (mainly driven by agriculture and textiles), while commodity diversification (and hence product innovation) and innovation costs, are negative on aggregate. While there are more positive signs on a sector-by-sector basis in trade with the EU-15, the aggregate-level picture suggests that industrial upgrading efforts of Ukrainian enterprises, measured by higher diversification and innovation expenditures, have had a more positive effect on exports to the CIS than to other regions; or could have been made because the demand on the CIS markets has been driving this industrial upgrading. Evidence-based reasons for this cannot be given in this chapter, but, as was already observed in Chapter 3 with the use of the gravity model, geographical proximity (plus longer common borders), as well as cultural proximity (language used as a proxy) are strong positive factors here. Cultural proximity also represents path dependency and similarity in demand and tastes due to common past – some Ukrainian products have traditionally been sold to the USSR markets. Speaking of higher value-added products, CIS consumers are more likely to opt for a newer model of some Ukrainian product, e.g. a piece of home appliance or kitchen utensils, than a European consumer, who is not acquainted with Ukrainian products at all. This particularly concerns ready-made products,

raw materials and parts are less subject to this effect. Therefore it is not surprising that diversification and innovation are not producing a positive effect on the likelihood of exporting to the EU-15. In this case a European producer might more readily buy Ukrainian-made but well-known global brand product. This may also explain the positive effect of FDI on exports to the EU. And although some literature (e.g. Kudina, 1999) suggests that inward Ukrainian FDI has been mainly market seeking, a consistently positive and significant effect of FDI can be observed in the EU-15 regression as of 2002 (see Table 24). The next logical question would be whether this FDI is in itself leading to industrial upgrading and innovation. In the sample used in this analysis it does not seem to be the case – as can be seen from the correlation matrix in Annex 11, FDI is statistically and significantly correlated only with scale (i.e. higher specialisation), but not with innovation and diversification. This concerns all trade partners, regardless of the region. No attempt is made to interpret this as a finding, but there are little grounds for a positive association between these variables in the regression analysis.

Hence, it can be said that in the period 2000-2006 enterprises exporting mainly to the CIS were characterised by both higher specialisation and diversification of their products, and hence – relative industrial upgrading. With regard to the latter it is important to note that the results of the study do not suggest that exporting to the CIS *causes* industrial upgrading (or productivity growth), as that would require regressing previous period's exports on current period innovation. If any causality were to be inferred, the results are more indicative of diversification or product upgrading increasing the likelihood of a firm to export to the CIS than to the EU, rather than exporting causing product upgrading. Although a mutually reinforcing process is likely as well, it has not been tested in this analysis. In reality, the most relevant interpretation of the results is that *the data shows that Ukrainian enterprises tend to sell more diverse products to the CIS than to the EU.*

Exporting to the EU-15 was positively affected by FDI, and only marginally by specialisation. On aggregate there is little evidence to suggest that this FDI was conducive to industrial upgrading, but this is seen as a positive finding in any case, as it shows that not all FDI to Ukraine is market-seeking. Particularly positive in terms of higher-value added content of Ukrainian exports is a strong and positive sign of FDI on exports to the EU of machinery, transport and other equipment.

6.6. Conclusion

This chapter explored various determinants of internationalisation of Ukrainian manufacturing enterprises. In line with the argument in the previous sections of this thesis, this section departs from the premise that in the Ukrainian context a successful internationalisation strategy should involve penetration to more advanced markets, as well as maintaining traditional markets of the former Soviet Union. Ukrainian foreign economic policy has been directed towards European integration, and deep and comprehensive free trade agreement is being negotiated. Therefore it is important to explore the differences between firm-level characteristics that are associated with exporting to the EU and those that are more typical for exporters to the CIS.

The first exercise showed that a typical Ukrainian exporter tends to be *a large firm with foreign ownership and educated labour, but which does little product innovation and upgrading of capital.* It seems that it is well established, large and less dynamic firms that tend to export. These results do not come as a surprise if one thinks about the commodity composition of Ukrainian exports, dominated by resource-intensive and low value-added products.

The second exercise turned to the destination-specific export determinants, trying to reveal the factors that increase the chances of a firm to export to the EU as opposed to the CIS. Some of the findings of the first exercise are corroborated in the second model. Contrary to the theoretical expectations, innovation has a negative effect on export propensity with regard to all regions in question – EU-15, EU-12 and CIS. Foreign ownership, which had a pronounced positive effect in the first exercise, in the second model has a positive effect only in trade with the EU-15. Also consistent with the first model, the scale effect, which can be approximated with size, has a positive effect in trade with most regions, apart from EU-12.

In addition to the above, exports to the **CIS** were found to be positively affected by both specialisation (scale) and commodity diversification. Innovation also had a positive effect on exports to the CIS, but for a more limited range of products (surprisingly, agriculture, as well as textiles and wood and related industries). FDI, on the other hand, had no positive effect on exports to the CIS.

At the same time, in trade with the **EU**, specialisation had only a marginally positive effect (mainly pronounced in agriculture and textiles), while commodity diversification (and hence

product innovation) and innovation expenditures (process innovation) are negative on aggregate.

While there are more positive signs on a sector-by-sector basis in trade with the EU-15, the aggregate-level picture suggests that *industrial upgrading efforts of Ukrainian enterprises, measured by higher diversification and innovation expenditures, have had a more positive effect on exports to the CIS than to other regions; or could have been made because the demand on CIS markets was driving this industrial upgrading.*

CHAPTER 7. THE ROLE OF BUSINESS ELITES IN THE EU-UKRAINE TRADE POLICY-MAKING: POLITICAL ECONOMY FRAMEWORK

7.1. Introduction

While the previous chapter looked at a population of Ukrainian firms to explore the characteristics that make firms more or less likely to export to the EU versus CIS markets, this chapter aims to pay due attention to individual businesses that have a disproportionately high influence both on overall exports and on trade policy-making, and therefore deserve a separate, qualitative, enquiry.

The textbook economics says that free trade is the most optimal outcome in the world economy. Political scientists, on the contrary, claim that vested interests will always prevent complete trade liberalisation from taking place and wonder why so much liberalisation is observed (Krueger, 1992). The political economy of trade attempts to marry these two views in order to explain how bilateral and multilateral trade policy coalitions are formed and thus solve the puzzle. The consensus has emerged that the resulting level of trade liberalisation will be determined by an interaction of economic considerations, special interests within a society and political institutions that shape trade policy formation, both on a country-level and internationally (Krueger, 1992; and Alt *et al.*, 1996).

This is exactly what this chapter will focus on – the degree of mobilisation of special interests, in particular large business actors, with respect to bilateral trade liberalisation in a particular case of a country and a trade bloc – Ukraine and the EU respectively – taking into account the other two components acknowledged as central to the political economy of trade – *economic factors* and *political institutions*. Normally in the literature the degree of trade liberalisation is the dependent variable, with economic factors, special interests and political institutions held exogenous. Whereas the assumption of business interests being one of the determinants of the degree of trade liberalisation is still kept here, the focus is shifted slightly, narrowing down the question and taking the degree of business mobilisation as the main dependent variable, looking at its interaction with the above mentioned and some other exogenous variables.

Ukraine and the EU represent a case of moving from very little trade throughout most of the twentieth century to a comprehensive trade liberalisation within a wider economic integration exercise. Although the volumes of trade have grown substantially since the collapse of the

Soviet bloc, and free trade area was already envisaged in the EU-Ukraine Partnership and Cooperation Agreement signed in 1998, efforts to liberalise trade have gained momentum quite recently – in the late years of Kuchma presidency (2003-2004). This was probably rather EU-driven, as the union was preparing a New Neighbourhood policy as a response to membership demands by some of its new neighbours, in particular Ukraine and Moldova. However, trade liberalisation efforts intensified substantially after the December 2004 Orange revolution with the election of a pro-Western government under the presidency of Victor Yushchenko. At the same time, despite trade liberalisation being debated in the academic and policy-making fora for quite a while, business community, the ones who actually conduct trade, have started to pay attention to this process only in the last couple of years (2006-2007). And this early interest is still hard to call mobilisation. Perhaps this is why this aspect has also seen very little reflection in the literature (see Puglisi, 2007; Shumylo, 2006, for some of the few enquiries). The early stage of business actors' mobilisation has implications for the extent of our analysis, but the situation is very likely to develop dynamically as the negotiations between the EU and Ukraine on the Free Trade Area are about to progress. On the other hand, some inferences can be made from an earlier trade liberalisation exercise – WTO accession, which lasted for fifteen years from 1993 until early 2008. Although the two processes are in some sense asymmetric – WTO implies liberalisation of imports and investment for Ukraine, while the EU integration is more important for liberalisation of Ukrainian exports to the EU – there are some systemic issues that are similar in the way business tends to mobilise on trade matters, and they will affect the eventual policy outcome of the EU-Ukraine free trade agreement.

The structure of this chapter will be as follows – section 7.2 reviews the theoretical considerations of business mobilisation and coalition formation in trade policy-making, which consists of sub-sections on identifying economic stakes and on collective action costs and political institutions as factors determining mobilisation. Section 7.3 turns to the analysis of trade-related lobbying in Ukraine, and consists of an introduction to WTO and EU trade liberalisation efforts, the framework chosen for the qualitative analysis, and sub-sections on the problems of asymmetrical and incomplete information, economic factors (comparing factors at play and mobilisation with regard to WTO accession and EU-Ukraine Free Trade Agreement), and collective action costs and political institutions in the Ukrainian case.

7.2. Business mobilisation and trade policy-making: theoretical approach

To put it very simply, the degree of business mobilisation with respect to trade policy making depends on the perceived gains from mobilising and its costs, i.e. as with any economic decision – on the cost-and-benefit analysis. On the benefits side economic theories had more to say than on the costs side – in trade theoretical literature the stakes of trade liberalisation for businesses and their resulting trade preferences are perceived to be determined by industry characteristics, or more specifically by the characteristics of the factors of production (e.g. labour and capital). At the same time economic theories say very little about how these trade preferences are eventually transformed into policy outcomes (Alt and Gilligan, 1994), as preferences will vary and individual business actors will face significant costs in trying to push through their own preferred policy. Here the new institutional economics and political science come into play and argue that apart from stakes of liberalisation, policy outcomes will be determined, *inter alia*, by collective action costs and political institutions.

Alt *et al.* (1996) conclude that convergence is taking place in the literature on the appropriate model of political economy of trade:

> (1) To lay out the implications of different trade policies on the incomes of sectoral groups or broad factor owners;
>
> (2) To deduce the policy outcomes from:
>
> (a) The organisational strength of these actors and
>
> (b) The nature of prevailing political institutions.

This framework is also used in constructing our argument about Ukraine, first looking at the *economic factors* that define businesses' trade policy preferences, then discussing the interaction of businesses' organisational strength (i.e. how they overcome *the costs of collective action*) and the *institutional environment* that they operate in.

7.2.1. Identifying the stakes: economic factors

Trade theoretical literature uses three main models to shape the argument about the impact of trade liberalisation on incomes of producers – Heckscher-Ohlin-Samuelson (HOS), Ricardo-Viner and increasing returns to scale models. The first two models place the factors of production (like capital and labour) at the core of producers' decision-making about the need to intervene in the trade policy formation process.

Factor specificity

In the HOS model trade benefits the owners of abundant factors (as products making use of these factors will be most competitive in a particular country) and harms the owners of scarce factors, hence the former will support trade liberalisation and the latter will be protectionist. But factors of production are presumed to be mobile, and therefore if needed harmed producers can redeploy them to sectors that are better off from freer trade. Pressure politics will be employed if the adjustment costs (costs of switching the factors of production) are higher than the costs of lobbying.

Ricardo-Viner model, on the contrary, assumes that factors cannot easily move across sectors, therefore the resulting fall in prices following trade liberalisation will benefit export-oriented industries and will harm import-competing industries, which will compete with each other to influence the decision-makers. Thus it logically follows that the higher the factor specificity, the higher are the costs of adjustment to trade liberalisation for worse off sectors, and hence the more likely are they to mobilise to lobby for their preferences. A good example would the automobile lobby in the Ukrainian parliament, which consistently acts as an anti-liberalisation force.

These assumptions shaped the early research on the politics of international trade, in particular the endogenous tariff theory (Mayer, 1984; Grossman and Helpman, 1994) – this mainstream approach assumed all trade decisions to be the result of lobbying. In simple terms, the logic ran as follows – politicians enact policies because they need votes; consumers are the main winners from free trade, but they are numerous and face prohibitive costs of collective action; producers are less dispersed than the consumers and can overcome the costs of collective action easier and therefore are more successful in promoting their interests, which often happen to be protectionist (Stigler, 1971). Most of endogenous tariff literature uses the Ricardo-Viner assumption of highly specific (immobile) factors of production, where industries serving the domestic market will be worse off from free trade and thus more likely to mobilise to lobby.

Thus, early literature (in 1970-80s) focused more on the demand for protection in trade policy coalition formation. Although more recent economic literature has demonstrated that business-government relations in trade matters can be much more complex than that, some authors acknowledge that such dynamics is still relevant in not fully liberalised and/or transition economies. Referring to Russia, Woll and Artigas (2007) note that in the emerging economies the stakes with tariff reductions are higher, their lobby opportunity structure is

more obscure, and therefore anti-trade lobby can still dominate in the resulting policy equilibrium.

New trade theory and increasing returns to scale

As global industrial organisation was undergoing a major change and multinational corporations were gaining an unprecedented strength, the trade lobby agenda changed as well, making business actors' demands more complex. The resulting balance of preferences was more and more often pro-free trade (as shown in Milner's 1988 influential study). Milner and Yoffie (1989) extended the argument to say that trade preferences will not always be exogenously determined, i.e. always pro-trade for exporters and anti-trade for import-competing sectors. They can be significantly dependent upon external (foreign governments' policy interventions) and dynamic (changing industry structure) factors, rather than solely on static factor endowments. And in this framework the main model of new trade theory is used – *the increasing returns to scale (IRS)* model – which leaves behind the factor specificity debate. It embraces Krugman's arguments that competitiveness of the firm is defined by the nature of an individual market and the size of the firm, while presence of economies of scale makes larger firms more competitive internationally and smaller – more protectionist. Large business actors can then advocate their own "strategic policy" of trade barriers if foreign markets are protected (Milner and Yoffie, 1989). Moreover, sectors with IRS will be expected to lobby more and support more open trade (Alt *et al.*, 1996).

Economic models help to identify the stakes. But in reality incomplete information may make identification of these stakes difficult.

Identifying the stakes: Uncertainty and incomplete information

Incomplete information is an important barrier for business actors in their quest to identify the potential stakes of liberalisation. The importance of information in international economic relations has been acknowledged in numerous studies (e.g. Keohane, 1984; Krueger, 1992). Woll (2005) also underlines that identification of preferences is a lengthy process linked to the interactions between business and government representatives, and that uncertainty affects both the way firms *conceive* of the interests and the way in which they *mobilise*.

Better information about the distributional implications of an FTA can have a significant effect on the incentives of domestic business groups to mobilise and pressure their governments to adopt policies that favour them. Thus, Goldstein and Martin (2000) argue that in multilateral trade talks the ability of a government to sign an agreement may depend on the

groups mobilised for or against. Moreover, depending on the status quo and on the degree of information precision, information can have different empowering effect on exporters or protectionists – sometimes complete information can increase the incentives for protectionists to mobilise, and therefore governments should aim to maintain the right balance between too much and too little information in order not to lead the talks to a stalemate.

In reference specifically to the EU integration policies, Leblond (2007: 9) notes that:

> Economic interests initially face great uncertainty as to the precise costs and benefits of integrating a particular policy area; only once the 'fog of integration' lifts—as a result of concrete legislative proposals being tabled by the Commission—are economic interests able to calculate these costs and benefits and, consequently, decide whether to lobby for or against the proposal.

This is of particular relevance to the Ukraine-EU trade liberalisation case, where little in terms of concrete legislative proposals has been done at the time of this research (2007-2008).

What is crucial in our case, and as has also been acknowledged in the literature (Dur, 2007), businesses tend to perceive the stakes to be higher when a trade policy measure or an agreement entail potential *losses rather than gains* – in the undertaken cost-and-benefit analysis the perspective of suffering losses will make business actors more eager to overcome the costs of mobilising. In particular, when discriminatory trade agreements are concluded, exporters of the third countries that are likely to suffer from trade diversion will mobilise either to receive compensation or to join these preferential agreements.

Kingstone (2001) goes further and criticises classifying business preferences based purely on economic criteria. He believes that politicians can use incomplete information as a tool to shape coalitions, especially when economic positions are undetermined. He quotes Verdier (1994), who argues that politicians can even create factor specificity through policy.

After making their judgements on the potential economic stakes of trade liberalisation, in conditions of higher or lower information availability, influenced or not by politicians, businesses will anyway face costs in turning these trade policy preferences into policy outcomes, which will be related to costs of organising the lobby and the institutions that shape the policy-making process.

7.2.2. Costs of mobilising: collective action costs and political institutions

In the quest to assess the degree of business mobilisation with regard to trade liberalisation efforts, under mobilisation we do not necessarily imply formal collective organisation. We look for various ways – both individual/direct and collective – that business community

members may employ to convey their trade-related interests to the government, so-called "voice" strategy, as opposed to passive acceptance of proposed policies and adjustment (e.g. Hathaway, 1998). Whenever interests of several firms coincide, it would be logical to expect some form of collective action, to produce more weight in their lobbying, but not necessarily – the firms may resort to individual / direct lobbying methods. The chosen mode of intervention will be shaped by: *the nature of policy question* (i.e. how many industries it concerns), *presence of common interests*, *industry characteristics* (competition, concentration), the related *costs of organising* and *the institutions* in which the business operates.

The very essence of the Olsonian (Olson, 1965) collective action costs argument is about the difficulty of achieving a common good for a group of individuals – the bigger the group, the bigger will be the incentive of free-riding for some or most of the group members, which complicates the realisation of this common goal. In contrast, individual interests are much easier to achieve, as are interests pursued by smaller groups. From this argument it follows that concentrated industries will find it easier to sustain their lobbying efforts (which found empirical support in Magee, 2002). Industries operating in monopolistic or oligopolistic environments (e.g. aircraft building or car manufacturing, respectively) will also have an advantage over industries characterised by near-perfect competition (such as textiles).

With regard to *political institutions*, there have been several ways to look at this aspect. The first view focuses on the electoral systems and the difference between majoritarian versus proportional representation systems (e.g. Rogowski, 1987; Mansfield and Busch, 1995). Proportional representation is expected to result in higher autonomy from interest groups and in higher stability (Rogowski, 1987). In turn, strong parties and large electoral districts are also likely to insulate the legislature from protectionist private interests. On the other hand, majority voting may make it easier for an industry that dominates in the electoral district (the easier the smaller the district) to have its loyal representative elected to the legislature and hence provide protection to the industry (Grossman and Helpman, 2005; Fredriksson *et al.* 2008). Proportional representation insulates policy makers from protectionist demands, and may therefore result in lower levels of protection.

Majoritarian systems encourage mass political movements, which is conducive to the formation of broad-based coalitions on certain policy issues. On the contrary, if institutions are less majoritarian, or 'insulating', interests will not be willing to form massive movements and will resort to back-room lobbying, which is conducive to specific and rent-seeking

policies. Thus, Woll (2005) notes that in the European Union, where policy-making process encourages broad-based coalitions, narrow specific trade policies can no longer find an easy way into legislation.

Party system also plays a role. Weak parties do not adhere as strongly to the party's position on the right-to-left spectrum and their pre-electoral promises can be less specific, therefore its members have more room for manoeuvre in their policies. In such conditions they are more susceptible to influence by specific interests and therefore the policies adopted are also likely to be more specific (Hillman and Keim, 1995). Institutional literature also emphasises that if issues are decided upon a sector-by-sector or industry-by-industry basis special interests will have a larger influence than if the decisions were made on an across-the-board basis (North, 1990).

The third view focuses on the relative strength of various branches of power – mainly legislature and bureaucracy – and their relationship with the constituency, including producers and consumers, or only businessmen, depending on the focus. Nevertheless, obviously the desire of politicians to be re-elected remains an assumption in any political science approach to trade policy-making. In American literature this relationship was coined as "iron triangle", which consists of politicians, bureaucrats and constituency (Krueger, 1992). Politicians want to be re-elected and therefore are ready to provide favours to constituency. As far as producers are concerned, they find favours more apparent when they are the outcome of the bureaucratic or administered process, and therefore politicians approve legislation that permits the bureaucracy to provide these favours.

In a more recent article, exploring the link between political institutions and protectionism in trade, Ehrlich (2007) criticises some of the above propositions, in particular the bipolar approach to majoritarian and non-majoritarian systems. He introduces broader institutional theory to the mainstream political science literature, suggesting that what is crucial is the number of access points to decision-makers, not the difference between majoritarian and non-majoritarian electoral systems.[100] Higher number of access points will make lobbying less costly, benefiting the protectionists. Once these factors are controlled for, majoritarian *vs.* non-majoritarian system would have no impact on trade policy.

This proposition is contradicted in Frye and Mansfield's (2003) study on trade liberalisation and political institutions in the post-Communist world. They find that fragmented power,

[100] These access points will depend on the number of parties in government, the number of electoral districts, the nature of the vote, and other institutions.

reflected in 2-, 3- or more party parliamentary coalitions, or presidential systems with majority support in the parliament, makes trade liberalisation more likely. They also find that in non-democracies (which Ukraine was considered to be according to their classification), a more fragmented power under Kuchma, but also dispersed away from protectionist elites affiliated with the prior (communist) regime, has created a political space for interest groups favouring openness to increase their influence over trade policy.

Hence, the views in the literature on the role of political institutions in the political economy of trade policy-making are somewhat contradictory. Section 7.5.2 will try to reveal the respective mechanisms at work in Ukraine.

7.3. Trade liberalisation in Ukraine and the conceptual framework of business mobilisation

At the moment of writing Ukraine is undertaking two main trade liberalisation initiatives – a multilateral one aimed at WTO accession, and a bilateral regional initiative aimed at establishing a free trade area with the European Union.[101] While the main question in this study is what role Ukrainian business community plays in the EU-Ukraine trade policy-making, the example of WTO is added here as to some extent the two processes are inter-related – WTO accession was a clear precondition for starting negotiations on the EU-Ukraine DCFTA, and, secondly, WTO provides a major example of business mobilisation with regard to trade in Ukraine.

These two processes differ significantly. WTO accession negotiations have started as far back as 1993. Technically WTO accession entails liberalisation of trade and investments mainly on the Ukrainian side, with some regulatory treatment consequences on the part of WTO members that will simplify exports from Ukraine, such as elimination of quotas on Ukrainian steel exports or easier dealing with anti-dumping investigations. More generally, however, WTO increases the attractiveness of the Ukrainian market and sends a positive sign to investors, thereby bearing the potential of increasing Ukrainian export performance. For most of the accession history the reforms were stalled, largely due to strong industrial lobby, but in 2005 there was a turn in the attitudes and most of the necessary laws were passed. This chapter will try to shed light on what economic and political factors contributed to the initial opposition and the eventual turn-around.

[101] While there are also free trade agreements with CIS countries, and there is a pending Russia-led initiative to establish Single Economic Space between Russia, Belarus, Kazakhstan and Ukraine, trade liberalisation efforts in this direction have been stalled for some time now.

Compared to WTO accession, which by and large has always been an economic project, EU-Ukraine trade liberalisation came about from a wider and rather political agenda. The intentions to liberalise trade were voiced back in 1998 in the Partnership and Cooperation Agreement, but, as with most PCAs, very little progress had been made. As the EU was approaching its fifth wave of enlargement in 2004 the new Eastern neighbours, in particular Ukraine and Moldova, were demanding membership prospects. Since for various reasons the EU was not willing to make such promises, the time came to offer some tangible alternatives. Thus, on the backdrop of political motives, the economic idea of trade liberalisation came about as the best "carrot" the EU was prepared to give away, suggesting to make it as comprehensive as possible and aim towards giving full access to the internal market. This would, at the same time, be of direct economic benefit to the EU itself. In contrast to WTO accession, this is also a very recent process. While both sides intensified calls for an FTA since 2005 (in the EU-Ukraine Action Plan), officially the beginning of DCFTA negotiations has only been announced in February 2008 (later than the fieldwork within this research was done).[102] Informal exploratory talks have been under way since spring 2007, but only on the inter-ministerial level, the business still was not given any official reason to start thinking about the potential impact of an FTA.

Unlike with WTO, where the discourse was mainly centred on *import* and domestic industry protection, with the EU-Ukraine DCFTA the opening up of the EU market for Ukrainian *exporters* is more important. Further removal of Ukrainian import tariff barriers is likely to be marginal, apart from the agricultural sector and services, if both sides decide to go for an extended liberalisation. The discourse will also differ substantially because the stress is being made on a deep format of this FTA, foreseeing major legislative harmonisation and removal of non-tariff barriers.[103] Such issues are even more difficult for the producers to grasp and estimate the potential impact of. As to the current EU-Ukraine trade policy matters, outside the future FTA debate, the nature of lobbying will also differ from that with WTO, as there is no common measure of concern for multiple sectors that they can deal with collectively, and hence less collective action can be expected.

[102] EU-Ukraine Action Plan, February 2005, http://ec.europa.eu/world/enp/pdf/action_plans/ukraine_enp_ap_final_en.pdf , retrieved on 10 May 2008. The Council of the European Union (18 February 2008) "Council Conclusions on European Neighbourhood Policy", http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/gena/98790.pdf . retrieved on 10 May 2008.

[103] Namely liberalisation of access to the services market, harmonisation of standards and product certification, customs procedures, competition policy, state procurement and subsidies, investment climate (including sale of land), environmental standards and intellectual property rights.

Table 27 roughly outlines the way the author sees business mobilisation in Ukraine as being in line with the framework described above. Economic factors are the *'why'* of mobilisation, and political institutions and collective action costs are the *'how'*. In other words, economic factors determine the stakes of trade liberalisation and the underlying incentive structure of business actors with regard to this process, while political institutions and collective action costs prevailing in the country will shape the strategy that will actually be undertaken – mobilise or not, and how. The stakes of liberalisation and response will vary depending on the size of businesses – a distinction is made here between largest businesses, medium to large enterprises and SMEs. The largest businesses in Ukraine, as well as in Russia, have become known as *oligarchs.* Although traditionally the term oligarchy has been applied to denote the power structures where power rests with a small segment of society distinguished by royalty, wealth, family ties or military control[104], in its current meaning in Russia the term oligarch denotes a large businessman who controls sufficient resources to influence politics (Guriev and Rachinsky, 2004: 3). Due to the term's widespread use, in the rest of the document the largest businesses are referred to as oligarchs. This term may be interchangeably used with a more formal definition 'financial-industrial groups' (FIGs). The term 'large businesses' will be applied to large enterprises, which are generally smaller than FIGs and do not possess a similar degree of political influence.

On the economic side, the 'why' of mobilisation, there are two main factors affecting the degree of mobilisation – the perception of losses or gains from liberalisation and the size of business concerned. Depending on these, the political side, the 'how' of mobilisation, will determine whether there will be response from the business community and in what form it will come. The amount of information available on either WTO or EU trade matters will also affect the way the stakes are perceived by businesses and the resulting response.

Therefore these three elements are described next – information asymmetry in section 7.4.1, economic factors in sections 7.4.2 to 7.4.6, and political factors and collective action costs in section 7.5.

[104] ὀλιγαρχία, Henry George Liddell, Robert Scott, *A Greek-English Lexicon*, on Perseus Digital Library. The word oligarchy is from the Greek words "ὀλίγος" (*olígos*), "a few" and the verb "ἄρχω" (*archo*), "to rule, to govern, to command", or, in other words "the power of a few".

Table 27. Conceptual framework of business mobilisation in Ukraine with regard to trade policy-making

Business by size	**HIGHER INFORMATION ASYMMETRY LOWER** **The higher the info asymmetry – the lower the mobilisation**	**<u>WHY</u> MOBILISE (OR NOT) – ECONOMIC FACTORS**		**<u>HOW</u> TO MOBILISE (OR NOT) – INSTITUTIONS and COLLECTIVE ACTION COSTS**
Large/ Oligarchic		**WTO**	**EU**	**WTO / EU**
		Characterised by IRS model – strategic behaviour. Winners mobilise as much as losers. + Structural/dynamic factors important.	IRS model – strategic behaviour. High perceived potential stakes make them mobilise yet before information or legislative proposals become available. + Structural/dynamic factors important.	Oligarchic business faces the lowest collective action problem, since individual weight makes collective action unnecessary, especially when issues are decided on a sector-by-sector basis (WTO). When on across-the-board basis (EU so far) – higher due to competition between FIGs.
Medium-to-large		Ricardo-Viner model behaviour: losers mobilise (mainly import-competing), winners (exporters) – no.	Lack of information and legislative proposals: lack of mobilisation so far.	Face higher collective action costs – associations are not as efficient as individual lobby. Exception – USPP.
Small		No mobilisation is observed with regard to trade. See →		Highest collective action costs – dispersed sector + SME business associations in Ukraine have few institutional channels to voice their position.

7.4. Trade policy and lobbying in Ukraine: Economic dimension

7.4.1. Asymmetrical and incomplete information

Availability of information concerns businesses of all size and both trade liberalisation initiatives – within WTO and with the EU. When information is too incomplete – the costs of informing oneself can be too prohibitive for any mobilisation to take place. Availability of some, but insufficient information, results in information asymmetry and in 'uninformed opposition' to the liberalisation process, often unjustified. The former situation is more characteristic of current EU-Ukraine trade liberalisation, while the latter – of WTO accession. In turn, the amount of information available to business actors will depend on the following factors: (1) how advanced the trade liberalisation negotiations are, (2) how active the government is in raising public (and business) awareness of the potential consequences of liberalisation (or indeed how willing it is to do so) and (3) how capable business actors themselves are of taking action and gaining information, when it's not readily available or difficult to interpret. The latter point depends upon financial and organisational capacities of enterprises themselves. If business associations are active and efficient in the country, individual businesses can gain information through this channel. In the absence of effective collective means, individual approach becomes the preferred option. The larger the company, the more capable it will be to meet the costs of a proactive action in this respect.

Thus, with regard to WTO, there is evidence available that unawareness and lack of understanding of the process has been a major stumbling factor in adopting the necessary WTO-compliant legislation. As the government started a more active information awareness campaign, conducting seminars, roundtables and public awareness workshops in the capital of Ukraine and in the regions, and progressed in this process, the opposition has ceased.[105] Better understanding of the process is said to be the main reason for the break-through in passing of the WTO-compliant legislation.

With regard to the EU, as far as institutionalised trade liberalisation process is concerned, information asymmetry is even greater. First of all, public discussions and round tables on this matter rarely address or involve business representatives, mainly held between civil society

[105] Interview with an anonymous interviewee, former member of WTO negotiating team of the Ukrainian Ministry of Economy.

and government representatives. Secondly, lack of concrete legislative proposals also gives little ground for business actors to act upon. If one looks at the ongoing trade relations, information asymmetry is less of a problem – policy issues are decided on a sector-by-sector basis, the consequences of a particular policy proposal by the EU can be directly assessed by business actors and, most often when losses are involved, the response or mobilisation is likely to follow.

The key to information asymmetry, however, comes from the top – the government lacks both a strategy of foreign economic relations in general, and a clear strategy on EU integration in particular.[106] It also lacks a vision on how to develop a formal framework for business-government relations. Unpredictability of investment and trade regime are viewed as seriously detrimental to the country's competitiveness by both domestic and foreign business actors. Therefore only better strategic planning by the government can help to consolidate the efforts of civil society and individual efforts of business actors.

7.4.2. Economic factors

As a reminder – economic theories on business mobilisation on trade matters depart from factor specificity. The neoclassic Heckscher-Ohlin-Samuelson model based on mobile factors of production predicts higher adjustability of businesses that are worse off from trade liberalisation, while Ricardo-Viner model predicts higher mobilisation for or against trade liberalisation due to lower factor mobility. Strategic trade policy argument (based on the IRS model, the main model of new trade theory) takes the debate a step further and focuses on industries with increasing returns to scale. What can be said about Ukrainian business and theoretical predictions?

Firstly, there are views in the literature arguing that such a dichotomous classification is not only very difficult to provide measures for, but is also erroneous as all factors are relatively mobile, not either mobile or specific (Kingstone, 2001: 990). Alt and Gilligan (1994) themselves admit that "whenever an industry can receive protection at a lower cost in terms of lobbying than the cost of switching industries, factors are not more mobile in the long-run than in the short-run". Considering the nature of Ukrainian politics, where lobbying and informal networks are embedded in policy-making process, and where poor business climate

[106] Interview with the representative of the Ministry of Economy, Department for EU integration. Kyiv, September 2007.

complicates factor mobility, it can be presumed that the costs of lobbying will often be lower in Ukraine than the costs of switching assets between industries, unless business has other incentives to switch. Therefore a Ricardo-Viner type behaviour can be expected, with pro-trade versus anti-trade coalitions. Pro-trade coalitions are, however, subject to further reservations – first of all, as was noted earlier, the perspective of bearing losses, even if uncertain, can be treated by businesses as more conducive to mobilisation than the perspective of obtaining uncertain gains; secondly, the costs of mobilising can exceed potential gains. Therefore, *ceteris paribus*, import-competing industries seem to be more likely to mobilise than export-oriented ones. Here, however, size enters the story. The costs of mobilisation in Ukraine are highest for small businesses and lowest for large oligarchic holding companies, with large-to-medium companies falling in between. More about this will be said in section 7.5.

Large vertically integrated industrial groups, concentrated mainly in metallurgy and related industries (energy production, heavy machinery, transport parts and equipment), are traditionally export-oriented. And they have the financial and political means to overcome the costs of mobilisation even when expecting gains, rather than losses, from liberalisation. Their factor mobility is potentially higher than that of smaller businesses, but it is also questionable. One the one hand, they can diversify their portfolio *within* the group, as they do – by investing in services, in particular in finance, telecommunications and the media. On the other hand, the vertically integrated metallurgical component (with coal/coke and energy production included in the chain) requires very high capital investments that once made are hard to recover. Moreover so, since in the existing conditions their assets are likely to be significantly undervalued. And this part of their business is by far the biggest in terms of investments. Therefore, the third economic model – *increasing returns to scale*, which predicts bigger companies to be more competitive internationally and more pro-free-trade – is more of use here. Using the example of Chile, Silva (1996) also argues that conglomerates can more easily switch assets between industries and thus more easily adapt to import competition, making overall pro-liberalisation stance a more likely outcome in countries where conglomerates are powerful. Therefore, pro-trade lobbying seems to be a logically expected behaviour for Ukrainian FIGs, both due to their size and the sector that they belong to.

Indeed, recently the groups whose interests are **diversified** (e.g. Kolomoyskiy's 'PrivatBank' group, Kostyantyn Zhevago's 'Finansy i kredit') tended to support the then president Victor Yushchenko and the Prime Minister Yulia Timoshenko, who actively promote EU, and Euro-Atlantic integration more generally. They are more active and flexible in the way they run their businesses – Ihor Kolomoyskiy has recently sold all his metallurgical assets to Russian EvrazGroup, while Kostyantyn Zhevago, the youngest of the oligarchs (he is in his early 30s), was the first one to list his iron ore company Ferrexpo on the London Stock Exchange. Perhaps this is why they stand for more rapid economic reforms and liberalisation of the economy, although they do not openly state their position on EU integration.[107] Businessmen supporting the ex-Prime Minister Viktor Yanukovich, apart from Rinat Akhmetov, have less diversified holdings. For example, quite a powerful figure in the Party of Regions, Andrei Klyuev, has a relatively small holding 'Ukrpidshipnik' (his total assets are estimated at US$144m), operating in machine building, metallurgy, energy and insurance services, and his factor mobility can be considered as rather low, as he built his wealth from scratch and would not easily exit from the existing business. And although he is a major exporter (of roller bearings) to the EU, he has been a keen supporter of stronger links with CIS countries and within Single Economic Space.[108] Dmitriy Firtash, another businessman supported by the Party of Regions and one of the richest people in Ukraine, built his wealth around gas trade; owns part of an opaque intermediary between Russia and Ukraine RosUkrEnergo, as well as the reseller on the domestic Ukrainian market UkrGazEnergo. Clearly his factor specificity is rather high, and status quo or closer ties with Russia would clearly be a preferred option.

Rinat Akhmetov, also a deputy on the Party of Regions list, is the owner of the biggest vertically integrated metallurgical group in Ukraine, and has been diversifying his assets increasingly in the past 5 years – into telecommunications, media, real estate and financial services. Along with this he has set on an internationalisation path, as will be described below, and is showing all signs of pro-liberalisation behaviour.

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[107] According to the political analyst Andrei Ermolaev. Olearchyk Roman and Stefan Wagstyl (2007) "Oligarchs loom over Ukraine polls". Financial Times, 20 September 2007.

[108] Ukrayinska Pravda, 14 April 2006. "Andrei Klyuev: Shtab Yanukovicha v Muzeynom pereulke byl prodoljeniem "Zoryanogo"" http://www.pravda.com.ua/news/2006/4/14/40966.htm , accessed in May 2008.

The next question is then – if large financial-industrial groups are more likely to be pro-free-trade, whilst medium and small business that are likely to lose out from greater openness more protectionist – what policy equilibrium could be expected with regard to particular trade liberalisation initiatives? This will depend first of all on the distribution of potential 'winners and losers' in the economy as a result of liberalisation; secondly, on the costs of organising and pushing through the preferred policy; and, thirdly, on structural and dynamic factors. Earlier WTO accession experience will also allow seeing whether our hypotheses on the size of businesses and trade theoretical behaviour are true or not. Next section therefore looks at the potential losers and winners.

7.4.3. Potential losers and winners of trade liberalisation

In the process of accession to WTO the average weighted applied tariff rates were reduced from 19.7 percent to 10.07 percent on agricultural products, and from 8.3 to 4.77 percent on industrial goods, bringing the overall average to 5.09 percent (US Trade Representative, 2006). DCFTA with the EU will involve limited further reduction of the average tariff, but extensive reduction of tariffs on some sensitive agricultural products and liberalisation of services.

Based on these assumptions, several quantitative assessments have been made using a computable general equilibrium model as to the potential sectoral gains or losses. Table 28 summarises their results, under the most likely scenario of a limited FTA with substantial agricultural tariffs retained, but with services liberalised (which are, however, not listed, as the effect on sectors other than financial and legal services is small).[109]

Although different assumptions and models make the results contradicting at times, all three models conclude that agriculture (*especially sugar and other processed food, which in particular concerns milk and meat*) and *minerals (especially coal-mining)*, producers of *transport equipment*, as well as *financial services*, are the losers from liberalisation.[110] Usually the losers are those sectors/industries that currently benefit from substantial protection – either in the form of subsidies, tax concessions or border protection.

[109] This is a scenario similarly approached by CASE and IER. CEPS considered deep and shallow trade liberalisation scenarios, with the former reported here, which may affect the outcomes. It should be borne in mind, however, that conditions of an FTA are far from clear to both parties at this stage – it may also result in substantial liberalisation of agricultural trade.

[110] Estimation made by CEPS used a high level of aggregation (into 6 industries), and therefore they are more difficult to compare with the other two.

Table 28. Gains and losses from WTO accession and EU-UA FTA

Sector	CASE		IER		CEPS	
	WTO	WTO+ FTA[a]	WTO	WTO+ FTA[b]	FTA	
Agriculture, fisheries, forestry	-	-	-	+/-	-	Agriculture
Coal, oil, gas	-	-	+/-	+	-	Minerals
Minerals nec	-	-	+	+		
Bovine animals	+	+	-	-	+	Food processing
Vegetable oils and fats	+	+				
Dairy products	+	+				
Processed rice, sugar	-	-				
Food products, nes	+	+				
Beverages and tobacco	-	-				
Textiles and apparel	+	+	-	+	+	Textiles
Wood products, paper products	-	+	-	-	+	Light manufacturing
Petroleum, coal products	+	+	+	+	-	Minerals
Chemical, rubber, plastic products	+	+	+	+	+	Light manufacturing
Mineral products, nes	+	-	-	-	+	
Metals and metal products	+	+	+	+	+	Metals
Motor vehicles and parts	+	+	-[c]	-	+	Heavy manufacturing
Transport equipment	-	-				
Electronic equipment, M&E	+	+			+	Light/heavy manufacturing
Manufactures nes	+	+	+	-		
Financial services, insurance (other services omitted)	-	-	+	+	-	Services

[a] Limited FTA (with high agricultural tariffs), including services liberalisation

[b] WTO and FTA - including services liberalisation

[c] IER aggregates the effect for all three industries – Motor vehicles and parts, transport equipment and Electronic equipment, M&E. Since the highest level of protection is received by Transport equipment, and it accounts for about 40 percent of these three industries, the negative effect dominates in this aggregation (e-mail correspondence with the author).

Source: author's compilation based on CASE (2007), IER (2006a), CEPS (2006).

Certain agricultural sectors, such as meat and milk producers, will have to increase prices, because the majority of their initial suppliers are small private farms, which are exempt from VAT, but will be subject to VAT upon accession. Coal-mining industry received substantial subsidies and de facto prices are dampened, which is also not economically efficient since coal prices should be allowed to move in parallel with metal prices, which would make this industry profitable. Transport-equipment and financial services currently benefit from high protection from external competition.

The biggest winners are going to be *textiles and apparel industry*, *electronics and equipment*, as well as *metallurgy*. Although the effects for metallurgy are divided – on balance, despite

losing protection (such as restrictions on export of scrap metals and subsidised coal-mining), producers of pipes and products exported to WTO members are gaining, while those not oriented at such market are losing out. On average, however, the industry is expected to be a winner from liberalisation. Overall, automobile sector is expected to benefit from liberalisation, mostly because of the expected relocation of some blocs of the European car manufacturing supply chains, but it is clear that national producers will not resist the competition of opening up.

An important assumption in the above CGE models – full mobility of factors of production – i.e. falling output in any of the sectors results in increased output in some other sector, as labour and capital can freely move between sectors of the economy. In terms of predictions described above, this would reduce the potential losses for sectors that are worse off and thus reduce their incentives to mobilise against liberalisation. However, as has already emerged from the discussion above, this may be an unrealistic assumption. Therefore, by simple accounts, sectors that are likely to lose from EU-Ukraine trade liberalisation – which are agriculture and food processing, minerals, transport equipment and financial services – should have high incentives to mobilise and lobby against such liberalisation; sectors benefiting from liberalisation – textiles and apparel, metallurgy and electronics and equipment – should have incentives to mobilise in favour of liberalisation. As mentioned above, the outcome will further be determined by costs of organising and the nature of existing institutions.

From CGE estimations above one can see that in most cases the direction of the effect is the same for both WTO accession and FTA with the EU. Therefore from the past experience with WTO accession the strategies undertaken by business actors can be traced and their attitudes to the EU integration can be projected.

A wider issue, however, is the fact the real winners of trade liberalisation are the industries and firms that do not exist yet – such as those that may emerge as a result of deeper involvement of Ukraine in global production chains. New businesses, producing a wider range of products (or providing distribution services, as part of forward linkages) and bringing about a rise in average factor productivity, are probably the main winners of the future trade liberalisation. And here no lobbying or business mobilisation can be expected, and change should be facilitated by the policy measures.

7.4.4. Economic factors and mobilisation with regard to WTO accession

In the process of WTO accession four sectors voiced their position most actively – agriculture, automobile industry, metallurgy and financial services. Some examples of interest group politics are given below.

Losers

Automobile sector, although not estimated to lose from trade liberalisation on average, is bound to see national producers and suppliers worse off in the face of freer access to foreign investors. It has been a clear example of interest group politics, traditionally having had strong lobbyists in the Parliament.[111] Individual enterprises (in particular the main car manufacturer ZAZ) received exemption from customs duties, reduced tax rates, some of which contradicted with WTO and PCA requirements. However, most contradicting privileges were removed in 2005. Domestic production of cars is not competitive internationally, as there has been little foreign investment. The only foreign investor with the full production cycle, Daewoo, which had invested in ZAZ, went bankrupt in 2000. Therefore the sector will not resist competition from budget Central European, Russian and Chinese cars (CEPS, 2006). Automobile lobby against WTO in the Parliament was mainly represented by the head of an organisation holding 12 percent of the Ukrainian automotive market.[112] Allegedly, he has been leading automobile lobby because he is the only lobbyist whose interests are solely concentrated in the automobile industry – and this confirms the proposition of *highly specific factor owners* being more likely to mobilise.

On the other hand, another example confirms the importance of information asymmetry – already after Ukraine joined the WTO, automobile, alcohol, confectionery and meat producers joined forces in a deed of remarkable collective action trying to maintain import tariffs until end-2008 – supported by 367 votes in the Parliament, but eventually vetoed by the President.

Winners

In terms of the domestic effect, metallurgy is one of the biggest losers due to the high level of protection prior to accession – currently restrictions on export of scrap metal, but until 2002 substantial subsidies were received as well. On the one hand, since metallurgy is an export-

[111] Guriev and Rachinsky (2005) note the same about Russian automobile sector.
[112] Dmytro Svyatash, AIS corporation, distributing most Russian brands in Ukraine, some European, and controlling the Kremenchug car assembly plant. www.news.finance.ua

driven sector, the positive effects from the removal of export barriers – quantitative quotas on export of steel, as well as easier handling of anti-dumping (AD) investigations – are expected to offset the negative ones. Originally, the bulk of AD investigations were introduced in reaction to significant state support granted to metallurgy in 1999 within the experiment in metallurgy and mining sector. Although the experiment was subsequently abolished in 2003, the restrictions on exports of raw materials (scrap) remained as the last and significant protectionist measure. Therefore AD investigations are expected to ease once these restrictions are eliminated. There were estimations that on balance the industry would gain around US$200 million from elimination of AD measures, whilst the budget would save US$580 million from abolition of subsidies, with the overall positive effect for the economy in the range of 1 percent of GDP (Eremenko and Lisenkova, 2005). However, despite these potential benefits, in 2005 metallurgy was still blocking the law on dropping the ban on export of scrap metal. In 2006, when it became clear that there was no hope to receive concessions on this, they gave way to the new law, still keeping export duties on scrap metals. This again became a turning point with the EU already in late 2007, when the EU was insisting on complete elimination of export duties. Such position is partly explained by the fact that most of Ukrainian steel is exported to Asia, not to the OECD countries, and therefore losses from losing cheap inputs were perceived as being higher than gains from additional exports to relatively small markets of the EU and the US.

A number of *structural and dynamic factors* have contributed to a shift towards pro-liberalisation stance, in particular the need to upgrade obsolete capital, to capitalise assets and protect them from unstable political regime and other factors. They will be described in more detail below, as they relate equally to EU integration. By and large, although it is difficult to call Ukrainian industrial lobby strategic in the original Milner's sense – i.e. being pro-liberalisation – clearly large businesses have been positioning themselves as pro-free-trade, but tried to give up as little as possible of already existing protection, leading an ambiguous dual game.

Why did other sectors not mobilise to support WTO accession? One of the reasons refers back to the Dur's (2007) argument that business is much more likely to mobilise in the face of losses than in the hope of benefits. Secondly, mobilisation can only realistically be expected in response to concrete legislative proposals being laid on the table. There were no legislative changes targeting specifically electronics and equipment. *Electronics and equipment* are

expected to benefit from investment into middle and high-technology production, like TV transmission, computer assembly, etc. and is as already showing signs of growth. No evidence was available as to WTO-related lobbying. The reasons were probably lack of much legislative impact to react to, dispersed nature of the industry, plus incomplete information as to potential stakes and difficulty of predicting positive outcomes.

Textiles and apparel is also a dispersed sector, composed of many small and micro-producers, i.e. has inherently high collective action costs, and in Ukraine it is not very well organised.

Incomplete and asymmetrical information is a crucial factor – businesses are hardly aware of the expected effect of trade liberalisation. The then speaker of the Parliament, Litvin, was quoted as saying: "The Laws required for the WTO accession are not getting passed by the Parliament because the government is not giving us a clear economically grounded cost and benefit analysis for the economy from passing this legislation" (UNIAN, October 2005). At the same time, in-house assessments entail substantial costs, and only a few enterprises could afford to do so and have undertaken such studies. According to the former Ministry of Economy official from the WTO accession department, there were requests from several enterprises to the ministry to conduct individual assessments of the consequences of WTO accession. These were primarily large, but not oligarchic enterprises – such as exporters of machinery and importers of metals. This fact confirms that oligarchic businesses have an in-house administrative and financial capacity to evaluate the stakes from trade liberalisation for them, while large enterprises could request such an evaluation either from the respective ministerial department or from external consultancies. Smaller businesses seemingly had none of these opportunities, or did not perceive taking such action as necessary. A typical free-rider argument – "this is beyond our control" could also play a role, and relates to the costs of collective action described in more detail below.

To summarise, to what extent are trade theoretical predictions useful in explaining Ukraine's WTO-related trade liberalisation experience? On the whole, none of the theories on its own explains the degree of business mobilisation in Ukraine. Looking at enterprises of different size, however, a correlation emerges with certain theories – medium-to-large enterprises are more likely to take anti-liberalisation position, according to neoclassical predictions of Ricardo-Viner model, while large export-oriented oligarchic enterprises can act strategically, trying to achieve both liberalisation for their exports and preserve whenever possible existing

protection. They thus behave in a way similar to that of multinationals, whose 'strategic trade policy' lobbying was related to the increasing returns to scale model. Small and medium enterprises in theory would also be expected to behave according to neoclassical predictions, but their degree of mobilisation is very much determined by political institutions in place in Ukraine, which will be discussed below in section 7.5.

7.4.5. Economic factors and mobilisation with regard to the EU-Ukraine trade

Here a clear distinction needs to be made between the ongoing trade relations and perspective trade liberalisation on the basis of a free trade agreement. The lobbying strategy is much simpler with ongoing trade policy-making. Lobbying arises in response to concrete trade-related measures, which tend to be addressed at a particular sector. Assessment of economic losses or gains in case of anti-dumping measures or bans on particular products is usually straightforward. The sector affected by such measure, provided it has necessary organisational and institutional capacity, will respond by lobbying either its own government, or government bodies in the partner country, or other economic agents that can have an influence on the government that imposed a particular trade measure. A typical example of such lobbying process is export of Ukrainian steel products.

Interpipe, belonging to Kuchma's son-in-law Viktor Pinchuk, is the main and quite aggressive lobbying force in Ukraine when it comes to quotas on steel, set both by the EU and Russia. It is doing a bulk of lobbying in the process of signing of an annual agreement on steel quotas with the EU, as well as in the antidumping investigations. On one occasion, in response to the antidumping investigation initiated by the EU in 2005 on Ukrainian steel pipes (which Interpipe considered to be unfair to Ukraine, as different evaluation methods were applied to Ukraine on the one hand, and to Russia and Romania on another), it collected all necessary evidence to initiate a retaliatory anti-discriminatory investigation against the EU and the Ministry of Economy was close to starting this investigation. Although the process was halted by the Ministry of Foreign affairs, reportedly the reaction of European Commission was very negative to such methods.[113]

Andrey Klyuev, the owner of the corporation 'Ukrpidshipnik' (Ukrainian roller bearings) also initiated a wide lobbying campaign when Austrian authorities favoured a local buyer in the

[113] Interviews with an anonymous representative of Interpipe and a representative of EU-Ukraine Business Council, July and October 2007 respectively.

sale of the bank Burgenland, although the Ukrainian consortium offered a higher price. As a result of a formal complaint to the EU Competition directorate general and extensive lobbying activities (including though the EU-Ukraine Business council) they won a case and the sale was declared discriminatory, and the Austrian buyer has to pay a higher price. Currently the consortium even plans to claim compensation for moral damage.

Therefore with regard to ongoing trade relations information asymmetry is minimal. In general there is a link between the size of the business and the level of the targeted policy-makers can be described as follows:

- Largest business actors have the capacity to target the government and/or legislators, both domestic and foreign, as well as foreign business associations, and hire international public relations consultancies;
- Non-oligarchic large businesses have fewer resources to approach foreign governments and hire international consultants, but will still have some access to the domestic government. They may also have relatively less access to legislators and act through line ministries and trade associations (e.g. the Union of Chemists with anti-dumping investigations, but they will represent first of all the interests of enterprises that do not belong to oligarchic structures). Such businesses are also likely to approach Ukrainian diplomatic mission in the EU, as they either cannot afford or do not appreciate the benefits of external lobby agencies.
- Small enterprises struggle with centralised collective representation of their interests in Ukraine, as will be described below, but may use services of the regional Chambers of Commerce.

The **forthcoming trade liberalisation** is a territory of high information uncertainty, where the stakes are more difficult to identify. Despite some quantitative assessments already available to decision-makers, the degree to which such studies are taken into consideration by business managers is very low. First of all, because of the fundamentally low level of interaction between the business community and academia in Ukraine. Secondly, because of general scepticism towards quantitative models among non-economists, businessmen and policy makers alike (as the author could observe at the CASE study presentation in the European Delegation in Ukraine). Therefore, on the benefits side of our approach – the potential economic gains and losses are far from clear to business actors, and in Leblond's

words, in the absence of any legislative proposals the prospects of integration have been too 'foggy' for a visible mobilisation of interests to take place.

Therefore, only the *increasing returns to scale model* applies, where actors capable of behaving strategically, whose stakes from liberalisation are large enough, can try to overcome the barriers of incomplete information and even to influence the informational space. Ukrainian financial-industrial groups could and did undertake such strategy, due to both economies of scale effects and institutional factors, but a number of additional external and internal structural economic factors have served as a 'push' factor for this mobilisation. They affected the support for both WTO accession and the EU integration.

7.4.6. Structural economic factors as a 'push' factor for mobilisation

Financial-industrial groups in Ukraine operate mainly in the mining and metallurgy sector, including energy generation and machine building. Oligarchs also control important assets in services, in particular financial services, sports, media, telecommunications, as well as in chemicals and food industry. Diversification into services, however, has taken place recently and metallurgy is still the main sector for most FIGs. Therefore structural trends in this sector are of great importance to the behaviour of influential business actors.

Global steel market. Mining and metallurgy accounts for 25 percent of Ukrainian industrial output and for over 30 percent of total exports. Steel is the most important metal resource. Therefore the main structural change that affected the state of Ukrainian economy in general was growth of world steel prices – by 50 percent from 2003 to 2006.[114] This contributed both to macro-economic growth – the sector accounted for 20 percent of economic growth in 2004, and to growth at a micro- or enterprise-level. Thus, assets of System Capital Management, the biggest FIG in Ukraine specialising on production of steel, have more than doubled between 2004 and 2006 – from US$5.2bn to US$11.4bn.[115]

To demonstrate the role of oligarchs in the mining and metallurgy sector the table below compares production volumes of individual FIGs with the total output of respective products in the country. SCM's Metinvest accounts for a quarter of total production of crude steel and almost a third of rolled products. Interpipe produces almost half of all pipes, while IUD and

[114] CRUspi Global Steel Index http://cruonline.crugroup.com/SteelandFerroalloys/CRUSteelPrices/CRUSteelPriceIndexCRUspi/tabid/143/Default.aspx , retrieved in May 2008.
[115] www.scm.com.ua

Metinvest share production of another half. Not all groups have their own resource capacity – IUD, Interpipe (which is anyway primarily a pipe producer), as well as Zaporozhstal and Mariupol Metallurgical Plant 'Ilyich' do not have iron ore production capacities. This also crucially affects their development strategies.

Table 29. Metallurgy output by major enterprises, 2006, mln tonnes

	Iron ore[a]	Cast iron	Crude steel	Rolled steel	Pipes, Mt
Metinvest	26		10.8	11	0.6
IUD	-		6.2	5.8	0.78
Interpipe	-				1.2
Privat			1.25	1.1	
Total in Ukraine[116]	77.4	35.6	42.8	36.2	2.6

[a] Iron ore production by FIGs: SCM Metinvest – 36.1%, Novinskiy's Smart Group 33.5%, Kostyantyn Zhevago's Ferrexpo – 12.5%, Mittal Arcelor Kryvyi Rih – 10%, Privat – 7.5%.

Source: corporate web-sites, media reports.

Such individual power and growth potential make internationalisation the only viable long-term strategy for FIGs. And it is arguably the main driving force behind oligarchs' mobilisation in favour of WTO accession and EU integration. This is rather a 'pull factor', while situation within the industry – urgent need to finance modernisation, to access additional extractive and metal processing capacities abroad, as well as to access restricted export markets – were strong 'push factors'.

Vertical integration. The structure of the industry has been undergoing a major change since late 1990s early 2000s. Oligarchs as a class are said to emerge only in 1998-1999, before then they had been accumulating capital mainly by commercial activities (trade in gas and metals). Having gained sufficient level of capital, they started to invest in productive capacities. The early stage of this process was characterised by high degree of interdependence and cross-ownership between individual businessmen (e.g. Privat group and SCM sharing ownership of "Ukrrudprom" iron ore mine; SCM and IUD – "Azovstal'" plant, Khartsyz Pipe Plant, "Azovmash"), Grygorishin and Medvedchuk – "Dneprospetsstal") and high fragmentation.[117] As of early 2000s oligarchs embarked on a path of steady consolidation and vertical integration of their assets.

[116] Interfax Ukraine quoting Ministry of Industrial Policy. www.economica.com.ua/metal/news/111063.html . Accessed in February 2008.
[117] Expert Online (2004). "Deti gaza i stali". http://www.expert.ru/printissues/ukraine/2004/01/01uk-fpg/ . Accessed in February 2008.

A link is being made in the literature between the quality of the rule of law in Ukraine and vertical integration – Aslund (2006) argues that vertical integration and establishment of control of complete production chains was the most convenient strategy in the conditions of high uncertainty of property rights. Puglisi (2007) questions the exogeneity of the rule of law to oligarchs, blaming oligarchy itself for the stagnation in the legal environment, as it allowed them to continue unobstructed redistribution or 'grabbing' of assets. The truth is probably somewhere in between, as oligarchs could block certain legislation, but not all the package of reforms. Indeed, the Company Act has been repeatedly submitted to the Parliament, but never passed. And this is clearly beneficial to those participating in redistribution of assets, as regulatory uncertainty facilitates privileged access to tenders, potentially depresses the value of assets, and makes reversal of acquisitions and privatisations more complicated. In fact, this connection is arguably of secondary concern altogether – vertical integration is known to be a preferred model of industrial organisation in the worldwide business practice due to its cost minimising benefit. Multinationals are opting for cross-border integration due to lower overseas labour or other input costs. Vertical integration in Ukraine was initially domestic due to availability of all necessary components – raw material extraction, coke, energy generation and cast iron and steel smelting capacities, labour, and possible due to domestically oriented privatisation process. Poor competition policy, characteristic for all transition economies, was also a facilitating factor. Once allowed, consolidation and further vertical expansion of FIGs has ever since been a path dependency rather than anything else.

Need for reconstruction and modernisation. Traditionally oriented at Soviet markets, the commodity composition of Ukrainian steel industry differed from the world market demand structure, with high share of low value-added and semi-finished products. The subsequent introduction of restrictive quotas by the EU and USA lead to further increase in the share of such products, as they were less subject to restrictions. At the same time the productive assets are obsolete (43 percent of steel is produced in open-hearth furnaces) and require urgent modernisation (InfoMine Research Group, 2007).[118] The sector reached a crisis in late 1990s and the government attempted to reanimate it by conducting a large-scale subsidisation experiment between 1999 and 2002. In line with a rebound in global steel prices as of second half of 2002, this experiment significantly helped the industry to revive. It coincided with the

[118] INFOMINE Research Group (2007) "Steel and rolled steel in Ukraine - 2007". *http://www.the-infoshop.com/study/info55288-rolled-steel.html* . Accessed in March 2008.

consolidation of the sector in the hands of large businessmen, which is also believed to have contributed to increase in efficiency and partial modernisation.[119] However at the end of 2006 depreciation of the operating facilities still exceeded 60 percent, with blast and open-hearth furnaces almost 90 percent depreciated (InfoMine Research Group, 2007).

Modernisation has already started - between 2001 and 2006 some US$3.6bn were invested in metallurgy, mainly in modernisation of existing crude steel production capacities, allowing to sustain the existing volume of output or increase it, at the same time reducing the costs. Individual enterprises' modernisation plans, foreseeing installation of converter-type furnaces, include projects worth around US$1-2bn each.[120] These changes concern mainly basic steel smelting processes. The equipment for the production of finished and semi-finished products remains largely obsolete, but is covered by the aforementioned medium-term plans. Producers realise that diversified production will render higher shareholder returns than specialisation in semi-finished products. But the shift towards higher value-added products is rather on a long-term agenda, as it requires a much more extensive development package, including further debt financing or equity issue, cross-border mergers and acquisitions and so on.

Until recently capital investments had been made from retained earnings, as foreign banks had not engaged in more than lending for working capital, while best local banks could not afford to lend more than US$100 million.[121] As of 2004-2005 the FIGs started to secure access to larger credits. Industrial Union of Donbass, for example, in 2006-2007 attracted about US$750 million in credits, including from EBRD and IFC, and issued bonds for US$150 million, while SCM agreed a US$545 million credit from BNP Paribas (with total foreign credit liabilities reaching about US$800 million).

Internationalisation. It is normal to expect export-oriented enterprises, which belong to the 8th biggest steel and 5th iron ore production industries in the world, to pursue some cross-border investment activity. Outward investment is the next stage in internationalisation

[119] By buying out the debts of enterprises, optimising sales processes, eliminating unnecessary intermediaries, establishing new contacts with local and foreign traders.
[120] The following investment plans are in progress: Mariupol Metallurgical Plant – US$0.5 billion, belongs to the only 'red director' who managed to retain ownership after initial privatisation – Vladimir Boyko; System Capital Management (Rinat Akhmetov) - US$4 billion in mining and metallurgy capacities in the coming 5 years; Industrial Union of Donbass - US$3.3 billion in 5 years; ArcelorMittal Krivoi Rog – US$ 2 billion. Ukrrudprom. 12 March 2007. "Stalnye mashiny". http://ukrrudprom.com/digest/dstaln120307.html , accessed in February 2008.
[121] Expert-Ukraina, No. 8(13), 7 March 2005. "Tretii stsenariy dlya Ukrainskoi stali" http://www.expert.ru/printissues/ukraine/2005/08/08uk-8-meta/ , accessed in February 2008.

process after exporting, and requires a certain degree of success in operations, which Ukrainian FIGs have been demonstrating recently. It is being done both upstream – getting access to additional inputs or processing capacities, and downstream – to ensure access to export markets. If additional productive capacities are located in export markets, the two can be combined.

Most of the investments by Ukrainian oligarchs have been made with the purpose of getting access to the European export markets, which are protected by restrictive steel quotas. It was partially a response to the EU enlargement, which restricted access to markets of the new EU members, and partially due to restrained exports to Russia and the need to further diversify exports geographically. IUD's acquisition of bankrupt Polish and Hungarian steel mills (Huta Czestochowa and Dunaferr respectively), as well as of Gdansk shipyard is a case in hand. This also provides IUD with upstream benefits – diversification of the product range and additional processing capacities. SCM's purchase of Ferriera Valsider and Trametal steel mills in Italy, as well as Spartan in the UK is a similar case, but differs in that plants in Italy and the UK are more modern than those in Hungary and Poland, and thus allow increasing the value-added content in overall output. SCM admits that investments in Italy and the UK "perfectly fit with the long-term strategy of producing more value-added products and improving the company's industrial balance".[122] Kostyantyn Zhevago, the founder of the 'Finansy and Kredit' group is looking to obtain control of a Bulgarian steel mill.[123]

On the back of the global consolidation of steel assets (Mittal *vs.* Arcelor, BHP Billiton bid for Rio Tinto), Ukrainian producers have followed suit initiating mergers with Russian counterparts, with access to iron ore resources being the main driver behind these initiatives. IUD negotiations on a merger with Metalloinvest, the results of which are not yet known however, would solve IUD's problem of lack of natural resource base. SCM's Metinvest merger with Smart Group, whose assets are based in Ukraine, but owned by a Russian businessman, further consolidated iron ore production in the hands of SCM (70 percent of all production in Ukraine), and gave Akhmetov access to cooperation with a major Russian metallurgical company EvrazGroup, whose main shareholder is Roman Abramovich. In turn,

[122] Metinvest Press Release, 12 November 2007 "Metinvest signs agreement to buy Trametal and Spartan UK". http://www.metinvestholding.com/en/press-centre/news/2007/11/9 . Accessed in March 2008.
[123] "Finansy i Kredit" is a name of a bank, not of a FIG, but is unofficially used to refer to the assets belonging to Kostyantyn Zhevago, which also include metallurgy, iron ore production and machine building.

Evraz Group has bought metallurgical assets of Privat, which also holds significant control of iron ore enrichment.

Growth potential, the desire to be internationally recognised and the need to raise capital have prompted FIGs to consider undertaking initial public offerings (IPOs) on international stock exchanges. Kostyantyn Zhevago's Ferrexpo was the first one to list on the main London Stock Exchange market, and the value of its shares has grown 144 percent since listing in mid-2007. [124] Industrial Union of Donbass, Interpipe, SCM and its Metinvest holding have all announced plans for IPOs as well.

Both debt and equity issue, and international recognition in general, require substantial restructuring effort – corporate as well as image restructuring, or, as Puglisi (2008) calls it – 'social legitimisation'. All the biggest groups (SCM, IUD, Interpipe) have launched a major overhaul of their corporate and management structures, aiming to make them simpler and more transparent, streamlining individual enterprises in larger holdings; introduced financial reporting compliant with international accounting standards, as well as external auditing; attracted foreign managers; launched extensive social corporate responsibility campaigns. The boards of directors have an option of having external directors, but to the best of the author's knowledge so far this option has not been used.

Image restructuring involves a whole range of measures, from direct engagement of international PR agencies (SCM – Burson-Marsteller, Interpipe - Hill and Knowlton), through media statements and campaigns to philanthropic and social corporate responsibility activities.

Thus, while economic factors were defining the costs and benefits of mobilisation, the so-called 'why mobilise?' question posed in our conceptual framework (see Table 27), the next question is 'how to mobilise?', which is determined by institutions and collective action costs imminent in the system.

[124] "Ferrexpo beats expectations and plans fourfold production increase". http://www.investegate.co.uk/invarticle.aspx?id=4525 . Accessed in March 2008.

7.5. Trade policy and lobbying in Ukraine: Collective action costs and political institutions

As has been mentioned above, the mode of intervention that business actors will choose to influence trade policy-making will depend on the following factors: *the nature of the policy question* (how many industries it concerns and how much it affects them)*, presence of common interests, nature of competition within the industry,* the related *direct or indirect costs of organising,* as well as *formal and informal institutions* in which business is operating (which in turn shape business-government relations).

7.5.1. Nature of the policy question and collective action costs

The ***nature of the policy question*** is the first and foremost question. Trade liberalisation within Ukraine's WTO accession negotiations implied mainly the reduction of protection by Ukraine, not by its partners, and proceeded on a sector-by-sector basis. Therefore, although not always correctly and objectively, specific industries could perceive potential stakes from abolition or reduction of existing protection levels. Most often such stakes were perceived as losses, as individual businesses rarely apprehend the dynamic effects of increased competition, leading to higher efficiency and quality, or positive effects of learning from competitors or investors.

The free trade area with the EU entails only limited import tariff reduction on top of WTO commitments, going further and targeting non-tariff barriers to trade, and therefore the immediate negative consequences can be perceived as minimal. Although the majority of industries are affected and aware of the existing differences in standards and technical requirements (agriculture being more affected than manufacturing) and that harmonisation will entail substantial costs, they cannot yet make sensible estimations of the economic costs and benefits and decide on a necessary mode of intervention. This is due to an early stage and a rather general agenda of negotiations to date.

Assuming that business actors were better informed and motivated to voice their position on trade liberalisation with the EU, how would the ***structure of competition*** within an industry affect this? Industries controlled by oligarchs, by virtue of vertical integration, are characterised by high degree of concentration. Therefore the Olsonian costs of collective action would be expected to be lower in metallurgy and mining, energy, machine building and

automotive industries. The same process that brought about concentration and near-oligopoly market structure has, however, created fierce competition *between* oligarchs – redistribution of property left some of the oligarchs lifetime enemies, making collective initiatives between them nearly impossible. [125] This, however, does not mean that oligarchs do not have other channels for promoting their interests – individually they can achieve just as much if not more.

What about non-oligarch-controlled business? The degree of organisation varies – it is traditionally better for resource-dependent sectors – such as metallurgy, chemicals and agriculture, and for large enterprises that are members of the Ukrainian Union of Industrialists and Entrepreneurs ('USPP'), and worse for other, non-resource-rich industries. Dispersed industries, such as textiles, consumer manufactures and, to a lesser degree, chemicals have higher barriers to organisation due to intrinsic collective action problems. Although, agriculture, not being a concentrated sector in terms of the number of enterprises, is a very strong lobby in Ukraine, and managed to form a major resistance to WTO-required reforms.

USPP is best positioned to channel its interests to the government – it has an official Memorandum for cooperation with the Cabinet of Ministers, and established dialogue with various government agencies (Ministry of Industry, National Bank, Fiscal Administration etc.). Moreover, throughout its history it has had influential politicians as its presidents – shortly before becoming a president of Ukraine in 1994 Kuchma held this post, since 1997 it has been Anatoliy Kinakh, whose latest post was a Minister of Economy in the Government of Viktor Yanukovich. It has, however, been criticised for representing the views primarily of former 'red directors' (e.g. Kubicek, 2001). Largest businessmen, even if on the list of members (such as Viktor Pinchuk), do not use USPP to promote their interests, while interests of small and medium enterprises are not consolidated and represented well enough within this organisation.

Referring back to Table 27, size of an individual business matters a lot in Ukrainian business-government relations. The existing traditions, inherited from the Soviet times, favour direct lobbying, a so-called 'survival of the fittest' practice, which as a consequence suppresses collective bargaining with small and medium business. Due to these historical and

[125] For example, the separation of assets between SCM and IUD that left the latter without any iron ore enrichment capacities, or the controversy over ownership of Nikopol Ferro-Alloy Plant between Viktor Pinchuk and Ihor Kolomoyskiy.

'organisational' reasons the next section is heavily skewed towards the largest, oligarchic, business, as they were the ones who, given the combination of economic costs and benefits and the costs of collective action, were most likely to mobilise in favour or against EU integration and trade liberalisation.

7.5.2. Formal and informal institutions and business-government relations

The role of *formal and informal institutions* in business-government relations in Ukraine and other CIS countries has been the subject of extensive literature.

Hellman's 'state capture' (1998) and Aslund's 'rent-seeking' are the most quoted ways to describe this relationship. The former departs from the 'partial reform' proposition – gradual and incomplete reforms allowed vested interests to use reform distortions to their benefit, locking in the political system in this state. These captors are respectively not interested in furthering the reforms, preferring the status quo. The latter, 'rent-seeking' concept, is similar in meaning, but makes more focus on the goal of capture or influence on the state – profit maximisation by means of obtaining privileges from the government, such as subsidies, accumulation of tax arrears, monopoly status and alike. Aslund (2005a), however, rightly notes that the room for rent-seeking has been considerably reduced since the 1990s – in 2000-2001 the reforms of the then prime minister Viktor Yushchenko eliminated most of the subsidies and privileges benefiting individual enterprises, banning barter and off-sets and demanding that all payments to the state be made in cash, as well as enforcing timely payments by large enterprises for gas in trade with Russia. This reduced the profit-related dependence of business on political elites, and partially contributed to improved efficiency of enterprises, but strong links with political structures were still necessary to protect the very right of ownership, as opaque initial privatisation / acquisition deals meant that there was always a threat of re-privatisation, depending on who was in power.

Some authors (Zimmer, 2006) question the notion of state capture, since it implies a clear separation between public and private spheres, whereas in Ukraine there is rather an "overlap of informal personal networks with formal political organisations" (Easter, 2001, quoted in Zimmer, 2006, p. 281). Indeed, it was reinforced in 2002, the year of most oligarchic coalition government (under the rule of Viktor Yanukovich), when 364 out of 450 deputies of the Verkhovna Rada were directly or indirectly connected with commercial structures (Zimmer, 2006). It is also worth mentioning that the draft law on lobbying has repeatedly failed even to

reach the parliament – twice in 1999 and once in 2005 – being either declined by the parliamentary committee or passed for deputies' consideration but never voted on.

Although both political and economic elites were in constant competition, which was encouraged by the President Kuchma, the core political orbits of key political figures had been more or less stable during his time in office.[126] Orange revolution and subsequent constitutional changes have brought about substantial dynamic changes, not necessarily diminishing the influence of oligarchs, but changing it qualitatively and modifying the political orbits.

Constitutional reforms of 2004 shifted the power from the president to the legislature and abolished the semi-majoritarian system of parliamentary elections, introducing proportional representation (PR) as of 2006.[127] Interestingly, contrary to the general rule of thumb, in Ukraine the majoritarian system had resulted in a rather fragmented and unstructured legislature, with weak parties and a lot of independent deputies in the Verkhovna Rada[128]. This was the result of a young democracy and lack of polarisation of people's preferences. In terms of the influence of this system on trade liberalisation, the situation in Ukraine prior to Orange revolution indeed corroborates the predictions of the endogenous tariff literature (e.g. Grossman and Helpman, 2005; Fredriksson et al. 2008; Rogowski, 1987). Majoritarian electoral system with small electoral districts resulted in high representation of regional and sectoral interests in the Parliament, which respectively often promoted individualistic interests with regard to trade. Strong presidency also did not help in establishing a more liberal trade policy – the president, who has a strong motivation to keep the office, provides privileges to interest groups in exchange for loyalty (as Rogowski, 1987 argued). At the same time weak and numerous parties and big number of independents, as Ehrlich (2007) rightly emphasises, made it cheaper for lobbyists to push through their preferred policy options.

The institutional environment that emerged after the 2004 Orange revolution is more difficult to assess against the same criteria. While "competitive authoritarianism" was the key issue in the business-government relations in the previous regime, de-concentration of power and

[126] E.g. Pinchuk and Medvedchuk-Surkis group were consistently favoured by Kuchma, the former not surprisingly, being Kuchma's son-in-law. Prime Minister Yanukovich was closely connected with Rinat Akhmetov and other businessmen of Donetsk origin.
[127] In 1990 and 1994 parliamentary elections all 450 members of parliament were elected by majority voting. In 1998 and 2002 the system was changed into a mix of majority voting and proportional representation.
[128] Thus, in 1998 the Parliament comprised of 11 parliamentary factions and 3 deputy groups. One of the reasons was strong regional division of electoral preferences and semi-PR system allowing many independents in.

political instability[129] became the main features in the new one, even before the shift in the balance between the executive and the legislature (which came into force with the election of the new parliament in 2006). At the same time, political reform did matter. The parliamentary elections in 2006, conducted under the proportional representation rule, resulted in restructuring and consolidation of parties with emergence of 5-6 strong parliamentary factions. Gradually, the whole concept of lobbying and business-government connections in Ukraine changed – instability made relying on one particular political figure (or party) very risky, while party consolidation made lobbying more complicated and expensive. Thus, for oligarchs hedging the bets by simultaneously supporting several figures became one of the strategies, but ensuring property rights was an even more pressing issue. A broader campaign, involving the internationalisation strategy described in section 7.4.6 as well as a comprehensive PR, was a more certain tool for achieving this.

As a result of regime change some of the oligarchs found themselves out of favour (and out of Parliament, e.g. Viktor Pinchuk, Viktor Medvedchuk, Grigoriy Surkis, Volodymyr Boyko). At the same time, although one of the slogans of the Orange Revolution was to draw a line between business and oligarchs, it has only brought about reshuffling – the places of those who left were taken by others – Akhmetov, as well as Dmytro Kolesnikov, Serhiy Klyuev with the Party of Regions, and many others. But the ensuing constant instability – hard-to-form and collapsing coalition governments, parliamentary elections in 2006 followed by premature elections in 2007, four prime ministers (Timoshenko, Yekhanurov, Yanukovich, Timoshenko again) in the course of 3 years – all this made backing particular political figures and relying on their support extremely risky for oligarchs. Instability prompted them to seek new options for protecting their positions. And this implied both back-up political protection and corporate and financial changes.

Thus, the founder of the Privat Bank group, Kolomoysky, is told to support both the Bloc of Yulia Timoshenko party, as well as Yushchenko's Our Ukraine. Recently he has shifted his allegiances towards Viktor Yushchenko.[130] Vitalii Gaiduk (co-owner of the Industrial Union of Donbass) and Dmitriy Firtash (co-owner of the monopoly gas intermediary RosUkrEnergo) have also been hedging their bets on different electoral blocs, as does, most interestingly,

[129] Largely due to inability of the president Viktor Yuschenko and the Prime Minister Yulia Timoshenko, former allies in the revolution, to agree on any policy stance.
[130] Ukrayinska Pravda, 28 March 2008 "Igor Kolomoyskiy: "Esli prezidentom stanet Timoshenko, ia sebia viju v emigratsii"…". http://www.pravda.com.ua/ru/news/2008/3/28/73735.htm Accessed on 15 April 2008.

Rinat Akhmetov, who has realised the decline of the positions of his protégé Yanukovich and allegedly started to gradually get closer to Viktor Yushchenko.

7.5.3. Mobilisation with regard to the EU integration

Large changes in formal institutions, instability and de-concentration of power have indeed made the state capture (or whatever one wishes to call the close relationship between business and politics in Ukraine) more difficult, and prompted oligarchs to 'modernise' their *modus operandi* and become more outward oriented. As Frye and Mansfield (2003) predict, this has also been associated with support for further trade liberalisation. The economic aspects of pro-EU business strategies have already been looked at, and the next step is to look at the political aspects.

First of all, one has to admit that regardless of all the prerequisites, there is still *no formal collective bargaining* in Ukraine on the part of business in favour of EU integration or, more specifically – trade and investment liberalisation. Neither horizontally – between businesses, nor vertically – between business and the government. The former is due to the above mentioned problems of collective action and competition between oligarchs, while the latter is also more or less clear – there is no formal tripartite bargaining as such. And although there are early signs of change – calls by the then President Yushchenko and his administration to establish a collective dialogue with large business – they have not yet led to any productive cooperation.[131] Moreover, the government (indeed under any prime minister) lacks a clear foreign policy strategy.

There are, however, two main channels through which business support for EU integration has manifested itself, and they cannot be ignored: **business internationalisation strategy** *per se* (as discussed in section 7.4.6 above), and a range of measures that can be summarised as a **complex PR campaign**.

The most prominent of such PR campaigns has been that launched by Viktor Pinchuk. It includes Yalta European Strategy – a platform for bringing together high-level European and Ukrainian politicians and other stakeholders for making the case for "Ukraine in the EU", as well as YES Economic Advisory Council, a less successful undertaking, but a step in the right

[131] Memorandum on Cooperation between the President and representatives of large businesses, signed on 14th of July 2007, was criticised for "furthering the interests of the large business instead of those of the economy in general", and for absence of some of the biggest actors, in particular Akhmetov, which reduced the weight and symbolic meaning of the event (Vedel, 2007).

direction. Its goal is "to create a group of 'wise men' to assist the Ukrainian authorities [with] the … policy for international and EU economic and trade negotiations", but the composition of the Council so far has not been indicative of a broadly inclusive dialogue. Apart from civil society representatives, who are traditionally active in matters of EU integration, the only business representative, not related to Interpipe, was from Food Processors' Association (European Business Association was also present, but it mainly represents European business interests). And it is highly unlikely that this Council will see representatives of businesses of the size comparable to that of Pinchuk on its board.[132]

When addressed by one of the Ukrainian think-tanks to organise a joint initiative with other oligarchs to promote FTA with the EU, Pinchuk agreed, but the reality is such that oligarchs cannot sit on one table. None of the oligarchs attended the YES Annual Meetings or the recent FTA Forum. The same lack of dialogue is demonstrated with regard to Euro-2012 European Championship project – many of the large businessmen have interests in this project, as most of them have investments in football industry, but collective measures are impossible to organise.

Apart from Viktor Pinchuk, who was a pioneer in this respect, other large businessmen – namely Rinat Akhmetov and Kostyantyn Zhevago – have repeatedly spelled out their support to EU integration in the media (Olearchyk and Wagstyl, 2007). Others, such as Ihor Kolomoyskiy and his partner Gennadiy Bogolyubov, Serhiy Taruta and Dmitriy Firtash are abstaining from making public their positions, although the latter openly supports closer links with Russia.

Rinat Akhmetov's SCM has also engaged in an active social corporate responsibility campaign, in an attempt to build an image of a company working by world standards. Akhmetov has also established the Fund for Effective Governance (FEG) – a think tank aiming to promote deeper economic reforms in Ukraine. Jointly with McKenzie it developed a Strategy for Effective Governance for Ukraine.

Interestingly, while Pinchuk's initiative clearly prioritises EU integration, the recent Concept of Economic Development of Ukraine produced by FEG, in the section on foreign trade,

[132] Viktor Pinchuk has also been conducting a range of other initiatives aimed at boosting the image of Ukraine in Europe and worldwide, such as presenting Ukrainian art pavilion at the Venice Biennale in 2007 and funding a documentary on Ukrainian holocaust together with USC Shoah Foundation Institute for Visual History and Education.

emphasises the need for simultaneous trade liberalisation with the EU and the CIS. However it acknowledges the ineffectiveness of the SES initiative, calling for greater formalisation of free trade on a bilateral basis. It also calls for greater involvement of business representatives and business associations in negotiations on the EU-Ukraine FTA.

As to the mobilisation of non-oligarchic business, USPP (Union of Industrialists and Entrepreneurs) would be the first candidate, due to its large membership and well-established lobbying infrastructure. Indeed, advancing EU integration is one of the priorities of its external relations strategy, though it seems to be mainly focusing on EU-2012 football championship. However no specific activities could be named when a representative of USPP was contacted.[133]

An example of a strong collective business organisation promoting EU integration is the European Business Association. It is probably the most active business association in this field, however it mainly represents interests of European organisations in Ukraine (as a quick look at the membership list and the range of issues on their agenda shows) and promotes inward investments to Ukraine. This also eventually results in greater openness and competitiveness of Ukraine, but is not indicative of mobilisation of local business actors.[134]

Very little evidence is available as to the attitudes of sectoral organisations to trade liberalisation with the EU. The associations of metallurgy and chemicals producers are known to have pro-European views and are better organised than others. However the level of awareness of EU-Ukraine trade issues appears to be very low in the Union of Chemists. [135] During years 2006-2007 the International Centre for Policy Studies has undertaken a series of round tables with sectoral interest groups to explore their view on the potential consequences of a deep FTA with the EU. Most active and informed were representatives of metallurgy and chemicals, while light industry, as a sector composed of small or micro-enterprises, was not so well represented and less receptive. [136]

Another important aspect, which could become a catalyst of closer integration if better developed, is *horizontal links* between the Ukrainian and EU businesses, or, so-to-say,

[133] Anonymous representative of USPP, interviewed in Kiev on 7th of July 2007.
[134] www.eba.com.ua

[135] Interviews with the Deputy-directors of the Union of chemists in July 2007.

[136] Interview with Olga Shumylo, Director of the EU integration programmes, ICPS, 10 July 2007.

'diagonal' links – between Ukrainian businesses and EU policy makers. Very little evidence exists of such links, but where available – horizontal links are less common than 'diagonal'. And here, as with domestic mobilisation, the same argument holds – only the biggest enterprises with increasing economies of scale are able to be proactive in this respect. The strategies of Viktor Pinchuk have already been mentioned – engaging EU members of Parliament into the debate on Ukraine and its EU integration; direct steel-related lobbying in Brussels. Some affirmative answers have been given as to the presence of Rinat Akhmetov's lobby in Brussels, both in the European Commission, and in the Parliament, without any details, however.[137] EU-Ukraine Business Council is also an efficient platform for connecting Ukrainian business with EU business and policy makers or politicians. Certain business groups have found it useful in reverting business deals in the EU that they found as discriminating. One of the examples of horizontal links is BusinessEurope[138] being approached by the Industrial Union of Donbass – a definite sign of a growing interest in the EU towards the Ukrainian market.

7.6. Conclusion

Business preferences, and the way they are voiced, affect the trade policy and the extent of trade liberalisation. This chapter focused particularly on the attitudes of business elites in Ukraine to the EU-Ukraine trade liberalisation. To conclude, what kind of mobilisation with regard to trade liberalisation can be observed in Ukraine?

In terms of political economy predictions, Ukraine is characterised by the following interaction of factors – relatively low mobility of factors of production making it more difficult for producers to adjust to unfavourable policy changes, while non-majoritarian, fragmented political system, as well as formal and informal institutions provide a favourable environment for direct lobbying. Such circumstances create conditions for specific industries harmed by liberalisation to easily get access to the decision-makers and receive the necessary protection. And this is the 'balance of power equilibrium' that one could observe at the early stages of WTO accession. The process was halted by inefficient political institutions, lack of negotiating experience and strong industrial and agricultural lobby.

[137] Interview with a representative of the European Commission, Directorate General Relex, Brussels, May 2007.
[138] The main horizontal business organisation at EU level. Includes 40 member federations, representing 20 million companies from 34 European countries. http://www.businesseurope.eu/content/default.asp?PageID=582

However later on, on the backdrop of significant economic growth, favourable external economic conditions and structural changes in the key industries, as well as a more favourable external political environment (EU being interested in closer political and economic relations with Ukraine) the balance of power among business elites shifted towards pro-liberalisation.

So far, however, it has been only the largest business that demonstrated some form of mobilisation in favour of the EU-Ukraine economic integration. Lack of traditions of effective collective bargaining has resulted in such intentions being pursued on a direct, vertical (business-government) basis. The fact that Ukrainian business attracts EU Members of Parliament to build the case for Ukraine in the EU is a positive sign; however collective representation of Ukrainian interests in the EU would prove much more efficient. Horizontal links between large Ukrainian business and its European counterparts are slowly developing, but they have not yet gained any formal status. Therefore, there is clearly some evidence of mobilisation aimed at closer economic integration with the EU, but it has not been realised in a collective manner, and there are few signs of such collective effort developing. Initial mobilisation is already a good trend, compared to the situation observed some five years ago, however once negotiations on the EU-Ukraine DCFTA enter a more advanced stage this lack of organised business representation may well affect the resulting conditions of the DCFTA.

This study paid less attention to the Eastern vector of economic integration, primarily because at the time of research the project of deeper integration within the Common Economic Space was off the agenda and pro-EU attitudes of some important business groups came to the forefront.[139] However, the conceptual framework developed in this study can equally be applied to explain East-leaning business attitudes. For instance, if the circumstances change and the aggregate benefits of deeper integration within the CIS turn out to outweigh the benefits of integration with the EU, business elites will be expected to mobilise in favour of the Eastern vector.

[139] In fact, when interviewees (business representatives and analysts) were posed with a question on their attitudes to the CES project, the reaction was most of the time indifferent, as to something that is 'passé' and not worth discussing.

CHAPTER 8. CONCLUDING REMARKS AND AVENUES FOR FURTHER RESEARCH

8.1. Findings of the empirical analysis

8.2.1 Subject of research – trends in export reorientation

While at the beginning of this research, in 2005 (using the available data until 2003), reorientation of Ukrainian exports towards the EU and away from FSU appeared to be a steady trend, by 2008 the situation changed. Exports to the CIS experienced a U-turn, this region regaining its role as a leading destination market for the Ukrainian exports. Eventually, although between 1990 and 2008 the share of the CIS declined dramatically (from 81 percent to 35.6 percent), the share of the EU-15 in total Ukrainian exports increased by only a small margin (from 5.6 percent to 14.4 percent), with the biggest reorientation taking place to the rest of the world (from 13 percent to 37 percent). Among the rest of the world the most important countries have traditionally been USA, China and Turkey, but by 2008 the role of China has diminished while that of Turkey increased from 3 percent to 7 percent of total Ukrainian exports. A not less important trend has been a dramatic increase in the role of MENA countries as a destination for Ukrainian exports. The role of Turkey and MENA taken together has increased from 8 percent to over 20 percent of total exports from Ukraine. A somewhat disappointing conclusion, there seems to have been more reorientation towards the Middle East than towards the EU.

Despite this fact, the focus in this thesis has been mainly on the East-West dimension of the Ukrainian trade since the motivation of the study was not purely the trade patterns, but the deeper economic, political and societal integration processes that are taking place in relations with both the CIS and the EU. While with the economies of CIS Ukraine enjoys a free trade regime on the basis of bilateral free trade agreements, with the EU it is negotiating a deep and comprehensive free trade agreement in the framework of the future Association Agreement, which may improve Ukraine's competitiveness on the EU market in the future. Even if reorientation towards the EU has been limited since Ukraine's independence, it was important to explore any positive or negative trends and the possible determining factors thereof, in view of the EU's strategic importance as an economic and political partner of Ukraine.

It is important to note, however, that given Ukraine's EU membership aspirations, such low degree of reorientation towards the EU is not good news. Integration with the EU is a sub-criterion in the 'competitiveness' condition of the Copenhagen Criteria that European Commission uses to assess candidate countries' fitness for membership; hence, low and hardly improving degree of integration with the EU would not be counted as a plus for Ukraine should its membership application be submitted and assessed.[140]

However, when a more detailed analysis is undertaken, breaking down the trade flows by factor content, it appears that medium-technology exports have been growing in trade with both regions, but more dynamically in trade with the EU. When the dynamics on the destination markets is taken into account, and the role of imports from Ukraine is compared to those from the rest of the world, it also emerged that Ukraine enjoys a more intensive comparative advantage on the European markets than on the Russian market. Admittedly in 2000 even with the lower average intensity of the comparative advantage Ukraine enjoyed a much more favourable position on the Russian market, having more competitive products lines in total and in technology-intensive products in particular. By 2008, however, the situation has changed and Ukraine lost a fair share of its comparative advantage on the Russian market. At the same time, the number of competitive medium-technology products has grown since 2000.

This apparent contradiction between macro-level trends and trends in terms of factor content and comparative advantage is explained by the fact that the latter analysis looks at the narrower product categories, and reveals upgrading of the degree of processing that has taken place within the same broad commodity groups (e.g. Metals or Chemicals). The loss of some of the comparative advantage in medium-technology products on the Russian market is likely to stem from Russia's dynamically growing demand that has had to be met by imports from other countries, thus crowding out Ukraine's competitive position.

Nevertheless, despite the growing external pressure on the destination markets, the dominant role of the CIS and Russia for the *Ukrainian trade and economy*, in particular in machinery & equipment and transportation products – commodity groups that, according to theory, bear the highest growth-enhancing potential – has to be acknowledged as a more important trend. The weakening *relative* comparative advantage on the Russian market serves as a warning for the

[140] An anonymous representative of the Directorate General Economy and Finance, European Commission.

medium- to long-term perspective. On the other hand, the shrinking role of the EU in aggregate terms is mitigated by more positive findings on a more disaggregated level (factor content) and in relative terms (revealed comparative advantage).

8.2.2 Macro-level determinants of the Ukrainian exports

The macro-level analysis has shown that total and per capita income, along with geography, explains between 60 to 70 percent of the variation in the value of real exports from Ukraine in 1996-2004. Since geographic conditions do not change, this finding implies that the level of exports from Ukraine is largely determined by economic growth and the level of development in partner countries. This finding corroborated the suggestion made in CHAPTER 3 that a rebound in trade with the CIS since early 2000s must have been driven by the start of recovery in those countries after a decade of recession. Importantly, Ukraine was found to trade more with countries of similar level of income than with high-income economies.

After controlling for the income and geographic effects, belonging to a trade bloc, even if *de jure* not institutionalised, was found to increase further Ukraine's export intensity. The effect of CIS was found to be significantly positive even though it is not a formal free trade area, but a network of bilateral preferential trade agreements. In contrast, Ukraine was still under-trading with the EU, in particular in 2000-2004. However, when steel exports were removed from the dependent variable, the effect of under-exporting to the EU was much less pronounced, being significant only in 2004. This finding implies that it is primarily steel exports that are underperforming in trade with the EU, while the rest of merchandise exports seem to be in line with the macro-economic and geographic fundamentals. Under-exporting of steel to the EU-15 is not surprising, given the quota regime that the EU maintained with Ukraine (as well as Russia and Kazakhstan) until 2008.[141] Still, the lack of positive effect of the EU trade bloc on Ukraine's export intensity, which contrasts with a strong positive effect of the CIS, indicates that there is an under-utilised potential.

Interestingly, the effect of the then CEFTA, which until 2004 included CEE economies, was insignificant for total exports during 1996-2004, but was significantly positive on non-steel exports. However, this positive effect disappeared after 2001. A more detailed look into the underlying trade data revealed that the decline was mainly driven by the fall in mineral

[141] In 2008 Ukraine joined the WTO and as a member could no longer face quantitative restrictions.

exports, which was in turn determined by domestic structural factors in Ukraine, rather than by trade diversion from trade liberalisation between the EU-15 and CEFTA.

8.2.3 Micro-level determinants of exports

In CHAPTER 6 the focus of the analysis was shifted from preferential trade blocs and macro-economic fundamentals to the firm-level factors that may explain the performance of Ukrainian exports. The factors chosen for the analysis were derived partially from the trade theoretical literature, and partially from the corporate governance literature. In broad terms, the former focuses on the link and the causality between productivity and exporting, and in particular suggests that size, product and/or process innovation, foreign links and higher human capital are likely to improve the chances of a firm to internationalise (i.e. to become an exporter). Corporate governance literature adds the hypotheses that *de novo* or privatised enterprises (as opposed to state-owned enterprises, in particular in transition economies), as well as firms with easier access to finance will be more likely to become exporters.

The above trade theoretical factors have also been found to have a positive effect on productivity, while higher productivity, in turn, has been found to be associated with higher likelihood of a firm to enter *more advanced markets*. The research in this thesis used this indirect association to explore whether size, innovation, foreign links and product diversification increase or decrease the likelihood of Ukrainian enterprises to export to the EU – as a more advanced market – versus the CIS.

Exploring first the factors that make Ukrainian enterprises more likely to *internationalise* – i.e. to become exporters – the findings were that a typical Ukrainian exporter seems to be a large firm with foreign ownership and higher human capital component (measured by the level of education of the employees), but which does little product innovation and upgrading of capital. It seems that it is well established, large and less dynamic Ukrainian firms that tend to enter foreign markets through exporting. Although the negative effect of innovation and capital upgrading on export propensity is contrary to the theoretical expectations, this finding is not totally surprising given the commodity structure of Ukrainian exports.

When *destination-specific internationalisation* is explored – i.e. the likelihood to export to the EU as opposed to the CIS – some of the findings of the internationalisation model are

corroborated. The effect of the economies of scale[142], which can be paralleled with size, also has a positive effect in trade with most regions – EU-15 and CIS – although negative in trade with the EU-12. Again, contrary to expectations, but consistent with the internationalisation model, innovation was found to be negatively associated with the export propensity to all regions in question – EU-15, EU-12 and CIS. Foreign ownership, which had a pronounced positive effect in the first exercise, in the destination-specific model had a positive effect only on the likelihood to export to the EU-15. Higher commodity diversification, on the contrary, made a firm more likely to export to the CIS, but not the EU.

Hence, theoretical expectations have only partially been validated by the empirical analysis. Indeed, size (or economies of scale) has been found to be positively associated with export propensity, and in particular with the likelihood to export to both the EU-15 and CIS. Foreign ownership, likewise, positively affects internationalisation and exporting to the EU-15. However, unlike hypothesised, neither process/product innovation, nor commodity diversification increase the export propensity or the chances to export to a more advanced market (the EU); moreover, they are inversely related to these dependent variables. The same holds for capital upgrading and general export propensity. I.e. neither of the variables that are associated with industrial upgrading, apart from foreign direct investment, was found to increase the chances of exporting to the EU. The positive effect of FDI, however, appears to be a positive finding on the backdrop of the anecdotal evidence that the majority of FDI in Ukraine is market- rather than export-seeking.

8.2.4 The role of business elites in the EU-Ukraine trade policy-making

While the latter analysis was aimed at enlarging the understanding of the determinants of Ukrainian exports by shifting the inquiry from the mainstream trade model (gravity model) to a newer approach of firm-level determinants, the aim of CHAPTER 7 was to recognise the shortcomings of the quantitative firm-level analysis in CHAPTER 6 in a context of a country, where business elites play an active role in determining policy-making. Thus, business elites were chosen as another potential determinant of exports from Ukraine to the EU, and their role was explored in a qualitative manner.

[142] In the internationalisation model size was measured by the number of employees, while in the destination-specific model by the value of total exports.

Seeking signs of business mobilisation with regards to the current EU-Ukraine trade policy-making and the potential EU integration (in particular through the creation of the free trade area), little organised business action with regards to either of the processes was found. Nevertheless, there was evidence of individual lobbying channels targeting both *current trade and integration with the EU*. While different in nature, both of these lobbying initiatives have been pursued by the largest business actors – financial-industrial groups, owned by the so-called oligarchs. Using WTO accession as an example of trade liberalisation exercise, we also found some evidence of mobilisation of large (non-oligarchic) enterprises. Small and medium enterprises, on the other hand, were not successful in making their voice heard with regard to either process.

In order to explain the observed business behaviour a conceptual framework was developed, which suggests that the degree of business mobilisation will depend on: (i) economic costs and benefits as perceived by business elites; (ii) nature of prevalent political institutions, and (iii) collective action costs.

With regard to the economic costs and benefits, it was found that business mobilisation observed in Ukraine was in line with the political economy postulates derived from classical and new trade theories. The former suggests that when economic agents that are bound to lose from the proposed trade policy find it hard to adjust to unfavourable changes of trade policy, they will mobilise against trade liberalisation. The resulting policy equilibrium is likely to be protectionist. This was observed in Ukraine during the WTO accession process, when automobile industry and some agricultural producers mobilised against the required liberalisation of Ukrainian trade policy. With regard to the EU-Ukraine trade liberalisation, little mobilisation of medium-to-large business has been observed due to the lack of concrete legislative proposals by the time of conducting the research, 2007/2008, which is explained by an economic concept of high information asymmetry.

The new trade theory shifts the attention to larger firms, whose economies of scale make them interested not only in the domestic market, but also in international markets. Being competitive at an international level and having the negotiating power, such firms can act strategically, pursuing better access to foreign markets. Moreover, they can do so *even in the absence of concrete legislative proposals*. Thus, with regard to current trade flows, there is evidence of Ukrainian oligarchic businesses (steel producers) effectively lobbying for

improving access to the EU market (lowering import quotas in the EU). With regard to the future bilateral trade liberalisation with the EU, a broader range of factors is at play. Having reached the scale of business development when interests on the international markets go beyond pure exporting – intentions to conduct IPOs on European stock exchanges, outward investment in the EU, plus the need to internationally legitimise assets gained during 1990s by often opaque schemes – some FIGs have engaged in direct cooperation with the EU institutions or launched pro-European public campaigns. They also, reportedly, facilitated the break-through in WTO accession negotiations by abandoning a protectionist stance and applying their weight in the parliament.

In addition to economic considerations, formal and informal institutions prevailing in Ukraine also explain the observed mobilisation of oligarchic businesses. Formal institutions – fragmented, non-majoritarian legislative system – do not encourage broad dialogue and consensus building, while informal institutions – so called 'state capture' by business interests – also facilitate individual dialogue between business and the legislative and executive branches of power. Thus, subject matter support for the EU integration and direct access to power reinforce the role that oligarchic business can play in the EU-Ukraine trade policy-making.

Such mobilisation was only observed with the oligarchic business, SMEs and stand-alone large enterprises remained uninterested in the issue of EU integration at the time of research (2007-2008). This appears logical in the light of the proposed political economy framework: lack of economies of scale rules out strategic behaviour, while the lack of concrete legislative proposals and of apparent negative consequences do not create significant incentives to mobilise. At the same time, absence of traditions of effective formal business-government dialogue hinders the mobilisation of SMEs with regard to the EU integration further.

8.2. Interpretation of the findings within a wider conceptual framework

From the conceptual framework outlined in Chapter 2 it emerged that for an economy in transition like Ukraine (which for analytical purposes can be identified as the South) a preferable dynamics would be to trade more with the more advanced markets of the North, which in the Ukrainian case in view of the geographic proximity and economic mass would

be the market of the EU, and to reorient its commodity structure towards products of higher degree of processing and/or technology intensive products.

The empirical analysis undertaken in this thesis revealed no clear evidence of such evolution of trade. Moreover, a somewhat contradicting picture emerges, as the discussion on aggregate level trends and factor content *vs*. revealed comparative advantage suggests. Thus, although on a macro-level Ukraine has clearly been undergoing a deepening South-South integration, there are some signs of improving South-North integration on a more disaggregated level. It is also important to note that the dynamically growing aggregate demand in the CIS is inducing diversification of suppliers, posing a challenge for Ukraine in the future.

At the same time, the empirical analysis of determinants of export flows also yielded little support for the idea of deepening South-North integration.

The *macro-level* (gravity model) analysis showed that Ukraine tends to under-trade with the external trade bloc of the North (the EU) and overtrades with the internal trade bloc of the South (the CIS). Moreover, the model showed that Ukraine consistently trades more with countries with similar levels of income – i.e. middle-income countries, which can also for analytical purposes be identified as the South, than with those that have significantly higher income per capita.

On a *micro-level*, likewise, the analysis has not revealed that trade with the North has been associated with firm-level industrial upgrading. Neither diversification, nor innovation increases the chances of exporting to the EU. Admittedly, our various measures of innovation have not been shown to increase the chances of exporting to the CIS either, nor does it seem to increase export propensity in general. This does not come totally as a surprise given Ukraine's commodity structure of exports, more than half of which consist of resource-intensive products.

However, exporting to the South has been associated with higher commodity diversification. Diversification, in turn, indicates a better commodity structure of trade, and has been found to be associated with higher growth potential (Funke and Ruhwedel, 2001, 2005).

A positive finding in trade with the North, however, is a strong positive effect of FDI on the likelihood of exporting to the EU, especially in machinery and transportation. This contrasts with earlier findings that quote market size as a primary motive for inward FDI to the Ukraine (e.g. Kudina, 1999).

As far as *policy lobbying* is concerned, analysis in this thesis has shown that business elites are becoming increasingly interested in the advanced markets, not only for the reasons of market access, but for a whole range of factors ranging from image restructuring (so-called 'social legitimisation', Puglisi, 2008), the need to gain access to international capital markets, to secure their property rights in the conditions of political instability. Thus, despite a common belief that Ukraine's industrial East has pro-Russian allegiance, in reality active lobbying measures have been launched particularly with regard to the Western integration vector, rather than closer integration with the CIS.

On balance, although the picture is far from straightforward, we have to conclude that the anticipated reorientation of Ukraine's international economy towards the European Union, or in other words, greater South-North integration, has failed to materialise. The main rebalancing of trade took place in the early years of transition – 1993-1999, when the share of CIS fell from over 80 to 28 percent – while the subsequent years have been characterised by the rebounding role of the CIS and the increasing importance of the Middle East. Although commodity composition has somewhat improved in trade with the EU, as a share of total exports the CIS has become a more important market for many product categories, in particular technology-intensive products. Hence, to an extent *a deeper South-South integration moving towards North-North commodity composition is observed*.

As has been shown in the macro-level model, and more generally, such dynamics appears to be in line with the Linder hypothesis, which suggests that countries with similar demand structures will develop similar industries and thus will trade more with each other in similar, but differentiated goods. This is also supported by a high degree of intra-industry trade between Ukraine and CIS economies.

An important reservation needs to be made about the classification of regions into North and South. While indeed most CIS economies are specialising in exports of resource-intensive products, thus resembling the South, it is a much more dynamically growing market than that of the EU. Hence, as the macro-level analysis showed, higher GDP growth is likely to drive further increase of exports from Ukraine to the CIS and other middle-income economies. Since this South-South exchange is not entirely concentrated in goods of low added value, it may, eventually, be growth-enhancing; however the upgrading of an industrial base is still likely to be achieved through imports or FDI from the North.

On the other hand, if trade with the North, even if growing in importance, remains trapped in a typical North-South relationship (relative to the trade with the South), whereby Ukraine continues to specialise in low value-added products, is it good or bad for the Ukrainian economy? As the discussion in CHAPTER 2 (Conceptual framework) has shown, although there is evidence that more trade with the North is growth- (or productivity-) enhancing, it usually happens through trade in more R&D intensive products. Besides, growth-enhancing effects of trade with the North often come from imports (of technology- and R&D-intensive products), rather than exports. Hence, unless Ukraine manages to support the trends of marginal improvement in the commodity structure of its exports to the EU, it appears that the sharp improvement in commodity composition in trade with the CIS since 2003-2004 is a more important factor for Ukraine's growth prospects than the geographic distribution of exports. This conclusion concerns purely trade flows, and particularly exports. However, as was discussed in the Introduction and the Conceptual framework, deeper economic integration with the EU that *goes beyond trade measures* is likely to bring about much bigger benefits to the Ukrainian economy in the medium- to long-term than pure trade liberalisation would. 'Deep and comprehensive', however, implies not only deeper liberalisation of access to the EU market, but also extensive reform effort, which has so far been missing in Ukraine. Preservation of the same limited-reform approach might not only restrict reorientation towards the EU, but may also erode Ukraine's competitiveness on the dynamically developing traditional markets of the CIS, as is already happening with the loss of comparative advantage in many medium-technology products.

8.3. Reservations about the analysis and avenues for further research

Referring back to the section 1.5 on methodology (on p.16), the author would like to recall that the epistemological approach of this study was not based on positivist, but rather on critical realist assumptions. The former would essentially imply that what is measurable and observable must reflect the true causal relationships and mechanisms in the explored phenomena, and that "the scientist's conceptualisation of reality actually directly reflects that reality" (Bryman and Bell, 2007: 18). The latter, in contrast, posits that "the scientist's conceptualisation is simply a way of knowing that reality" and that the categories employed to understand the reality are likely to be provisional (Bhaskar, 1975: 250). Hence, this thesis

explored only a set of possible determinants of exports from Ukraine, some of which are part of the mainstream trade literature, while others have seen little reflection in the literature on the Ukrainian trade.

The author acknowledges that the techniques employed herein mostly reflected the relationship or association between certain phenomena, rather than exact direction of causality. Also, the approach taken in the study of micro-level determinants was somewhat non-conventional for the regression analysis methodology, however it also relates back to the critical realist epistemological position, which admits that there can be "hypothetical entities that account for the regularities in the ... social orders" (which would not be admissible in the positivist position), i.e. instead of simply stating the relationship established as a result of the regression analysis, this study made an attempt to explore the underlying facts that may provide better explanation of the relationship suggested by the regression analysis. The qualitative analysis of the role of business elites also suggested a provisional theoretical framework to account for the observed and very under-explored behavioural patterns of business actors; however, other explanations and views on this matter may be equally if not more correct.

Moreover, the author acknowledges the multiplicity of possible explanations for the observed export performance of Ukraine and for the failure to integrate closer with the EU. On the one hand this thesis took a relatively broad view on this, on the other it unavoidably missed out certain, potentially not less important, factors. Moreover, by "observed", the author implies either trends that are measured by official statistics (in a country where the size of informal economy may reach as much as 50 percent of GDP)[143], or a subjective impression made from conducting interviews and analysing the secondary literature. Both of these are not infallible.

The following avenues for future research can be suggested:

- Once Ukraine concludes the free trade agreement with the EU, it will be important to explore how much trade liberalisation and institutional reforms will help Ukraine to increase its exports to the EU.[144]

[143] E.g. Schneider (2002) and Thiessen (2007)

[144] Even if the premises of the argument for a higher level of exports from Ukraine to the EU can be argued about, the need to narrow down the trade deficit with the EU has been repeatedly acknowledged by Ukrainian officials.

- When more and better firm-level data becomes available, new opportunities will be opened for researchers. Thus, BEEPS dataset provided a wide range of measures, but did not distinguish between destination markets for exporters, thus making it impossible to explore export reorientation from a firm-level perspective. It will be interesting to explore better the role of financial intermediation, non-tariff and administrative barriers, product quality, as well as corporate governance and management practices, to name a few, in increasing or decreasing the chances of a firm to export to advanced markets as opposed to traditional markets of the FSU. Alternatively, qualitative studies with no preliminary hypotheses made may also improve our understanding of the process.
- The constantly changing political situation in Ukraine is also changing the position of Ukrainian oligarchs, both in terms of their economic situation and political influence. A bigger body of research into the issue of political economy of trade policy-making in Ukraine and in other economies with young democracies may help improve our understanding of the mechanisms involved in this process, which would hopefully be useful for other economies as well.
- Last but not least, recognising a significant shift in a relatively brief period of time from a European orientation back to a Russia-CIS orientation, one possibility cannot be ruled out – that a similar shift could happen again. One of the triggers could be the 2008 global financial crisis. In the aftermath of the crisis much will depend on the relative rates of recovery in the EU and CIS. At the moment recovery in Russia and the rest of CIS seems to be below par, while that in the EU is, although still lower in absolute terms, better than expected. Again, the conclusion of the DCFTA may further boost the chances of this reverse shift happening, improving both access to the EU market and Ukraine's attractiveness for investors potentially plugging Ukraine into international production networks.

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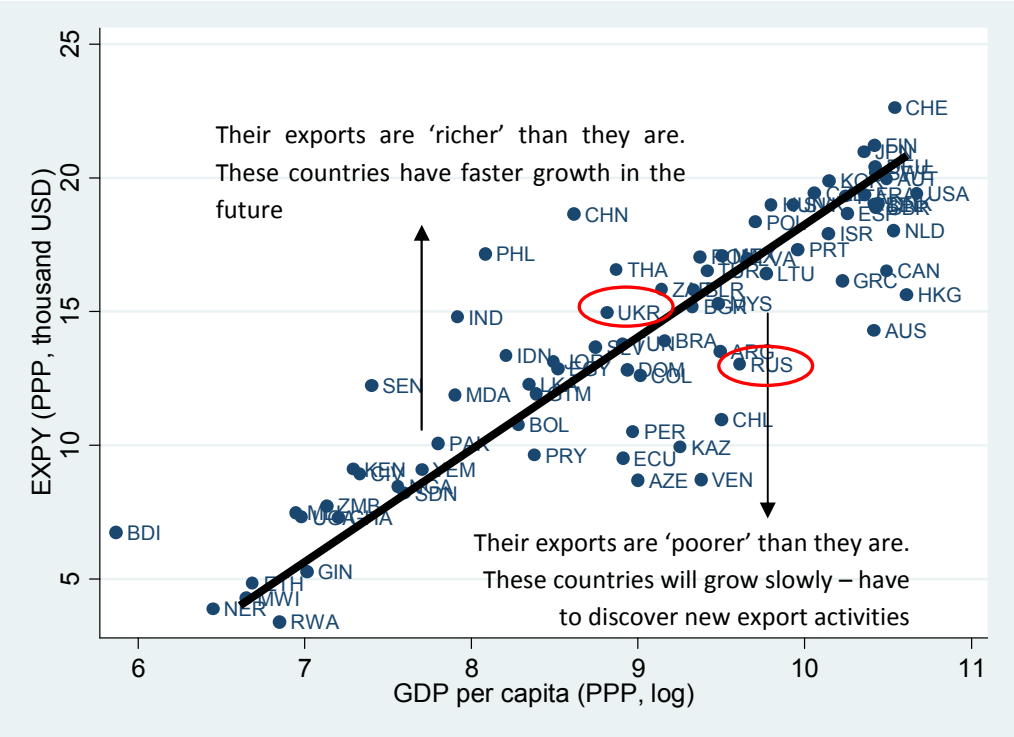
Annex 1. Export sophistication (EXPY) *vs.* GDP per capita, 2008



Source: Bailey Klinger (2010: 4) based on Hausman et al. (2005).

Annex 2. GDP growth in FSU economies, annual %, 1991-2008

	1991	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*
Armenia	-11.7	-41.8	-8.8	5.4	6.9	5.9	3.3	7.3	3.3	5.9	9.6	13.2	14.0	10.5	13.9	13.2	13.7	6.8
Azerbaijan	-0.7	-22.6	-23.1	-19.7	-11.8	1.3	5.8	10.0	7.4	11.1	9.9	10.6	11.2	10.2	26.4	34.5	25.0	10.8
Belarus				-11.7	-10.4	2.8	11.4	8.4	3.4	5.8	4.7	5.0	7.0	11.4	9.4	10.0	8.6	10.0
Georgia	-21.1	-44.9	-29.3	-10.4	2.6	11.2	10.5	3.1	2.9	1.8	4.8	5.5	11.1	5.9	9.6	9.4	12.4	2.0
Kazakhstan	-11.0	-5.3	-9.2	-12.6	-8.2	0.5	1.7	-1.9	2.7	9.8	13.5	9.8	9.3	9.6	9.7	10.7	8.9	3.2
Kyrgyz Rep.	-7.9	-13.9	-15.5	-20.1	-5.4	7.1	9.9	2.1	3.7	5.4	5.3	0.0	7.0	7.0	-0.2	3.1	8.2	7.7
Moldova	-16.0	-29.1	-1.2	-30.9	-1.4	-5.2	1.6	-6.5	-3.4	2.1	6.1	7.8	6.6	7.4	7.5	4.8	3.0	7.2
Russian Fed.	-5.0	-14.5	-8.7	-12.6	-4.1	-3.6	1.4	-5.3	6.4	10.0	5.1	4.7	7.3	7.1	6.4	7.4	8.1	7.3
Tajikistan	-7.1	-29.0	-16.4	-21.3	-12.4	-16.7	1.7	5.3	3.7	8.3	10.2	9.1	10.2	10.6	6.7	7.0	7.8	7.9
Turkmenist.	-4.7	-5.3	-10.0	-17.3	-7.2	-6.7	-11.3	6.7	16.5	18.6	20.4	15.8	17.1	17.2	13.0	11.4	11.6	9.8
Ukraine	-8.4	-9.7	-14.2	-22.9	-12.2	-10.0	-3.0	-1.9	-0.2	5.9	9.2	5.2	9.4	12.1	2.7	7.3	7.9	2.1
Uzbekistan	-0.5	-11.2	-2.3	-5.2	-0.9	1.7	5.2	4.3	4.3	3.8	4.2	4.0	4.2	7.7	7.0	7.3	9.5	9.0
Average	**-11.7**	**-41.8**	**-8.8**	**5.4**	**6.9**	**5.9**	**3.3**	**7.3**	**3.3**	**5.9**	**9.6**	**13.2**	**14.0**	**10.5**	**13.9**	**13.2**	**13.7**	**6.8**

Source: World Bank World Development indicators (September 2009 Edition).

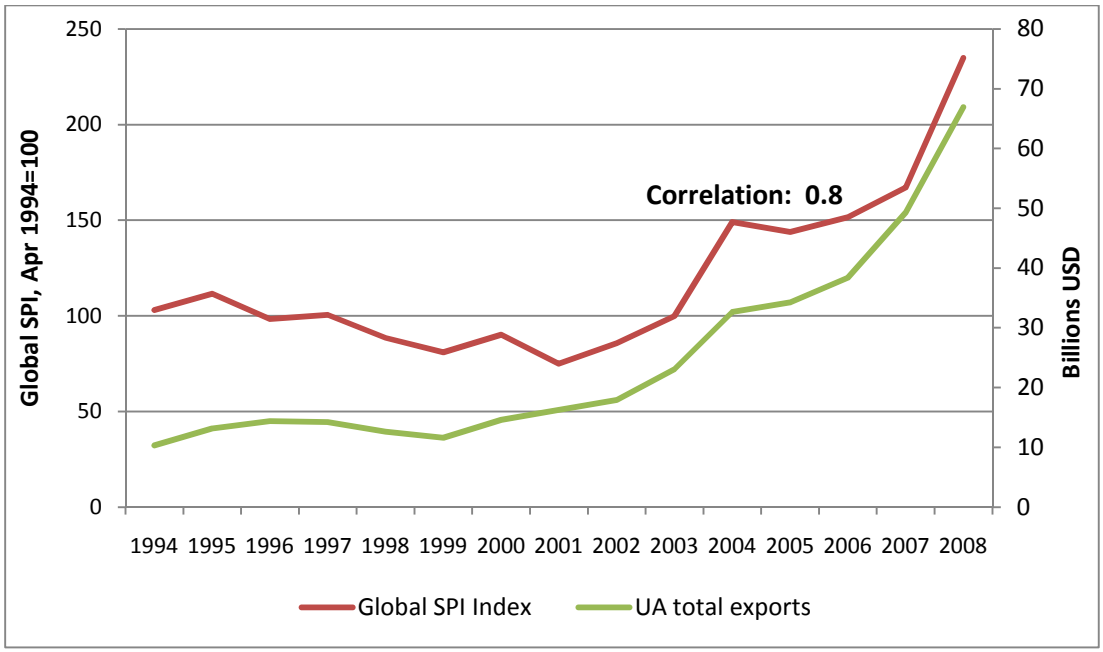
Annex 3. Grubel-Lloyd index of intra-industry trade (at the 2-digit SITC level)

	Total trade		CIS		Non-CIS		Manufacturing % of trade	
	1996	2000	1996	2000	1996	2000	CIS	Non-CIS
Armenia	51.7	54	42.3	38.6	40.8	51	37	66
Azerbaijan	32.8	20.2	38.5	41	24.2	9.4	29	3
Belarus	69.8	66.3	60.1	57.1	44.6	44.2	75	54
Georgia	n.a.	36.9	n.a.	54.2	n.a.	20.2	43	25
Kazakhstan	44.2	30.4	56.1	32.7	22.8	15.8	15	18
Kyrgyzstan	40.2	42.4	47.8	55.6	25	22.3	31	13
Moldova	53.6	31.6	50.9	53.7	46.8	16.3	20	56
Russia	47.6	54.7	75.1	71.5	36.3	44.5	24	22
Tajikistan	n.a.	11.8	n.a.	11.3	n.a.	5.5	15	10
Turkmenistan	8.1	9.1	8.3	8	8.0	9.6	3	11
Ukraine	42.5	44.9	58.2	60	27.7	28.7	69	66
Uzbekistan	26.7	25.3	30.8	26.1	13.8	14.1	20	4

Note: The index was calculated for manufacturing trade only (groups 5 through 8 minus 68, using SITC V.2 Classification).

Source: Freinkman et al. (2004 : 24).

Annex 4. Correlation between global steel prices and total exports from Ukraine, 1996-2008



Source: www.crugroup.com, retrieved Jan 2010, UN Comtrade Online Database

Annex 5. Commodity and geographical distribution of Ukrainian exports, 1996-2008, % of total unless otherwise mentioned

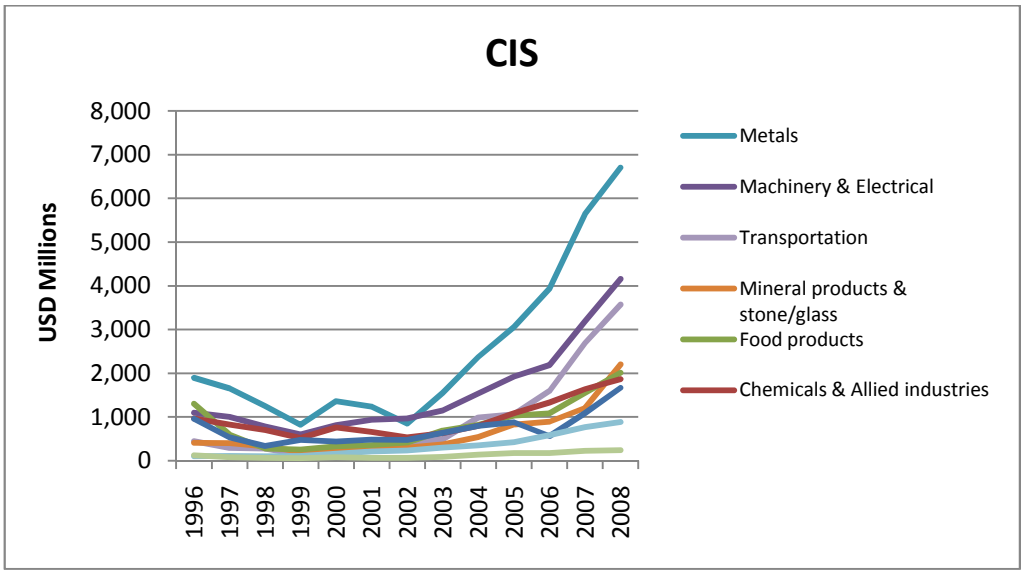
	1996	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*p.p. change 2004-1996*	*p.p. change 2008-1996*
Agriculture	11%	8%	8%	10%	7%	8%	10%	8%	7%	9%	9%	9%	12%	*-4*	*1*
CIS	58%	48%	32%	43%	45%	35%	26%	35%	34%	29%	17%	26%	20%	*-24*	*-38*
EU-15	14%	21%	23%	13%	19%	22%	28%	18%	16%	19%	24%	26%	25%	*2*	*11*
EU-12	12%	9%	9%	8%	9%	10%	8%	8%	9%	6%	7%	6%	8%	*-2*	*-4*
Other	15%	43%	35%	49%	27%	55%	38%	39%	40%	46%	52%	43%	47%	*25*	*31*
Chemicals	14%	13%	13%	11%	12%	11%	9%	10%	10%	10%	11%	10%	9%	*-5*	*-5*
CIS	46%	44%	44%	41%	43%	38%	32%	27%	25%	30%	32%	32%	31%	*-22*	*-16*
EU-15	12%	11%	15%	16%	16%	16%	12%	12%	16%	10%	12%	11%	10%	*3*	*-3*
EU-12	12%	13%	15%	12%	11%	13%	17%	17%	16%	14%	16%	15%	10%	*4*	*-2*
Other	29%	43%	26%	47%	31%	49%	39%	44%	44%	46%	40%	41%	49%	*14*	*20*
Food products	10%	5%	3%	3%	3%	3%	3%	4%	3%	4%	4%	4%	4%	*-6*	*-6*
CIS	93%	87%	84%	82%	82%	79%	77%	76%	72%	80%	78%	74%	80%	*-21*	*-13*
EU-15	2%	5%	6%	9%	7%	7%	6%	6%	4%	5%	5%	7%	3%	*1*	*0*
EU-12	4%	5%	5%	3%	3%	6%	8%	9%	10%	7%	8%	9%	7%	*6*	*3*
Other	1%	8%	5%	15%	8%	15%	9%	9%	14%	9%	9%	10%	10%	*13*	*9*
Mach. & Elect.	10%	10%	9%	8%	9%	11%	10%	10%	9%	8%	9%	10%	9%	*0*	*0*
CIS	78%	73%	71%	66%	60%	54%	55%	49%	51%	68%	66%	64%	66%	*-27*	*-12*
EU-15	5%	7%	11%	11%	9%	18%	14%	16%	17%	8%	9%	9%	9%	*11*	*4*
EU-12	5%	6%	6%	7%	20%	17%	15%	16%	14%	10%	12%	17%	17%	*9*	*11*
Other	12%	21%	13%	27%	12%	29%	16%	19%	18%	14%	13%	10%	9%	*6*	*-3*
Metals	33%	41%	42%	42%	44%	41%	40%	37%	40%	41%	43%	42%	41%	*7*	*8*
CIS	40%	28%	23%	17%	21%	18%	12%	18%	18%	22%	24%	27%	24%	*-22*	*-15*
EU-15	5%	8%	13%	11%	11%	11%	11%	13%	13%	12%	15%	13%	13%	*8*	*8*
EU-12	7%	6%	9%	10%	10%	11%	11%	10%	10%	10%	11%	9%	10%	*3*	*2*
Other	48%	66%	55%	73%	57%	70%	66%	58%	58%	56%	50%	51%	53%	*11*	*5%*

	1996	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*p.p. change 2004-1996*	*p.p. change 2008-1996*
Mineral prod.	10%	10%	10%	11%	10%	12%	13%	16%	14%	15%	11%	10%	11%	*4*	*2*
CIS	29%	29%	26%	16%	16%	17%	13%	10%	12%	16%	21%	25%	29%	*-17*	*0*
EU-15	20%	13%	19%	29%	17%	25%	33%	31%	23%	27%	25%	22%	12%	*3*	*-8*
EU-12	46%	54%	51%	41%	50%	41%	39%	42%	40%	31%	35%	30%	30%	*-6*	*-17*
Other	5%	18%	4%	43%	17%	42%	15%	17%	25%	25%	19%	23%	30%	*20%*	*25%*
Textiles etc.	4%	5%	5%	5%	5%	5%	5%	4%	4%	4%	4%	3%	2%	*0%*	*-2%*
CIS	22%	12%	10%	9%	11%	8%	7%	9%	12%	14%	13%	15%	16%	*-10%*	*-6%*
EU-15	51%	60%	67%	67%	66%	63%	62%	64%	64%	63%	64%	62%	60%	*12%*	*9%*
EU-12	12%	10%	7%	9%	9%	12%	17%	16%	11%	12%	15%	18%	20%	*-1%*	*7%*
Other	14%	78%	16%	82%	15%	80%	13%	11%	14%	11%	8%	5%	4%	*-1%*	*-10%*
Transport.	4%	4%	5%	4%	3%	3%	4%	4%	6%	5%	5%	7%	6%	*2%*	*2%*
CIS	70%	55%	44%	33%	49%	53%	58%	50%	49%	64%	77%	81%	83%	*-21%*	*13%*
EU-15	11%	11%	10%	14%	6%	15%	11%	12%	6%	7%	7%	4%	4%	*-5%*	*-7%*
EU-12	4%	7%	13%	8%	8%	4%	7%	25%	5%	7%	5%	6%	6%	*2%*	*2%*
Other	16%	38%	33%	59%	37%	43%	24%	14%	40%	22%	12%	8%	8%	*25%*	*-8%*
Wood etc.	1%	1%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	*1%*	*3%*
CIS	52%	51%	44%	36%	38%	41%	41%	42%	39%	43%	49%	48%	53%	*-13%*	*1%*
EU-15	10%	11%	15%	17%	17%	16%	19%	20%	19%	18%	16%	18%	16%	*9%*	*7%*
EU-12	18%	20%	26%	32%	28%	30%	29%	24%	27%	26%	22%	23%	22%	*9%*	*3%*
Other	20%	29%	15%	33%	17%	29%	12%	14%	16%	13%	13%	11%	9%	*-5%*	*-11%*

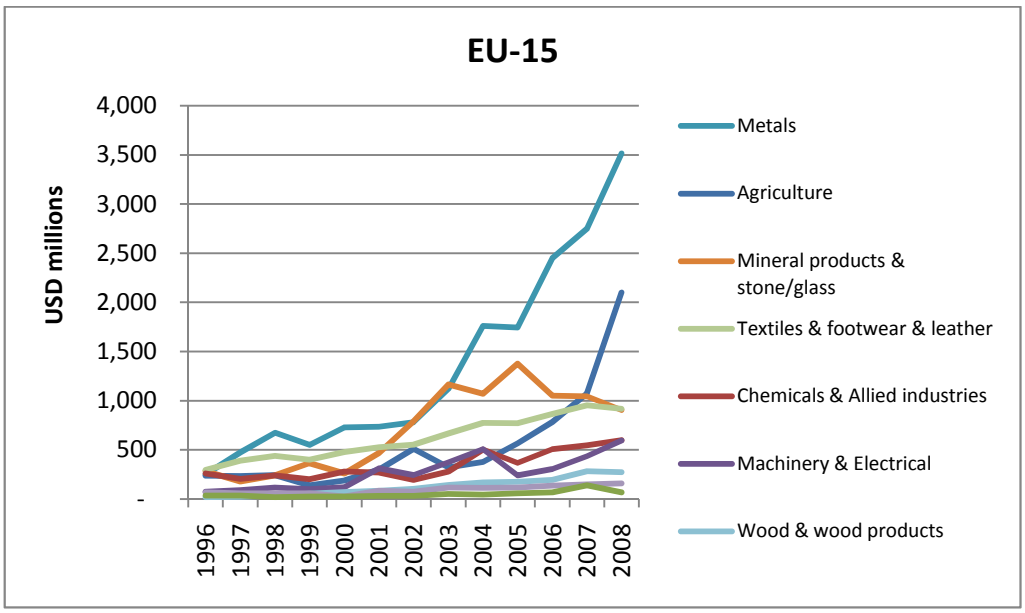
Source: UN Comtrade Online Database

Annex 6. Commodity distribution of Ukrainian exports to CIS, EU-15 and EU-12, 1996-2008, US$ million

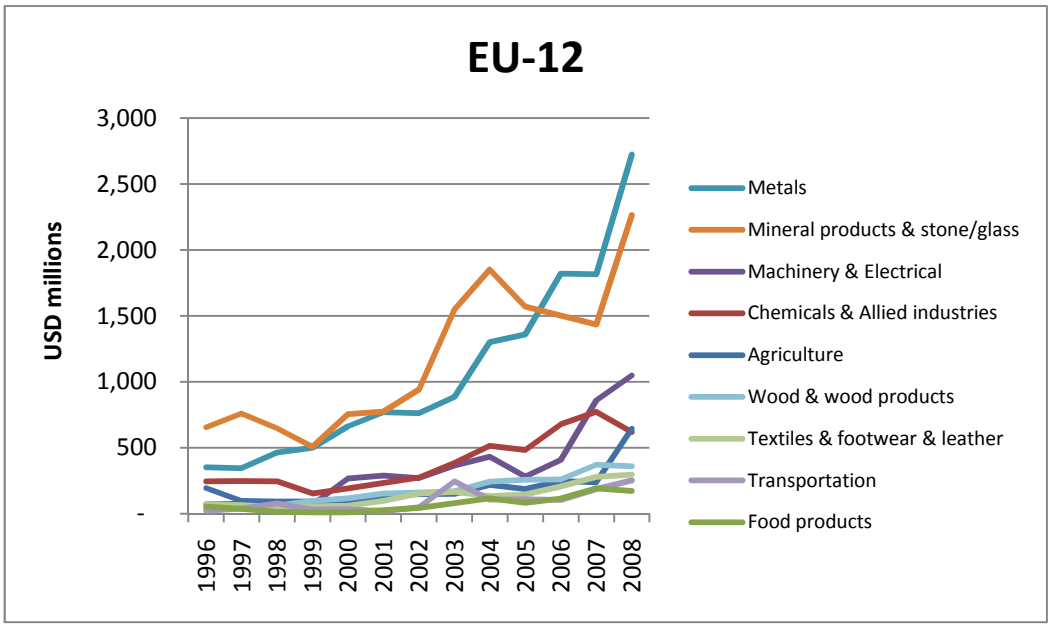
a)



b)



c)



Source:UN Comtrade Online Database

Annex 7. Exports of steel (HS 72) from Ukraine by main regions

	1996	1997	1998	1999	2000	2001	2002	2003	2004
EU-15	121.9	229.5	373.1	288.2	413.2	468.7	533.3	729.0	1352.6
% growth p.a.		*88%*	*63%*	*-23%*	*43%*	*13%*	*14%*	*37%*	*86%*
CEFTA	171.2	178.0	268.2	347.3	417.9	401.3	369.6	442.3	805.0
% growth p.a.		*4%*	*51%*	*30%*	*20%*	*-4%*	*-8%*	*20%*	*82%*
Russia	671.6	470.1	452.6	313.8	549.7	496.9	307.5	575.4	998.2
% growth p.a.		*-30%*	*-4%*	*-31%*	*75%*	*-10%*	*-38%*	*87%*	*73%*
Other CIS	216.0	271.3	223.2	105.5	128.1	143.3	134.4	269.4	486.2
% growth p.a.		*26%*	*-18%*	*-53%*	*21%*	*12%*	*-6%*	*100%*	*80%*
China	511.7	945.4	685.4	680.9	528.9	378.3	412.3	822.1	587.9
% growth p.a.		*85%*	*-27%*	*-1%*	*-22%*	*-28%*	*9%*	*99%*	*-28%*
ASEAN	464.2	309.5	186.0	282.3	345.1	521.2	856.4	728.5	884.8
% growth p.a.		*-33%*	*-40%*	*52%*	*22%*	*51%*	*64%*	*-15%*	*21%*
NAFTA	9.1	26.5	30.6	28.5	79.9	37.7	36.3	16.9	189.6
% growth p.a.		*191%*	*15%*	*-7%*	*180%*	*-53%*	*-4%*	*-53%*	*1020%*
Middle East	484.8	626.0	533.0	421.2	638.2	1047.4	998.5	1162.8	1566.7
% growth p.a.		*29%*	*-15%*	*-21%*	*52%*	*64%*	*-5%*	*16%*	*35%*
ROW	937.2	1603.2	1720.5	1768.4	2348.1	1883.4	2059.5	2424.0	4699.6
Total steel X to the world	**3416.6**	**4481.4**	**4204.3**	**3888.8**	**5031.2**	**4976.8**	**5338.3**	**6728.1**	**10765.6**

Source: UN Comtrade Online Database, author's calculations.

Annex 8. Exports to CEFTA as a share of respective categories of exports to the World (SITC Rev. 2 classification)

	2000	2001	2002	2003	2004
Animal and vegetable oils fats and waxes	2.05	1.58	**1.12**	**0.79**	**1.11**
Beverages and tobacco	0.35	0.11	0.52	0.08	0.90
Chemicals and related products nes	10.56	13.32	15.57	15.37	14.75
Commodities and transactions nes	0.06	0.05	0.12	0.48	0.00
Crude materials inedible except fuels	26.54	29.15	31.10	32.05	32.78
Food and live animals chiefly for food	3.42	5.24	4.49	5.32	6.95
Machinery and transport equipment	4.30	8.42	6.55	8.81	4.54
Manufactured goods classified chiefly by materials	8.85	8.92	8.82	8.16	8.16
Mineral fuels lubricants and related materials	**43.66**	**32.86**	**26.85**	**26.87**	**27.14**
Miscellaneous manufactured articles	4.50	6.87	9.36	13.23	6.77

Source: UN Comtrade Database, author's calculations

Annex 9. Breakdown of regional groupings employed in the analysis

EU-15	CEFTA	CIS
Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, United Kingdom	Bulgaria, Croatia (2002-), Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia	Azerbaijan, Armenia, Belarus, Georgia, Moldova, Kazakhstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkmenistan, Uzbekistan

Annex 10. Correlation matrix of the variables used in the panel data analysis, Internationalisation Model

	exporter	own_pr~r	age~1991	lnft_e~l	produc~e	lnuni_~e	int_qu~t	new_la~d	inputd~M	new_fo~s	credit~n	lnmach~t
exporter	1											
own_privfor	0.257	1										
age_pre1991	0.159	-0.101	1									
lnft_empl	0.504	0.233	0.312	1								
product_up~e	-0.044	-0.070	-0.008	-0.055	1							
lnuni_degree	0.157	0.104	-0.011	-0.023	-0.047	1						
int_qualcert	-0.250	-0.232	-0.039	-0.293	0.048	-0.127	1					
new_land_b~d	-0.243	-0.154	0.076	-0.179	0.149	-0.024	0.042	1				
inputdirectM	-0.051	-0.086	0.001	-0.013	-0.077	-0.148	0.104	-0.095	1			
new_forpress	0.204	0.106	0.070	0.147	-0.063	0.133	-0.099	-0.074	-0.024	1		
creditline~n	-0.064	0.114	-0.083	-0.033	0.036	-0.044	0.074	-0.003	-0.091	-0.031	1	
lnmach_rep~t	0.177	0.034	0.080	0.385	-0.068	-0.155	-0.099	-0.222	0.320	-0.087	-0.057	1

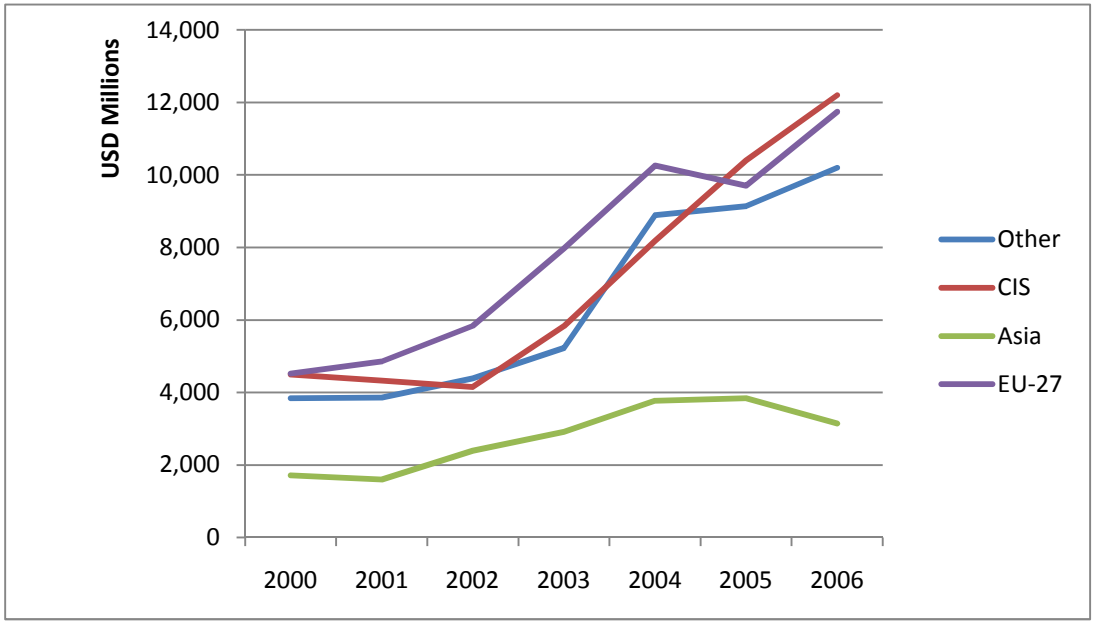
Source: Author's calculations using STATA 9.1

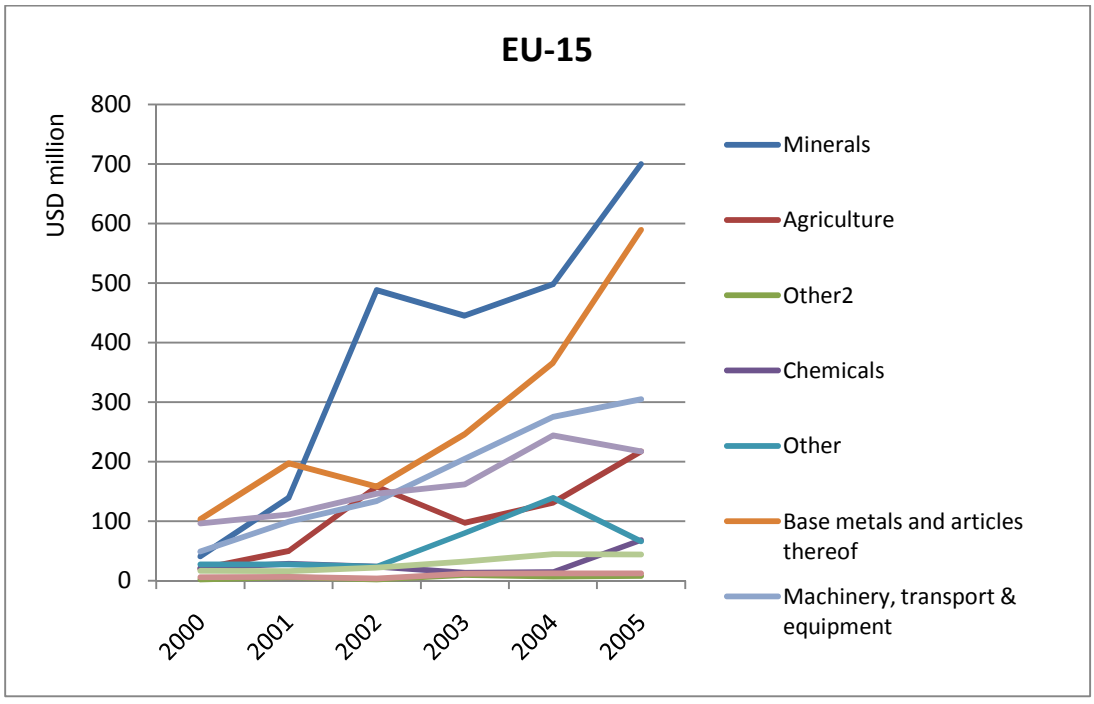
Annex 11. Correlation matrix of variables used in the Trade Reorientation regression analysis

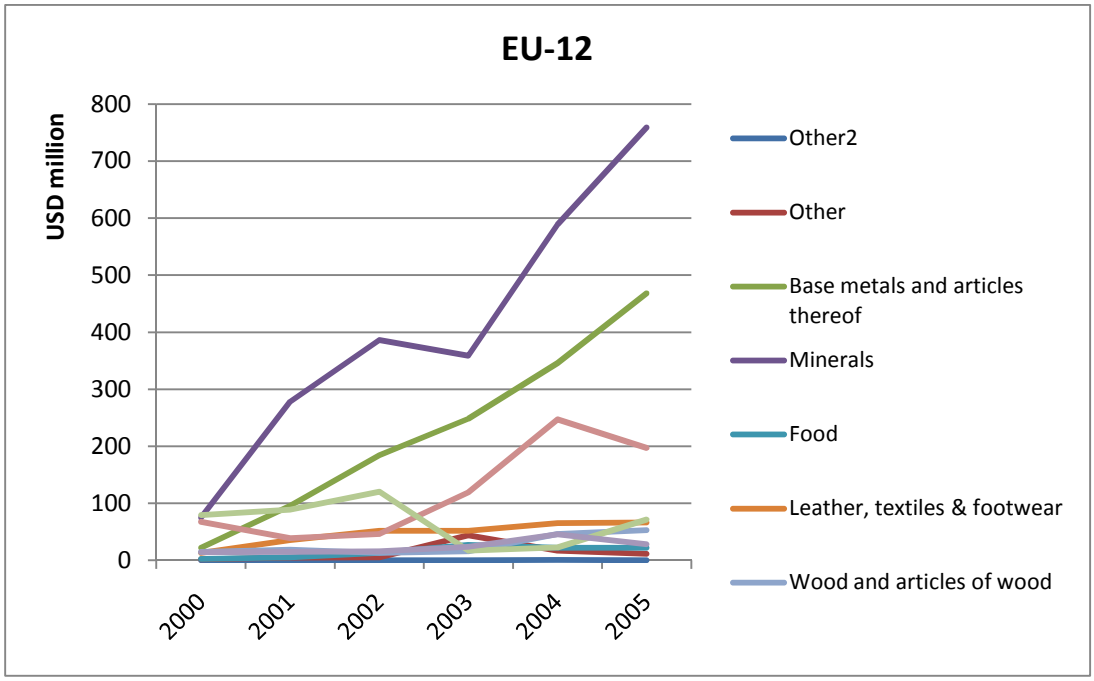
	eu15	eu12	cis	asia	fdi_y	inn_sum	scale	diversif
eu15	1							
eu12	-0.225*	1						
Cis	-0.382*	-0.440*	1					
Asia	-0.096*	-0.111*	-0.188*	1				
fdi_y	0.072*	-0.003	-0.026*	0.001	1			
inn_sum	-0.013*	-0.020*	-0.021*	0.040*	0.006	1		
scale	-0.017*	-0.041*	0.030*	0.028*	0.017*	0.281*	1	
diversif	-0.083*	-0.001	-0.067*	0.058*	-0.295*	0.097*	0.106*	1

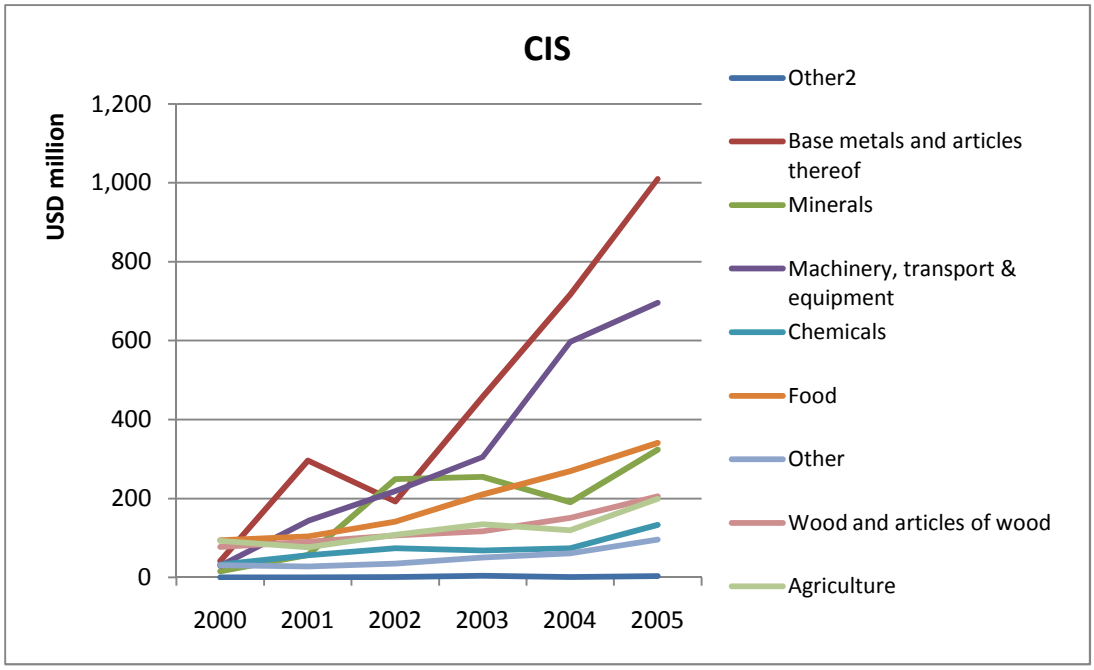
Source: Author's calculations using STATA 9.1

Annex 12. Geographic and commodity distribution of exports by Ukrainian firms in the Trade Reorientation dataset









Source: Data provided by the European Commission project on the Economic and Social Consequences of Industrial Restructuring in Russia and Ukraine