



TURUN KAUPPAKORKEAKOULU  
Turku School of Economics

*Janek Uiboupin*

Industrial clusters and regional development in  
Ukraine:  
The implications of foreign direct investments  
and trade

Electronic Publications of Pan-European Institute 9/2006

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*Janek Uiboupin*

**9/2006**

**Electronic Publications of  
Pan-European Institute**

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The author is grateful for the financial support of the Finnish Ministry of Education and the Foundation of Economic Education (Liikesivistysrahasto).

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## 1 Introduction

Ukraine is one of the largest transitions economies among the European Union (EU) eastern neighbors. Ukraine has direct borders with the EU countries after its enlargement in 2004. The Orange Revolution initiated by Viktor Yushchenko turned Ukraine's economy to the road of transition to modern market economy and to accession to EU. Ukraine is starting to get over the deep depression that began after the collapse of the Soviet Union. The interest of foreign investors in investing to Ukraine is increasing daily. Ukraine's strong position in some export markets (i.e. steel) has made Ukraine's economy increasingly attractive for foreign investors. Nevertheless, until 2004 the foreign direct investments to Ukraine remained one of the lowest among the Eastern European transition economies. Very poor legal framework and high corruption have been the main reasons for low foreign investments into Ukraine. The risks are high, but so are the returns.

The aim of the paper is to bring out main characteristics of sectoral and regional developments in Ukraine in the focus of foreign direct investments and foreign trade. The author tries to give a general overview of core industries and the role of foreign firms. The article also analyses the regional differences of economic development and its potential reasons. The export potential of different regions is analyzed and the role of special economic zones (SEZ) is brought out.

The remainder of the paper is structured as follows. In the second chapter an overview of Ukraine's general economic development in recent years is given. After that, the characteristics of most important industries in Ukraine are analyzed and the importance of foreign investments in different sectors is brought up. The chapter discusses the main tendencies in the chemical and pharmaceutical industry, metallurgy, machinery and metal engineering, light and food industry, the production of mineral products, and the development of the financial sector.

Next, in the third chapter the regional development of Ukraine is discussed. The difference between leading and lagging regions is emphasized and the growth potential

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of different regions of Ukraine is analyzed. The chapter gives also a shot overview about the special economic zones in Ukraine and their main benefits.

The dynamics of Ukraine's international trade relations is analyzed in chapter four. The main export and import partners of Ukraine are brought up and the regional differences of international trade are discussed.

In the chapter five, the main tendencies, problems and characteristics of FDI into Ukraine are provided. The chapter gives overview of most attractive sectors for foreign investors and analyzes the reasons for low FDI level in Ukraine. In chapter six, the Ukraine's current WTO accession is analyzed and the chapter 7 concludes and provides some policy implications for the Ukraine's economy in the light of cross-border cooperation.

## **2 Overview of the industrial development in Ukraine**

USAID review of Ukraine's competitiveness stresses several weaknesses of Ukrainian economy, all of them are related with poor public-private cooperation, whether in accession to WTO or in addressing deficiencies on market structure and market channels (Ukraine: competing in the global economy...2005).

Pivovarsky (2003) analyzed the effect of ownership concentration on firms' performance in Ukraine. The regression results showed that the ownership concentration is increasing enterprise performance. Ownership performance of foreign-owned firms was especially high, that fact revealed more clearly in the banking sector. Therefore the policy implication was that there should be more direct privatisations to foreign capital and higher ownership concentration is to be tolerated. The author of the current study suggests, that the main reason, why firms with higher ownership concentration perform better, is the high level of corruption and poor legal environment, under that is more difficult for firms with disperse ownership to operate effectively. Pivovarsky (2003) also stressed, that the main channel for high ownership to better performance is the agency costs and general agency problems.

**Table 1 GDP output by economic activities of Ukraine in 2004**

Type of economic activity	Output (mln UAH <sup>1</sup> )	% of Total
Manufacturing	325820	40,2
Other economic activities	109827	13,6
Agriculture, hunting and forestry	85668	10,6
Transport and communications	75233	9,3
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal goods	71490	8,8
Construction	37667	4,65
Electricity, gas and water supply	31961	3,9
Mining and quarrying	31766	3,9
Education	22086	2,7
Health and social work	18470	2,3
Financial intermediation services indirectly measured	Indirectly measured	x
Total	809988	100

Source: State Statistics Committee of Ukraine; author's calculations

Table 1 indicates, that the main source of the Ukraine's GDP production comes from manufacturing (40,2% in 2004) . Other important fields of economic activity are agriculture, transport retailing and construction. Manufacturing gives also the main share of industrial production volume, followed by metallurgy, electricity and machine building (see Table 2).

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<sup>1</sup> UAH – Ukrainian hryvna, Ukrainian national currency with exchange rate 1USD=5,05UAH (20.06.06)

**Table 2 Industrial production volume of Ukraine in January-December 2005**

	<b>Sold for the period since the beginning of the year</b>	
	<b>Mln. UAH</b>	<b>in % to the total</b>
Industry	385398,5	100
Mining	34997,3	9,1
Extraction of energy products	17815,0	4,6
Extraction of non-energy products	17182,3	4,5
Manufacturing	298686,9	77,5
of which:		
Food industry and processing of agricultural products	60492,5	15,7
Light industry	3898,3	1,0
Textile industry and sewing of clothes	2859,9	0,7
Production of leather and leather footwear	1038,4	0,3
Production of timber and timber products	2471,1	0,6
Cellulose and paper, printing industry; publishing	7596,3	2,0
Production of coke and refinery products	35835,1	9,3
Chemical and petrochemical industry	25964,4	6,7
Chemical production	20001,7	5,2
Production of rubber and plastics products	5962,7	1,5
Production of other non-metallic mineral products (construction materials and glassware)	11980,5	3,1
Metallurgy and metal processing	96955,5	25,2
Machine building	49333,3	12,8
Production of machines and equipment	16994,5	4,4
Production of electric and electronic equipment	8935,4	2,3
Production of transport equipment	23403,4	6,1
Production and distribution of electricity, gas and water	51714,3	13,4

Source: SSC of Ukraine 2006

Annual industry growth in 2004 and 2005 are given in table 3. The fastest growing industries over 2004-2005 period in Ukraine have been food industry, wood products, cellulose production, chemical production, metallurgy and machine building. There has been quite significant decline of production in coke and refinery industry and leather and footwear industry. It is important to note that the main exporting industries (mineral products, chemical products, machine building) have increased their production during last few years.

The production of metallurgy industry decreased slightly in 2005 (by 1,5%, see table 3). The economic growth and export volume in Ukraine depends highly on the performance of the metallurgy industry.



**Table 3 Annual industry growth in Ukraine (%)**

	2005	2004
Industry	3,1	12,5
Mining	4,4	4,1
Extraction of energy resources	3,1	1,9
Extraction of non-energy resources	5,7	7,6
Manufacturing	3	14,6
Food industry and processing of agricultural products	13,7	12,4
Light industry	0,3	13,6
textile and sewing of clothes	2,6	14
production of leather and leather footwear	-8,1	12,5
Output of wood and wood products	19,5	25,5
Cellulose and paper, printing and publishing	12,7	25,9
Production of coke and refinery products	-13,4	3,4
Chemical and petrochemical	9,8	14,4
chemical production	7,8	11
production of rubber and plastic products	17,6	28,8
Production of other non-metallic mineral products (construction materials and glassware)	14,3	19,3
Metallurgy and metal processing	-1,5	12
Machine building	7,1	28
production of machines and equipment	12,2	18,9
production of electric and electronic equipment	-9,2	49,3
production of transport equipment	12,4	24,6
Production and distribution of electricity, gas and water	2,9	-1,1

Source: State Statistics Committee of Ukraine; author's calculations

**2.1 Chemistry and pharmaceuticals industry**

The chemical industry of Ukraine includes several sub-sectors: chemical, petrochemical and chemical-pharmaceutics with over 1,600 enterprises and other organizations. Majority of the capital assets (about 90%) and about 80% employees in the industry are involved in chemical sector. Petrochemical and chemical-pharmaceutics sub-sectors account for the remaining production. The chemical industry accounts for about 10% of total industrial fixed assets and more than 5% of employees in Ukrainian industrial sector (Ukraine gateway).

An overview of biggest chemical enterprises and their economic performance in 2004 is given in table 4. Two biggest chemical companies were owned by domestic capital, but 5 out of 10 biggest firms were foreign owned at the end of 2004. The return on shareholder's capital has been more than 35% for two big domestic companies, for

others it is much lower. Chemical sector is attractive to foreign investors, but the sector is heavily regulated.

**Table 4 Biggest chemical enterprises in Ukraine and their economic performance in 2004**

Company name	Ownership (31.12.04)	Turnover th USD	Turnover growth (%)	Total assets th USD	Return on shareholders funds (%)
ODESSKIY PRIPORTOVYY ZAVOD OAO	Domestic	517832	25	267260	36,71
OBAEDNANNYA AZOT GP	Domestic	305326	29	230022	34,16
AZOT OAO	Foreign	259228	1	309034	6,40
DNEPROAZOT OAO	Foreign	246152	34	273164	14,64
LUKOR ZAO	Domestic	231628	44	215126	0,21
TITAN OAO	Domestic	183125	59	113212	4,76
RIVNEAZOT OAO	Foreign	163927	37	140951	6,53
SUMYHIMPROM OAO	Foreign	145411	47	110913	12,03
DNEPROSHINA OAO	Foreign	138546	9	77730	16,38

Source: Amadeus 2006, author's calculations

Manufacturing of various kinds of chemical products (niter, salts, alkali, etc.) was established already quite a long time ago. The sector began developing as an industry in the late 1800s. At that time plants manufacturing dyes, soda, superphosphate, etc were main outputs of the industry. At present time, the chemical industry can be considered as a developed multi-branch industrial sector. The chemical industry provides the basis for an extensive use of chemical technologies and contributes to scientific and technical progress, and increases the efficiency of many industrial sectors, agriculture and construction. (Ukraine gateway)

Ukraine's chemical industry was well-developed already in times of former Soviet Union. Ukraine was producing 16% of the total of mineral fertilizers, 24% plant-protection chemicals, 18% sulfuric acid, 25% soda ash, 16% caustic soda, and 13% chemical fiber in the former Soviet Union.

Predominant producers within the industry are asset- and energy-intensive basic chemistry enterprises. This sector is represented by production of mineral fertilizers, non-organic acids and soda. Nitric fertilizers are manufactured in Donbas

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(Severodonetsk, Horlivka) and Prydniprovia (Dniprodzerzhinsk). Rivne and Cherkasy enterprises use natural gas in their production. Phosphate fertilizers are manufactured in sugar-beet producing areas (Sumy, Vinnytsia) and in Odesa and Kostyantyniv (Donetsk oblast). Production of sulfuric acid is concentrated in the regions where it is consumed and in the centers of phosphate fertilizers production. Basic chemistry is concentrated in the Crimea and comprises production of bromine, magnesium and iodine. Enterprises of the organic synthesis industry manufacturing synthetic resins, plastic masses, chemical fiber, man-made caoutchouc and threads are located in Donetsk, Zaporizhzhya, Kyiv, Chernihiv, Cherkasy, etc. (Ukraine gateway)

The most important products within the variety of products in the petrochemical are car and motor-cycle tires (produced mainly in Dnipropetrovsk, Bila Tserkva), hoses, and consumer goods. The firms where petrochemical and rubber-asbestos are concentrated to regions of Donbas, Prydniprovia, Prysivashia and Prykarpattya. The major centers of the sector are Kyiv, Cherkasy, Chernihiv, Shostka, Sumy and Rubizhne.

The chemical industry experiences significant structural changes. State-owned enterprises are less than one-fifth of the total number of chemical industry enterprises manufacturing about one-third of the products. The remaining enterprises are in collective ownership, with open and close joint-stock companies being the predominant form (Ukraine gateway, 2006). The FDI flow to chemical industry is increasing. Six per cent of total FDI inflow to Ukraine went to petrochemical industry.

An important and fast growing part of the chemical industry is the pharmaceutical sector. Nevertheless, there are many obstacles for the development of the sector. One of the main problems is the regulation system. The pharmaceutical sector is limited by opaque regulations that converge very slowly to EU standards, healthcare system is only in the beginning of transition and intellectual property rights are underdeveloped. The leading companies are Arterium, Darnitsa, Farmak, Styrol, Brshchagovsky and Biostimulator. Most Ukrainian firms are based on Kyiv or Kharkiv. The market share of local producers has declined to about 20-23%, imported drugs are predominant on the market. The trade balance of pharmaceutical products in Ukraine is estimated to be \$1 bn negative in 2006 and this negative trend is even deepening. The leading exporters to Ukraine are

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Germany, France and India. The domestic sector needs major modernisations to compete with high-quality international production. (Business Monitor, 2006)

## **2.2 Metallurgy**

Metallurgy is the key industry of the Ukraine's economy. Metallurgy is the most important export article of Ukraine and the production of metal is important input factor for machine building and metal-working industries and metal is the main source of engineering materials. Around 40 per cent of Ukraine's export volume in 2004 and 2005 came from the export of base metals. Metallurgy and metal processing made over 25% of Ukraine's total industrial production in 2005 (see table 2).

Ukraine is self-sufficient in iron ore, coke, manganese, and other various supplementary materials. Kryvy Rih basin is the source of most iron ore (about 90%). Ukraine is also the largest area of iron ore extraction in the world. Iron ore is shipped both to Ukrainian plants and to the of Western and Eastern European countries. The high importance of metal production in Ukraine's economy makes it vulnerable to the fluctuations of metal prices in the world market.

The Ukraine's metallurgy sector includes 14 integrated steel making plants, 7 pipe plants, 10 plants producing metallic articles, 16 merchant-coke plants, 17 refractory production plants, 3 ferroalloy plants, 20 non-ferrous metallurgical works, 35 factories reprocessing ferrous and non-ferrous scrap metal, and other enterprises. (Ukraine gateway)

The key strength of Ukraine's steel sector is easy access to vast iron ore reserves. The country is estimated to harbor the worlds fourth largest reserves of medium-rich iron ore (defined as having an iron content of 25+65%), of 8.8 bln tons, which implies a mine life of 133 years (based on 2004 output of 66 mln tons) (Ukraine: Broadening horizons, 2005). The total iron ore deposits in Ukraine (categories A, B and C) amount to 27 billion tons. There are four iron-ore basins in Ukraine: Kryvy Rih, Kremenchuk, Bilozerske and Kerch basins. In addition, there are several non-metallic raw material deposits: fluxing

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limestone (Donbas, Transdnipro, Crimea), dolomites, and refractory clays There are two manganese ore basins, one in Nikopol and the other in Velyky Tokmak (Ukraine gateway, 2006).

Ukraine steel industry is very much depending on export demand. Domestic demand is only 25% of steel production. The volume of steel production that is estimated to be around 35 mln tones per year, remains still lower than before the collapse of the Soviet Union (Ukraine: Broadening horizons, 2005). Ukraine has one of the worlds lowest cost to produce steel, but at the same time it is technologically old-fashioned, and needs substantial amount of investments to improve the infrastructure.

The largest of metallurgy enterprises are Metallurgicheskyy Kombinat Im Ilyicha, Doneckystal, Zaporizhstal, Kryvorizhstal (Mittal Steel) and Azovstal. The main metallurgical regions in Ukraine are: Transdnipro, Donetsk, and Transazov. Ukraine's metallurgy industry becomes more and more foreign-owned. Three out of five biggest metallurgy enterprises were more than 50% foreign-owned in at the end of 2004 and foreign dominance in continuously increasing.

Table 5 gives an overview of 10 top metallurgy enterprises in Ukraine and some indicators of their economic performance in 2004. The largest manufacturer of steel and ferrous base metals is the state owned Metallurgicheskyy Kombinat, followed by three large foreign owned companies. The average turnover growth for top metallurgy firms in 2004 has been more than 50% compared with 2003 and the return on shareholders funds is more than 40%. Those figures make the metallurgy sector very attractive for foreign investors.

**Table 5 Top 10 metallurgy enterprises in Ukraine and their economic performance in 2004**

<b>Company name</b>	<b>Ownership (31.12.2004)</b>	<b>Turnover th USD</b>	<b>Turnover growth (%)</b>	<b>Total assets th USD</b>	<b>Return on shareholders funds (%)</b>
METALLURGICHESKIY KOMBINAT IM ILYICHA OAO	Domestic	4299834	67	1390068	45,31
ZAPOROZHSTALY OAO	Foreign	2159232	59	845460	31,57
DONECYKSTALY ZAO	Foreign	2038758	195	471389	121,18
MITTAL STIL KRIVYY RIG OAO	Foreign	1922058	35	1229663	45,72
AZOVSTALY MK OAO	Domestic	1873946	71	1452518	29,10
ENAKIEVSKIY METALLURGICHESKIY ZAVOD OAO	Domestic	1039731	113	236221	-18,04
DNEPROVSKIY METKOMBINAT IMF DZERZHINSKOGO OAO	Domestic	902831	43	578896	15,22
ALCHEVSKIY METALLURGICHESKIY KOMBINAT OAO	Domestic	895004	77	243822	30,38
METALEN OOO	Domestic	837847	169	420477	38,26
BAYP KO	Foreign	680848	222	155798	-15,62

Source: Amadeus 2006, author's calculations

One of the most promising non-ferrous metallurgy industries is the aluminum production. The availability of resources and the increasing demand on the world's market encourage creation of a large aluminum industry in Ukraine. Two largest aluminum and titanium-magnesium plants are situated in Zaporizhia. The aluminum plant gets its raw materials from Mykolayiv alumina plant, and the titanium-magnesium plant – from Irzhansk.

Metallurgy has become one of the most attractive industries for foreign investors. In 2004 around 5% from total stock of FDI to Ukraine was invested to metallurgy industry, but at the end of 2005 the share of investments to metallurgy was already 33%.

### **2.3 Machinery and metal engineering**

Machine-building is the largest Ukrainian industrial sector. It accounts for over one-third of the employed and about a quarter of the total cost of industrial main assets.

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The largest machine-building sub-sectors in terms of their employment in Ukraine are instrument-making, tractor and agricultural machinery building, electric engineering, automobile building, chemical and petrochemical engineering, and machine-tool construction.

Table 6 provides information about 10 biggest machinery firms in Ukraine as of 31.12.2004. The firms are sorted by turnover. Turnover growth of the machinery firms has been remarkable. The growth of turnover exceeded 40% for many biggest machinery firms in 2004. It must be noted, that the general economic growth in Ukraine was especially high in 2004, and in 2005 and 2006 the growth has been much slower. The return on shareholder's funds has been quite diverse in range of 2% to 45%. Around half of biggest machinery firms in Ukraine are foreign owned.

The largest engineering centers are Novokramatorsk Machine-Building Plant, Kramatorsk Plant "Energomashspetsstal", Mariupol Heavy Engineering Plant, Kharkiv Turbine Plant, etc. The major electric engineering facilities are concentrated in Kharkiv, Zaporizhzhya, Kyiv, Donetsk, and Dnipropetrovsk.

**Table 6 Biggest machinery enterprises in Ukraine and their economic performance in 2004**

Company name	Ownership (31.12.2004)	Turnover th USD	Turnover growth (%)	Assets th USD	RSF (%)
ZAPORIZYKYY AVTOMOBILEBUDIVNYY ZAVOD ZAO	Domestic	936529	97	406090	44,17
SUMSYKE MASHINOBUDIVNE NVO IM FRUNZE OAO	Foreign	482082	32	344333	10,88
MARIUPOLYSYKIY ZAVOD VAZHKOGO MASHINOBUDUVANNYA OAO	Domestic	436588	0	206893	1,98
AZOVZAGALYMASH OAO KRYUKIVSYKYY VAGONOBUDIVNYY ZAVOD OAO	Domestic	421506	1	86987	8,18
MOTOR SICH OAO NOVOKRAMATORSKIY MASHINOBUDIVNYY ZAVOD ZAO	Foreign	355973	45	104703	43,19
DRUZHKIVSKIY MASHINOBUDIVELYNYY ZAVOD OAO	Foreign	330342	-2	362707	5,56
NORD OAO LUCYKYY AVTOMOBILYNYY ZAVOD OAO	Domestic	268689	47	286832	14,99
	Domestic	217838	61	133033	10,79
	Foreign	180359	30	66778	7,60
	Foreign	162388	161	99378	15,65

Source: Amadeus 2006, author's calculations

Transport machine building, including railway transport, automobile, aircraft and ship building, is gaining momentum as a priority development sector in Ukraine. This concerns development of new generations of aircraft (AN-70 and AN-140), rocket and space industry ("Sea Start"), new types of vessels, etc. Its main centers include Zaporizhzhya, Kyiv, Kharkiv, Lviv, Dnipropetrovsk, Mykolaiv, Kherson, and Odesa. Advanced are agricultural machine-building, machine-tool and instrument making, automation and computer equipment fabrication.(Ukraine gateway).

## **2.4 Light and food industry**

Light and food industry embrace over 3,300 enterprises of different forms of ownership and subordination. Light and food industry is well developed in Ukraine and almost completely satisfied the needs of population in consumer goods. The production of main



types of light industry goods per capita was at the level of the leading countries of the world.

Table 7 gives an overview of biggest light and food industry enterprises in Ukraine. Table 7 indicates that the light and food industry is foreign dominated. Four biggest firms in the sector are foreign owned and there are three more foreign owned firms in top 10 of the sector by turnover. The return on capital is on average more than 25%, explaining high interest of foreign investors in the light and food industry. The turnover growth has been very diverse ranging from decline of 70% to increase of 90%.

**Table 7 Biggest light and food industry enterprises in Ukraine and their economic performance in 2004**

Company name	Ownership (31.12.2004)	Turnover th USD	Turnover growth (%)	Assets th USD	RSF (%)
FIRMA SOYUZ VIKTAN LTD OOO	Foreign	251487	31	85103	-6,14
LIK LIKERO GORILCHANIY ZAVOD OOO	Foreign	236668	9	121743	
OBOLONY ZAO	Foreign	224644	22	197765	19,21
NEMIROFF UKRAINSYKA GORILCHANA KOMPANIA	Foreign	201508	90	122731	30,86
OLIYNOEKSTRAKCIYNY ZAVOD ZAO	Domestic	193780	17	113207	14,96
KONDITERSKAYA KORPORACIA ROSHEN	Domestic	188971	-46	198046	126,02
KRAFT FUDZ UKRAINA ZAO	Domestic	167060	24	66040	41,81
KONTINIUM LYON KONTRAKT PKF OOO	Foreign	159213	-70	546	
DA LV OOO	Foreign	138346	-18	85012	22,13
AVK ZAO	Foreign	137510	41	77744	17,21

Source: Amadeus 2006, author's calculations

Light industry includes textile, knitting, clothing, leather, footwear, and other sub-industries. The key sector of the industry is textile production including cotton, wool and linen sub-units. Cotton industry uses imported raw materials. The largest operations are located in Kherson, Donetsk, Ternopil, Kyiv, Kharkiv, Lviv, Poltava, Chervivtsi, etc. The highest concentration of large wool operations using both domestic and imported raw materials is in Chervivtsi, Donetsk, Kryvyi Rih, Odesa, Luhansk and Sumy. (Ukraine gateway, 2006)

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Currently the sector is going through substantial structural transformation: small enterprise has grown considerably, and most companies have changed their ownership pattern.

USAID has prepared a report about the development of several clusters in Ukraine. According to the report, the main problems in light industry (leather and footwear cluster, home furnishing cluster, textiles and apparel cluster) are: poor quality of fabrics and trim; lack of cooperation or collaboration between firms; poor access to export markets; inadequate sales and marketing skills; inadequate access to capital; problems with VAT reimbursements with input (Ukraine: competing in the global economy...2005).

Food industry is traditionally the major supplier of basic foods, such as sugar, salt, oil, alcohol, confectionery, etc. Food industry is the leader of the agro-industrial complex. It is complained that although fast-developing and having a lot of potential, the food industry works far below of its capacity, indicating in-efficiency.

Food industry economic potential largely depends on the development of agriculture, which is the main element of the agro-industrial sector and the supplier of raw materials to all the sub-sectors of the food industry. Meat processing facilities are concentrated in Kharkiv, Poltava, Odesa, Kyiv, Vinnytsia, and Dnipropetrovsk. The largest dairy processors are based in Kyiv, Dnipropetrovsk, Kharkiv, Odesa, and Lviv. The sugar industry, which is another key element of the food industry, comprises more than 190 sugar refineries located in sugar beet growing areas (Vinnytsia, Cherkasy, Khmelnytsky, Kyiv and Ternopil Oblasts). Flour and cereals industry offers its products to the market (Ukraine gateway, 2006).

The most significant centers of the food processing sector are Kyiv, Kharkiv, Odesa, Mykolaiv, Zaporizhzhya, and Lviv. Canning industry based on fruit and vegetable supplies is strong in Odesa, Simferopol, Kherson, Izmail, Cherkasy, Nizhyn, etc. Vegetable oil extraction facilities primarily process sunflowers. The largest centers are Dnipropetrovsk, Mariupol, Zaporizhzhya, Poltava, Kirovohrad and Vinnytsia. Prospects for the food industry development include extension of domestic raw material supplies,

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introduction of state-of-the-art technologies, and advanced marketing and management methods (Ukraine gateway).

## **2.5 *Production of mineral products***

Ukraine is very rich of mineral resources. There are more than 7700 deposits of different minerals (90 different minerals). Ukraine has top position of the availability of iron, manganese, titanium, uranium and zirconium ores, kaolins and some other minerals. Ukraine extracts and consumes up to 5% of the world mineral products. Almost half of the deposits are currently being mined.

Ukraine is especially rich in coal, which is mainly mined in Donetsk and Lviv-Volyn. There is an important deposit of brown coal in Dnipro basin. Donetsk basin is of the highest importance.

Ore mining is another important element of the extractive industry. Iron and manganese ore mining is the basis for ferrous metallurgy development. The metallurgy sector was discussed under the chapter 2.2 of the current report.

Other important non-metallic minerals mined include rock salt (Donbas, Zakarpattya), flux limestone (Donbas, Crimea), magnesite (Zaporizhzhya and Dnipropetrovsk Oblasts), refractory clays (Chasiv Yar), quartzite (Zhytomyr Oblast), barium sulfate, graphite, etc. Glass-melting sand and construction materials account for a large part of the extraction volume, with the Zhytomyr Oblast granites and labradorites being of the world significance.

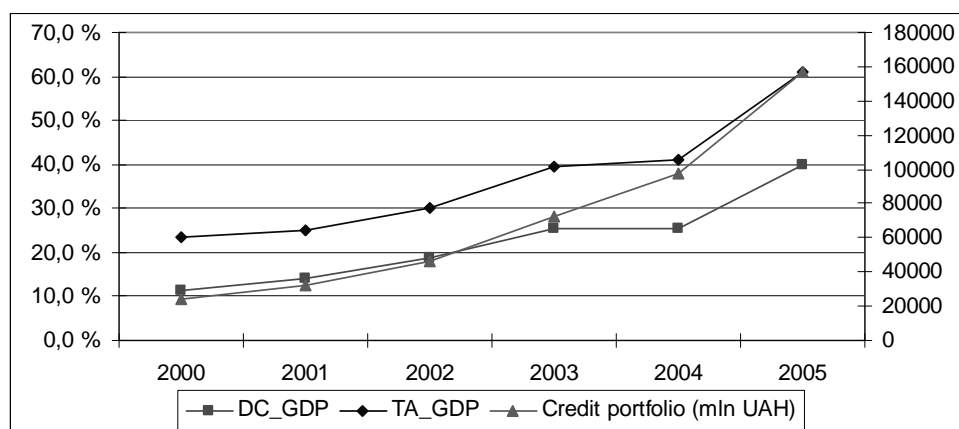
## **2.6 *Financial sector development in Ukraine***

Similarly to many other CEE transition countries there has been a rapid development of Ukrainian banking sector during last 10 years, but there has been also a severe banking crisis at the end of 90s. The national banking system in Ukraine started in 1991, after the adoption of the Law of Ukraine "On Banks and Banking". The Ukrainian banking system

is a two-tier structure consisting of the National Bank of Ukraine and commercial banks of various types and forms of ownership. By 1997, 32 of 195 banks were being liquidated, while 25 others were undergoing financial rehabilitation. Bad loans accounted for 50–65 percent of assets even in some leading banks. In 1998 banks were further hit by the government's decision to restructure government debt. The Ukrainian banking system has well recovered since 2000. Huang *et al* (2004) suggest that the banking crisis in Ukraine and Russia in 1998 had some positive effects to the development of the sector. Banks started to lend to real sector and interest rates declined sharply.

The credit portfolio of banks has increased up to 50% on yearly basis and domestic credit to GDP ratio (see DC\_GDP on figure 1) has increased to 40% at the end of 2005. Total banking sector assets to GDP ratio (see TA\_GDP on figure 1) was 60% at the end of 2005. Ukrainian banking sector has still strong growth potential as in more developed transition banking markets (i.e. Hungary and Estonia) DC\_GDP has already exceeded 100% level.

**Figure 1 Domestic bank credit in Ukraine 2000-2005**

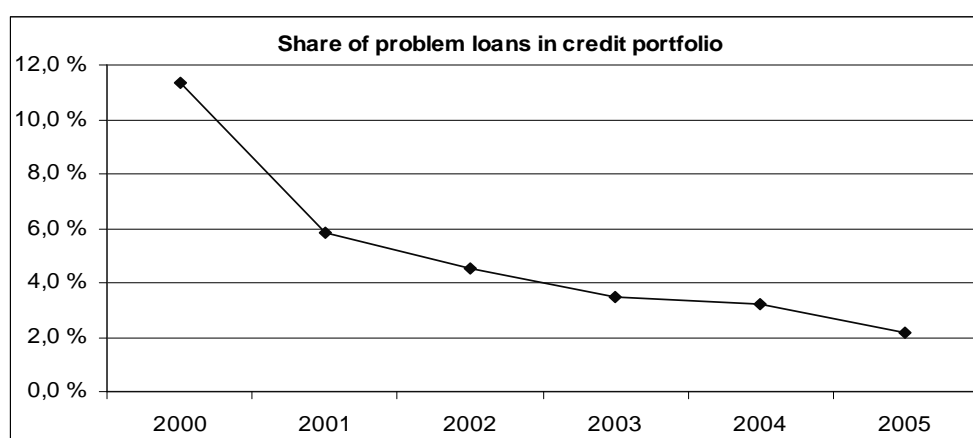


Source: National Bank of Ukraine; author's calculations.

Duenwald *et al* (2005) stressed that the credit boom in Ukraine has been different from those of in Bulgaria and Romania, as it has not generated macroeconomic instability, but rather increased the vulnerability of banks.

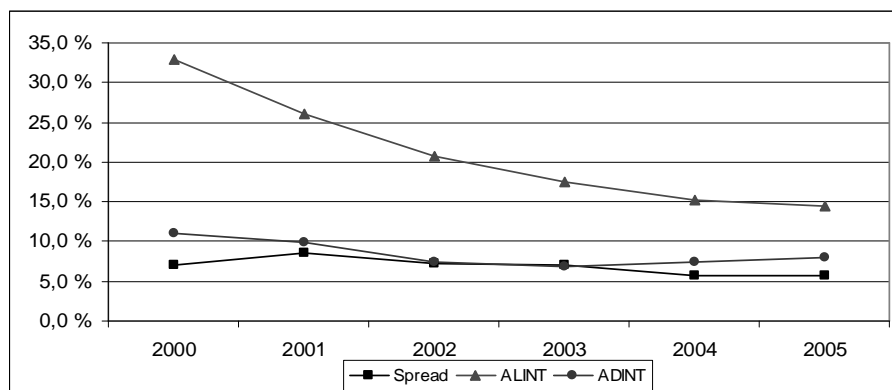
Figure 2 shows the dynamics of credit portfolio quality of banking sector in Ukraine. The assets quality of Ukrainian banks has significantly increased during last five years. The share of problem loans in total credit portfolio has lowered to 2% in 2005. This indicates that Ukrainian banks have sound credit policy. Nevertheless, it must be noted that Ukrainian economy has growth rapidly during last years and probably not all of the credit risk has realized yet.

**Figure 2 Problem loans in credit portfolio of banks in Ukraine 2000-2005**



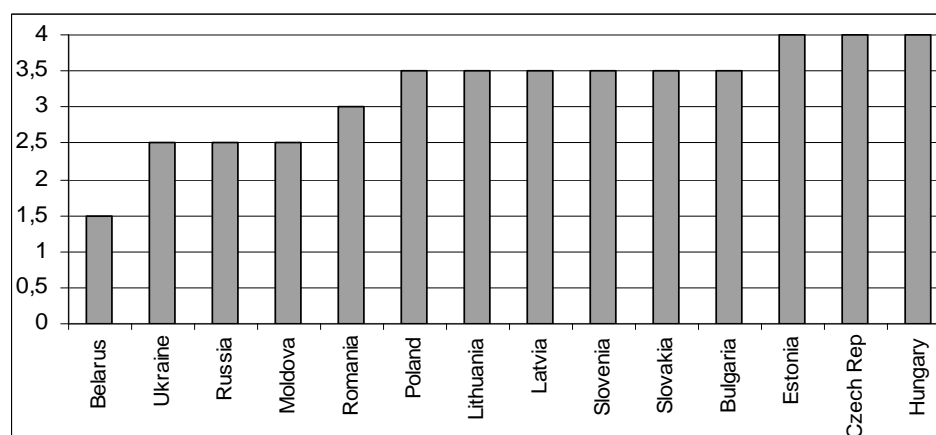
Source: National Bank of Ukraine; author's calculations.

Figure 3 shows the trends of average credit interest rate (ALINT), average deposit interest rate (ADINT) and total spread (Spread) in Ukrainian banks. Loan interest rates have significantly decreased during last five years, although the interest rates remain relatively high compared with developed countries. Total banking spread has been quite stable at around 5-6%, while the difference between average loan and deposit interest rate has clearly declined, that is a sign of increasing competition.

**Figure 3 Total bank spread and average interest rates on credit and deposits of banks in Ukraine**

Source: National Bank of Ukraine; author's figure.

Figure 4 presents EBRD's (European Bank for Reconstruction and Development) estimates of banking sector reforms in selected transition countries. Three main groups of countries can be distinguished. Ukrainian banking sector is about the same development stage with its neighbors Russia and Moldova with 2.5 points from maximum five. Most developed banking sectors among transition countries are in Estonia, Czech Republic and Hungary with 4 points. The author finds that Ukrainian banking sector has still a good starting position to converge with more developed CEE countries as the banking sector is sound and rapidly developing.

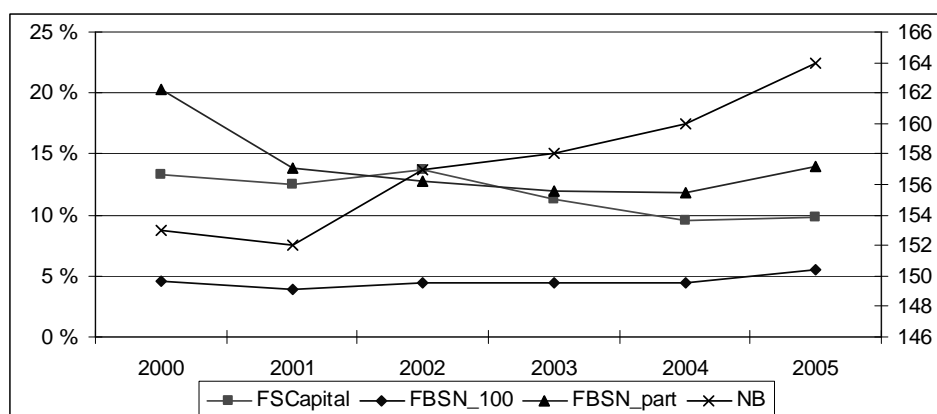
**Figure 4 Banking sector development in CEE countries in 2005**

Source: EBRD 2006; author's figure.

## Foreign banks' penetration in Ukraine

Foreign banks' share in Ukrainian banking market remains relatively low. From total share capital of banks in Ukraine, only 10% belong to foreign residents in 2005 (see FSCapital on Figure 5). The number of foreign banks has increased from 7 in 2000 to 9 in 2005, but this makes only 5% of total bank number in Ukraine (see FBSN\_100 on Figure 5). Bank with at least partial foreign ownership<sup>2</sup> encountered 14% form total number of banks in 2005.

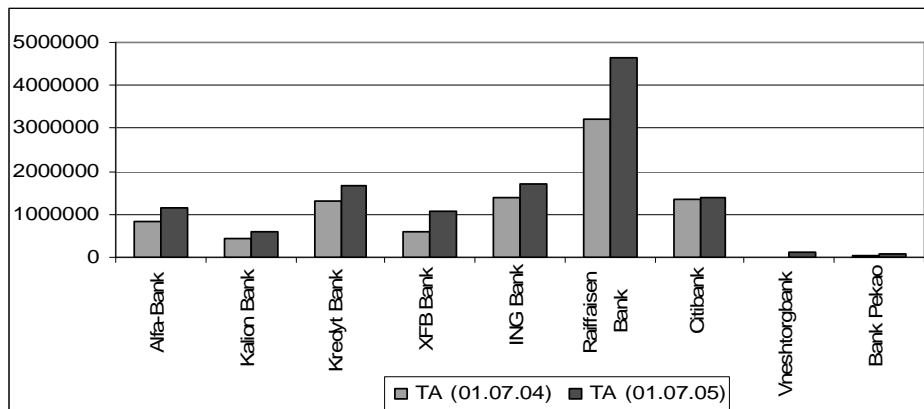
**Figure 5 Share of foreign banks in total number of banks in Ukraine**



Source: National Bank of Ukraine; author's calculations.

At the end of 2005 there were nine foreign banks operating in Ukraine: Alfabank and Vneshtorgbank with Russian origin; Kalion and Bank Pekao with Polish origin; XFB Bank (HVB) from Germany; Raiffaisen Bank from Austria; ING Bank from Netherlands and Citibank from USA. Figure 6 shows the amount of total assets of foreign banks in Ukraine. Figure 6 indicates that Raiffaisen bank is currently the biggest foreign bank in Ukraine which also had largest assets' growth from July 2004 to July 2005. There has been an increase of assets in all foreign banks, but the growth has been quite moderate indicating that there are some obstacles for foreign banks activities in Ukraine.

<sup>2</sup> According to Commercial Code and the Regime of Foreign Investment Act of 19 March 1996, significant foreign ownership is considered from minimum 10% of bank's charter capital.

**Figure 6 Size of foreign banks' total assets (TA) in Ukraine (mln UAH)**

Source: National Bank of Ukraine; author's figure.

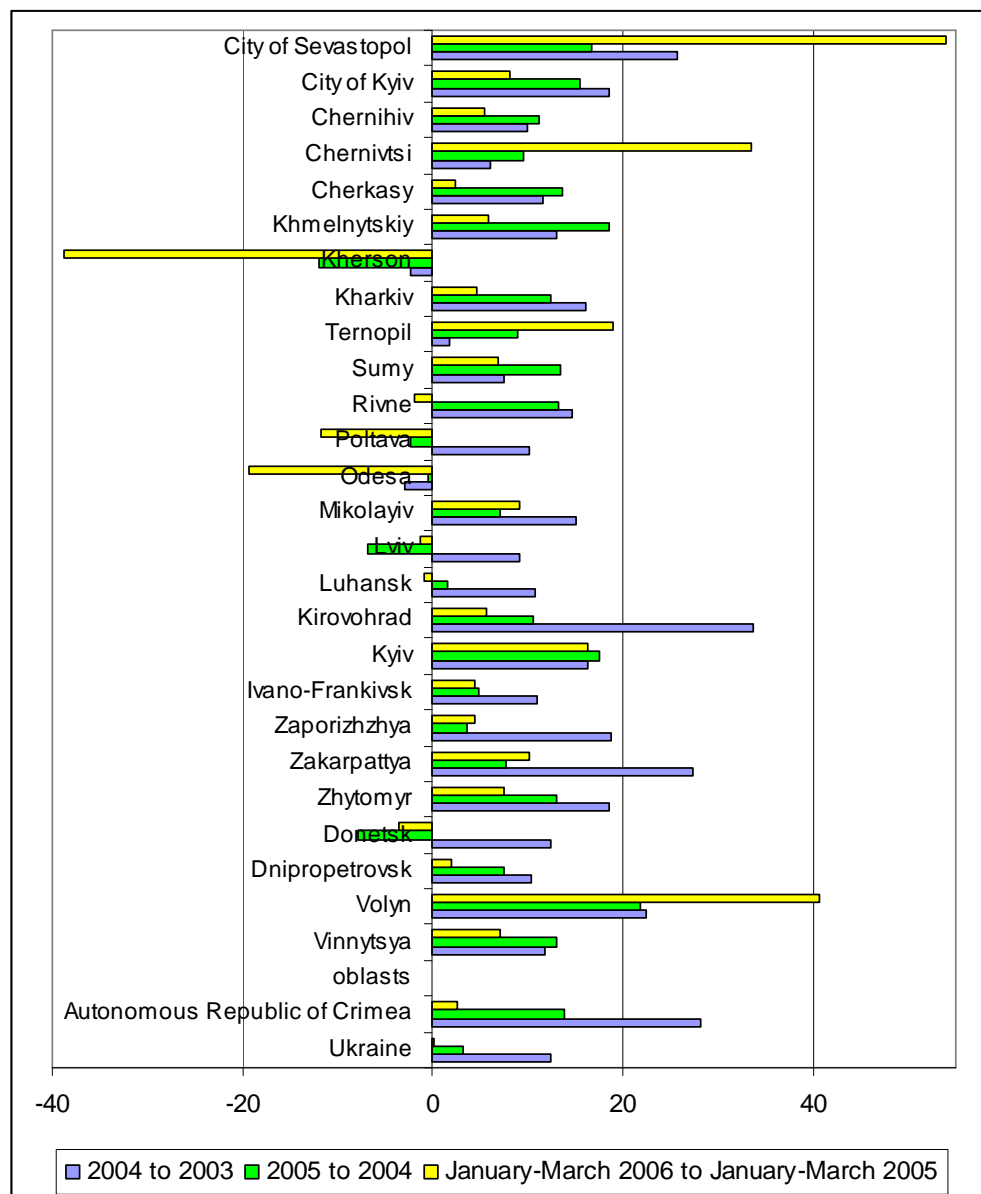
The author finds the removal of entry barriers for foreign banks in Ukraine to have several positive implications and good timing. The forthcoming entry of foreign banks will improve the capitalization of banks and increases the overall stability of the financial sector. Based on the experience new member states of EU it can be hypothesized that there will also be clear improvement in financial services' quality and access to financial services. The author suggests that the presence of multinational banks in Ukraine would improve the competitiveness of Ukrainian banking market, nevertheless, it is likely that the market concentration will increase because of several mergers and acquisitions in the banking sector in the near future. The author believes that the possible increase in the market concentration will not remarkably reduce the competitiveness of the banking sector.



### **3 Regional development in Ukraine**

#### **3.1 *The indicators of regional economic development***

Figure 7 gives information about the growth rates of industrial production in Ukraine's regions. Volyn shows high growth numbers and the author suggests that the proximity of EU border contributes to the fast development of Volyn's region. Other fast growing regions include City of Sevastopol, Kirovohrad, Zakarpattya and Crimea. Zakarpattya gains from the cross-border cooperation with the Czech Republic and Hungary. There are special economic zones (SEZ) formed in both Zakarpattya and Crimea. The special economic zone attracts foreign investments and enhances cross-border cooperation that contributes to economic development. Kirovohrad is another fast-growing region in Ukraine. The region of Kirovohrad had also the highest export growth in 2004 (200%) among all regions of Ukraine. Volyn, Chernivsti and City of Sevastopol had very significant growth of production in the first quarter of 2006 – 35-55%. There has been a decline of industrial production in Kherson and Odesa during last two years. The growth in Kyiv region has been moderate, but very stable, with around 15% during last 2 and half years.

**Figure 7 Growth of industrial production in Ukraine's regions\***

\* in %, (-) indicates decline

Source: State Statistics Committee of Ukraine; author's figure.

The location of rayons at the border with the neighboring states influences the level of social and economic development of these territories. The character of such an influence depends on the level of economic development of the neighboring country. After all the people living in the EU frontier territories, e.g. Zakarpattia, have more possibilities to

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generate additional income thanks to the local foreign economic activities, than their fellow countrymen from Chernihiv or Sumy oblast, which neighboring with Russia and Belarus. As the results of the rating analysis show, the majority of rayons, which border on the present or prospective member countries of the European Union, have higher than the average for 494 territories of Ukraine rating point. On the other hand, for the bulk of rayons, which are located at the border with the former Soviet republics (Russia, Belarus, Moldova), the registered level of the social and economic development is lower. (Institute for reforms, 2005)

Table 8 gives the information about the average wages in Ukraine by regions. The table 8 indicates that there are big regional differences of wages. Not surprisingly, the highest average wage is in the City of Kyiv. In January 2006 the average wage in Kyiv was 1400 UAH, while it was only 588 UAH in Ternopil, where the average wage was only 68% of total Ukraine's average. Ternopil has been one of the poorest regions in Ukraine despite the fact that it situates in the Western Ukraine. Nevertheless, Ternopil does not have direct border with EU member states and the cross-border effects to economic development are slower than in border regions. Nevertheless the wage difference between Ternopil and Ukraine's average had decreased over 4% during one year that is a positive sign of development.

The other regions with higher wages include Donetsk, Dnipropetrovsk, Zaporizhzhya, and Luhansk with above than average wage level. Again, it can be included that the wages are higher in regions of industrial production. Other regions of low salaries are Vinnytsya, Volyn and Zhytomyr and Chernihiv, where the average wages make around 70% of Ukraine's average level. These poorest regions are all border regions. Vinnytsya is on the border of Romania, Volyn has a border with Poland and Belarus, Zhytomyr and Chernihiv have the border with Belarus. The regions of lower wages are mainly agricultural. Among the less developed regions has Volyn one of the best geographical positions as it has direct border with EU through Poland. Chernihiv may gain from the trade relations with Belarus and Russia and also from its close geographical position with Kyiv.

**Table 8 Average wages by regions of Ukraine 2005-2006**

	January 2005 (UAH)	% of Ukraine's average	January 2006 (UAH)	% of Ukraine's average
Ukraine average	640,9	100,0	864,9	100,0
Autonomous Republic of Crimea	576,0	89,9	767,9	88,8
oblasts				
Vinnitsya	456,4	71,2	626,2	72,4
Volyn	450,1	70,2	632,2	73,1
Dnipropetrovsk	771,1	120,3	990,1	114,5
Donetsk	784,7	122,4	1040,5	120,3
Zhytomyr	460,8	71,9	631,5	73,0
Zakarpattia	502,2	78,4	704,7	81,5
Zaporizhzhya	721,5	112,6	935,8	108,2
Ivano- Frankivsk	555,5	86,7	757,5	87,6
Kyiv	651,7	101,7	860,3	99,5
Kirovohrad	488,3	76,2	660,9	76,4
Luhansk	642,9	100,3	876,0	101,3
Lviv	548,4	85,6	749,3	86,6
Mykolayiv	612,5	95,6	846,1	97,8
Odesa	640,0	99,9	805,7	93,2
Poltava	606,9	94,7	792,2	91,6
Rivne	561,1	87,5	751,7	86,9
Sumy	507,4	79,2	713,9	82,5
Ternopil	414,9	64,7	587,9	68,0
Kharkiv	596,1	93,0	804,0	93,0
Kherson	476,4	74,3	644,3	74,5
Khmelnyskiy	454,2	70,9	640,4	74,0
Cherkasy	486,3	75,9	682,7	78,9
Chernivtsi	476,8	74,4	660,0	76,3
Chernihiv	454,7	70,9	636,4	73,6
City of Kyiv	1024,8	159,9	1399,4	161,8
City of Sevastopol	630,9	98,4	834,2	96,4

Source: State Statistics Committee of Ukraine; author's calculations.

Recent two years saw a triumph of the resort territories of the South coast of the Crimea in the Ukrainian rayons rating. The somewhat forgotten status of the tourist Mecca of the

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former Soviet Union seems to have been restored in the last several years. One of the potential clusters in Ukraine is the tourism cluster in Crimea. The cluster does not yet exist formally, but there are some important steps made on that direction. Crimea Association of Travel Agencies (CATA) is formed to initiate better cooperation between tourism firms in that area. There still remain several problems: a big part of the tourism objects are in the hand of state, that is not a good manager; there is a lack of transparency among both public and private players; many tourists stay in Crimea unregistered in unofficial private accommodation places (Ukraine: competing in the global economy...2005). Nevertheless, an Autonomous Republic of Crimea has a good growth potential as a tourism cluster.

Statistics have recorded the constant growth of the number of tourists. According to the data provided by the Council of Ministers of the Autonomous Republic of the Crimea, in 2004 this indicator reached 6.3 mln people, which is 20 per cent more than the indicator for the previous year. (Institute for reforms, 2005)

### **3.2 Special economic zones in Ukraine**

There is an ongoing research about the effects of special economic zones in transition economies. Ahrens and Meyer-Baudeck (1995) has pointed out, that SEZs are aimed to promote FDI, to enhance and diversify the production of export goods and to import modern technologies. There are several SEZs formed in Ukraine.

**Special Economic Zone "Yavoriv"** is located in the Lviv oblast (Western Ukraine) and will exist until 1 January 2020. The following main benefits are available to investors who are prepared to undertake a project with a value over US\$ 500,000 in the territory of SEZ:

- Exemption for 5 years, commencing from the first profitable period, from corporate profits tax. Profits from the sixth year of operations are taxed at 1/2 of the standard rate;
- Exemption from innovation fund charge and unemployment insurance charge;

- 
- Exemption from import VAT for non-excisable goods imported for an investment project.

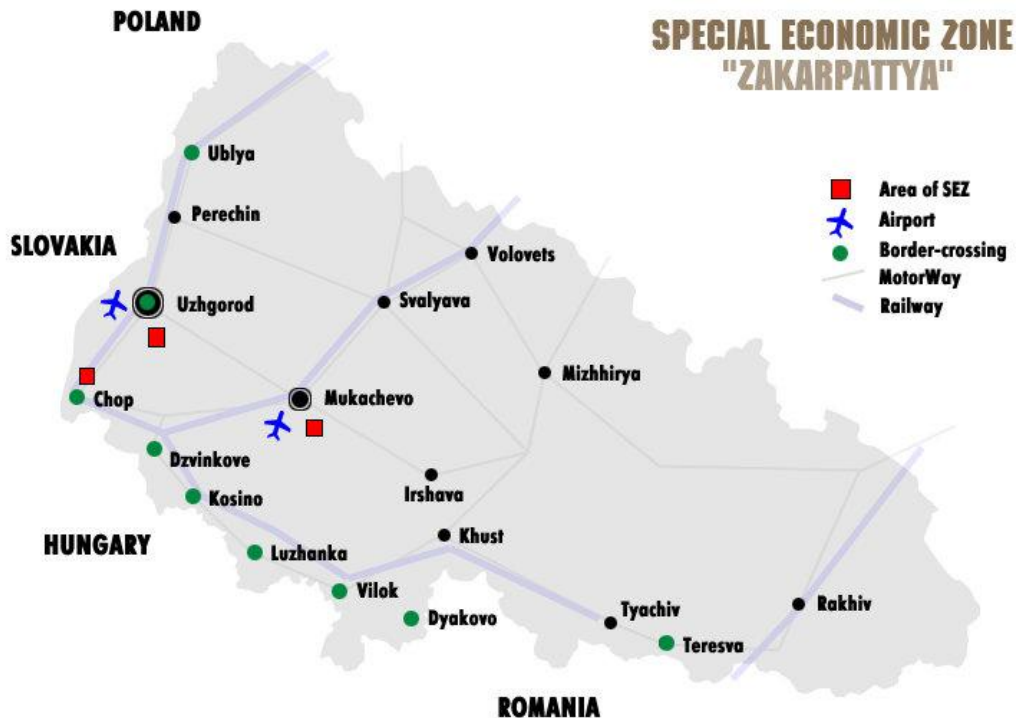
**The special economic zone “Zakarpattya”** is created on territory of the Zakarpattya region for the term of 30 years by the general area of 737,9 hectares in the performance of the Decree of the President of Ukraine "About a special economic zone "Zakarpattya" from December 9, 1998 <sup>1</sup>1339/98, which in March 22, 2001 by the Supreme Council of Ukraine was accepted as the Law of Ukraine".  
(<http://www.ogrsez.uzhgorod.ua/www/english/default.html>)

On territory of SEZ “Zakarpattya” all kinds of enterprise activity, except for directly prohibited by the legislation of Ukraine, can be carried out.

The state guarantees in complete volume all property and non-property rights of the investors.

The law of Ukraine "About a special economic zone "Zakarpattya" does not establish the minimal size of the investments. *January 1999*)

The areas of SEZ "Zakarpattya" are placed in Uzhhorodskij and Mukachivskij districts, towns Uzhhorod and Mukachevo (see Figure 8). The basic territory of SEZ "Zakarpattya" (525 ha), which is in Uzhhorodskij district, adjoins to border of Ukraine with Hungary and Slovakia. The map of the SEZ “Zakarpattya” on figure 8 shows a very favorable geographic position of the zone. It has direct borders Slovakia and Hungary and close connections also with Poland and Romania. There are two airports and good railway connections. The SEZ in Zakarpattya has made this region one of the fastest growing regions in Ukraine.

**Figure 8 The map of the special economic zone “Zakarpattya”**

Source: Special Economic Zone “Zakarpattya”, webpage.

### **Special Regime of Investment Activities in the territory of the city of Kharkiv**

- The Special Regime of Investment Activity shall be implemented for thirty (30) years in the territory of the city of Kharkiv within the administrative and territorial limits thereof for the purpose of the realization of Investment Projects concerning such priority economic activities as the Ukraine’s Cabinet of Ministers may, by order, determine.
- The Special Regime of Investment Activity shall be applied to such business entities, which have been registered in the territory of the city of Kharkiv and shall, under an agreement (contract) entered into by and between these business entities and the Council on Special Regime of Investment Activity, are involved in the realization, in the territory of Kharkiv Oblast, of Investment Projects concerning the priority economic activities as the Ukraine’s Cabinet of Ministers may, by order, determine with estimated costs thereof being not less than the equivalent of:

- 
- US\$3,000,000 – in the field of metallurgy and metal-working, production of machines and mechanisms, electric, electronic, and transport equipment;
  - US\$1,000,000 – in the field of electric power and gas production, production of coke, other non-metal mineral products, transport, communication, metal waste processing, and refuse and garbage processing;
  - US\$700,000 – in the field of civil engineering, sewage disposal, cleaning of streets, and waste treatment; in chemical industry, manufacture of furniture, pulp & paper industry, printing industry;
  - US\$500,000 – in food industry and processing farm products, textile industry, clothing industry, production of leather and leather footwear, in the spheres of education, health, social welfare, R&D in the field of sciences and technology.

### **Special Economic Zones and Special Regime of Investment Activity in Donetsk Region**

Special mode of investment activity operates in the territory of 26 towns and 7 agricultural districts. There were created 2 special economic zones "Donetsk" and "Azov" within the region. These towns and agricultural districts share 40 % of the territory of the region where 84% of the population lives and 85% of industrial potential is concentrated.



#### 4 Trade relations of Ukraine

The regional distribution of Ukraine's export and import is given in table 9. Table 9 indicates that the share of EU(25) in total export of Ukraine has increased over time. The EU enlargement in 2004 has had clearly positive role on Ukraine's export and the significance of the EU(25) has increased to 30% in total volume of export. The share of the CIS countries has remained rather stable, around 26% in last years. One quarter of total export goes to Asian countries, although no single Asian country has a clear dominating position in Ukraine's export.

**Table 9 Regional distribution of export and import of Ukraine (%)**

	<b>Total (mln USD)</b>	<b>CIS countries</b>	<b>EU(25) countries*</b>	<b>Asia</b>	<b>America</b>	<b>Other</b>
<b>Export</b>						
1996	14400,8	51	11	19	4	15
1997	14231,9	39	12	27	5	17
1998	12637,4	33	17	24	7	19
1999	11581,6	28	18	27	6	20
2000	14572,5	31	16	24	8	21
2001	16264,7	29	18	24	6	22
2002	17957,1	24	20	28	5	23
2003	23066,8	26	20	23	5	25
2004	32666,1	26	30	25	8	11
<b>Import</b>						
1996	17603,4	63	16	4	5	12
1997	17128	58	20	5	5	13
1998	14675,6	54	22	6	5	13
1999	11846,1	57	20	6	5	11
2000	13956	58	21	6	4	12
2001	15775,1	56	22	6	5	11
2002	16976,8	53	3	7	5	32
2003	23020,1	50	25	9	5	12
2004	28996,8	52	32	9	3	3

\*- EU 25 countries are summed up since 1996 for better comparisons.

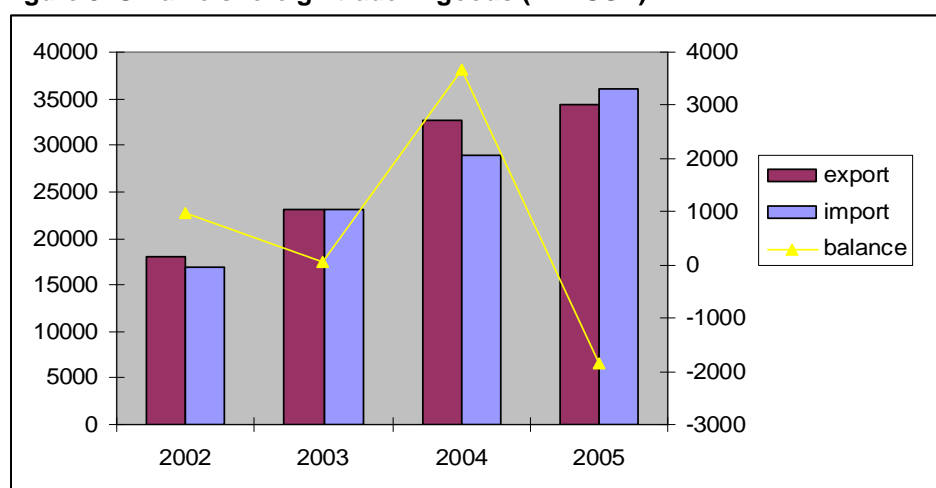
Source: State Statistics Committee of Ukraine; author's calculations

The import of Ukraine is dominated by CIS countries, more than half of total import. The share of EU(25) had increased to 32% in 2004, a jump from 25% with EU enlargement. The analysis shows that the cross-border cooperation between Ukraine and EU

countries has clearly intensified after the enlargement in 2004. Both export and import of Ukraine between the EU has increased significantly. It can be expected that after the foreign direct investments from the EU country will also significantly increase due to more intensive cross-border co-operating. The knowledge of the EUs firms about the Ukraine's market is increasing the interest to invest to Ukraine's industries is there.

Despite the improving economic conditions and growth, the trade balance of Ukraine has turned to negative in 2005 (see Figure 9). The export growth of Ukraine was quite modest in 2005, while the import increased more than 10%. The negative trade balance is nevertheless quite common for a transition country.

**Figure 9. Ukraine's foreign trade in goods (mln USD)**



Source: State Statistics Committee of Ukraine; author's figure.

Table 10 provides data about main export and import articles of Ukraine in 2004 and 2005. The Ukraine's export is clearly dominated by base metals. Both in 2004 and 2005 around 40% of total Ukraine's goods export was the export of metals. The significance of metal export is even increasing. Ukraine's second most important export is mineral products (around 13% in 2004 and 2005), mainly gas and petroleum. Ukraine has also quite strong position in chemical production and machinery. The share of chemical products has increased to 8,75% in total export of Ukraine in 2005. The share of machines has slightly decreased compared in 2005 with 2005, but is still more than 8%

in total export volume. Other more important export articles are plant products, transport and food products.

**Table 10 Ukraine foreign trade in goods pattern (% of total volume)**

	2005	2004
Export		
Base metals	40,97	39,94
Mineral products (petroleum, gas, ores)	13,73	13,23
Chemical and allied products	8,72	8,51
Machines and technical equipment	8,29	9,28
Plant products	4,95	3,48
Transport	4,83	6,24
Food products	3,77	3,49
Import		
Mineral products (petroleum, gas, ores)	32,01	37,4
Machines and technical equipment	17,55	16,35
Transport	8,91	8,6
Chemical and allied products	8,57	7,75
Base metals	6,83	6,05
Plastic and rubber	5,36	4,85
Food products	4,03	3,46

Source: State Statistics Committee of Ukraine; compiled by the author

The import of Ukraine is dominated by mineral products, namely petroleum, gas and ores. The share of mineral products was 32% and 37% respectively in 2005 and 2004. The second important good is machines and technical equipment, with importance of 17,5% in total import in 2005. Other main import articles are transport, chemical goods, base metals, plastic and rubber and food products.

Table 11 provides data about main export and import partners of Ukraine. The trade balance of goods has turned to be negative. Ukraine's imports exceeded the export by \$2 bn in 2005. Both Ukraine's export and import are dominated by Russian market. The export structure by countries is less concentrated than in import. The author suggests that the broader distribution of export market is a positive sign of the competitiveness of the Ukraine's export. 22% of total export went to Russia, around 6% of export went to Turkey and Italy. Other more important export partners of Ukraine were Germany

(3,8%), Poland (2,9%) and USA (2,8%). Ukraine's export is concentrated to neighboring countries as usual to many countries. Nevertheless the moderate share of Poland in total export is somewhat surprising, considering the size and the close distance of Polish market. It can be forecasted that the importance of Poland as an export market will increase, as it is the neighboring EU country.

**Table 11 Main export and import partners of Ukraine in 2005**

Export country	Export (mln USD)	% of total export	Import country	Import (mln USD)	% of total import
Total	34287	100	Total	36141	100
Russian Federation	7496	21,9	Russian Federation	12843	35,5
Turkey	2035	5,9	Germany	3384	9,4
Italy	1894	5,5	Turkmenistan	2678	7,4
Germany	1286	3,8	China	1810	5,0
Poland	1011	2,9	Poland	1407	3,9
United States of America	957	2,8	Italy	1030	2,9
Belarus	892	2,6	Belarus	940	2,6
Egypt	803	2,3	France	799	2,2
India	737	2,1	United States of America	710	2,0
China	711	2,1	Korea, Republic of	648	1,8
Hungary	691	2,0	Hungary	647	1,8

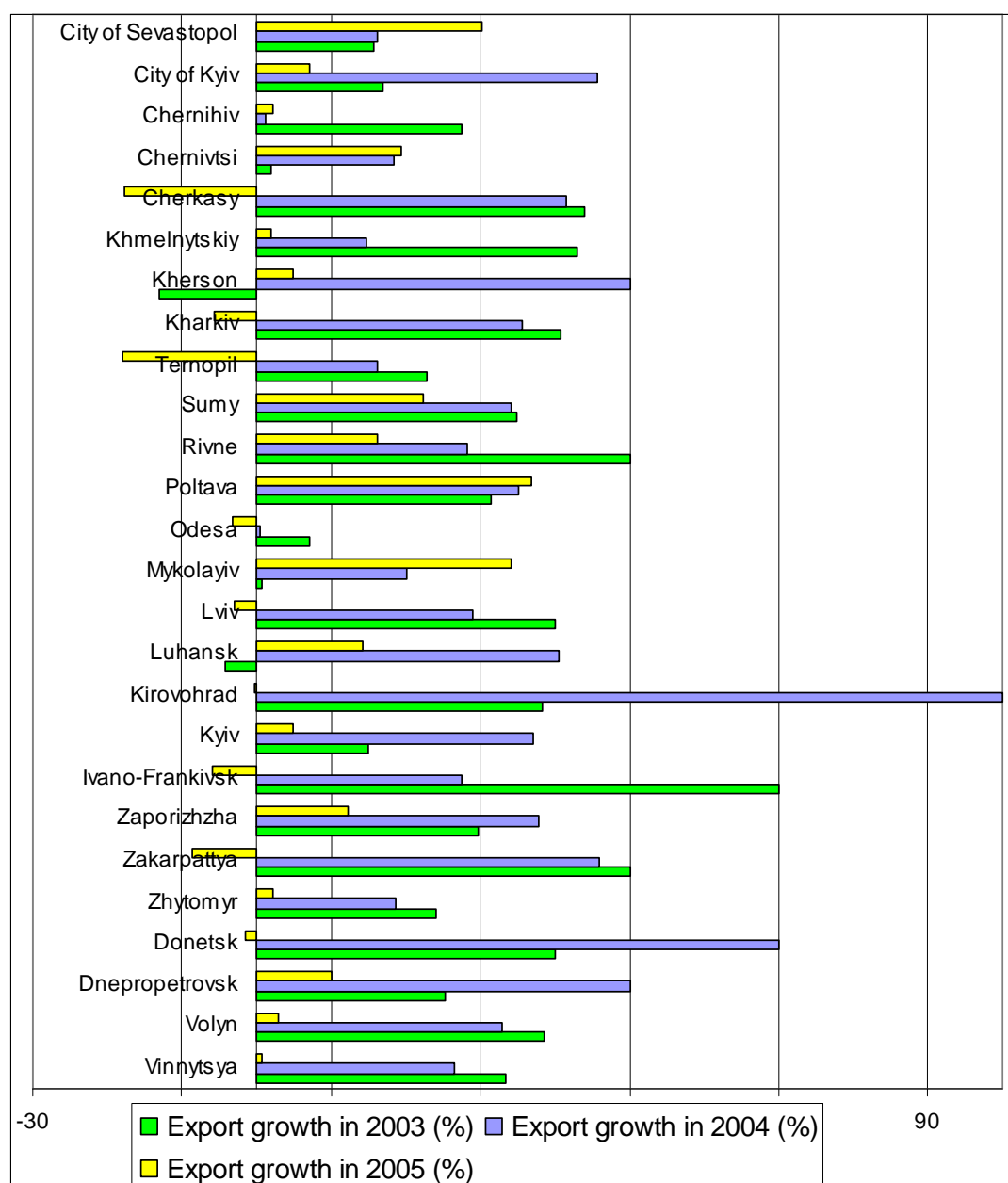
Source: State Statistics Committee of Ukraine; author's calculations

More than one third of the imported goods to Ukraine came from Russian Federation in 2005. Germany is the second biggest country by import with 9,4%. Other more important import partners are Turkmenistan, China and Poland.

Figure 10 gives an overview of the export growth in regions of Ukraine in 2004-2005. The fastest growing regions in Ukraine are those that are also the main industrial regions. The figure shows that Poltava, Sumy, Zaporizhzhya and Dnepropetrovsk are the regions of high and stable export growth. After two years of rapid growth the Donetsk

oblast had a negative export growth of 1.4% in 2005, but generally Donetsk remains one of the strongest industrial regions in Ukraine.

**Figure 10 Regional export growth in Ukraine.**



Source: State Statistics Committee of Ukraine; author's calculations

Of course the total volume of export is also an important factor describing the export competitiveness of a region. Table 12 gives an overview about the dynamics of export

share of different regions in Ukraine's total export. The importance of Dnepropetrovsk, Donetsk, Zaporizhzhya, Poltava and Luhansk in total export volume have increased in last years, indicating a strengthening economic performance.

**Table 12 Regional export volume and distribution in Ukraine**

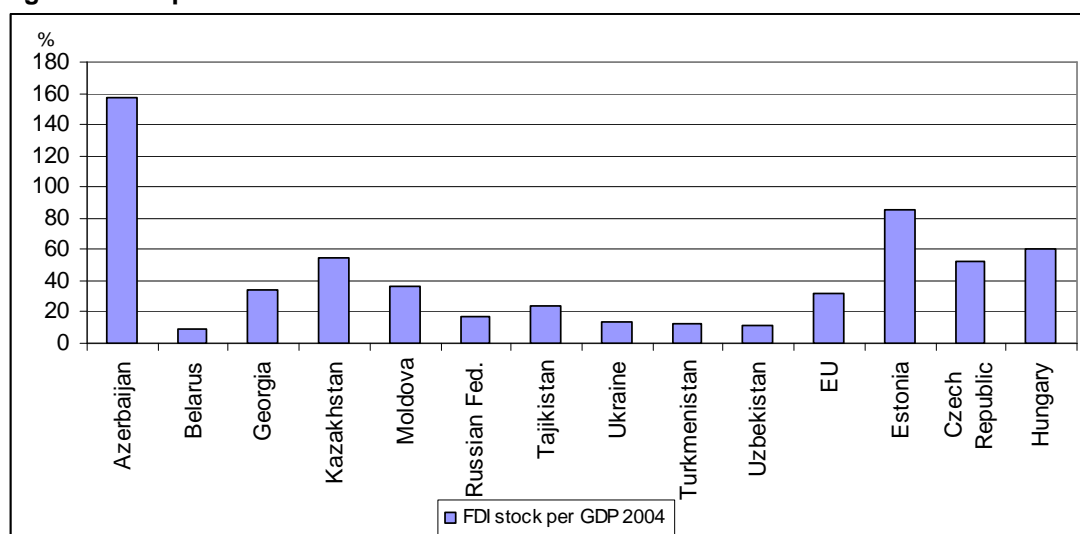
Region	Export mln USD in 2005	% of total export 2005	% of total export 2004	% of total export 2003
Autonomous Republic of Crimea	355,4	1	0,8	1,4
oblasts				
Vinnitsya	424,6	1,2	1,3	1,4
Volyn	280,8	0,8	0,8	0,9
Dnepropetrovsk	5958,3	17,4	16,6	15,6
Donetsk	8225,5	24	25,5	21,5
Zhytomyr	267,7	0,8	0,8	0,9
Zakarpattia	552,8	1,6	1,9	1,8
Zaporizhzhya	2658,7	7,8	7,3	7,5
Ivano-Frankivsk	815,2	2,4	2,7	2,9
Kyiv	496,4	1,4	1,4	1,5
Kirovohrad	199,4	0,6	0,6	0,4
Luhansk	2171,1	6,3	5,8	5,9
Lviv	621,4	1,8	2	2,1
Mykolayiv	878,3	2,6	2	2,4
Odesa	1019,4	3	3,2	4,5
Poltava	1890,1	5,5	4,2	4,4
Rivne	235,1	0,7	0,6	0,7
Sumy	577,9	1,7	1,4	1,5
Ternopil	76,1	0,2	0,3	0,3
Kharkiv	721,6	2,1	2,3	2,4
Kherson	234,6	0,7	0,7	0,6
Khmelnyskiy	184,7	0,5	0,6	0,7
Cherkasy	339,1	1	1,3	1,3
Chernivtsi	102,4	0,3	0,3	0,3
Chernihiv	250,7	0,7	0,8	0,9
City of Kyiv	4445,5	13	12,7	12,4
City of Sevastopol	80	0,2	0,2	0,2

Source: State Statistics Committee of Ukraine; author's table.

## 5 FDI into Ukraine

Foreign direct investment flow into Ukraine is claimed to be one of the lowest among the CEE countries. Despite the attractiveness of the market in terms of growth potential and scale, the FDI has remained modest (see Figure 11).

**Figure 11 FDI per GDP in CIS and selected EU countries in 2004**



Source: World Investment Report 2005; author's figure.

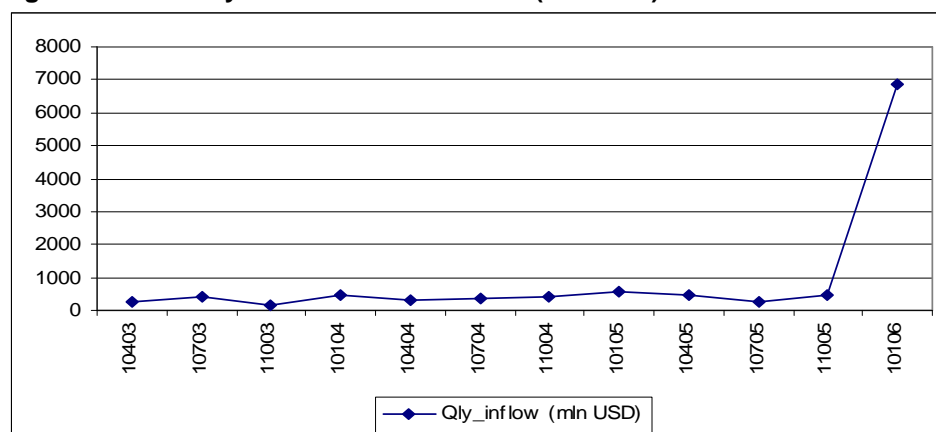
FDI inflow to Ukraine has been quite stable during period 2003 to the end 2005. The quarterly average FDI inflow has been around \$500 mln (see Figure 12). The Ukrainian government has made several steps to enhance the FDI inflow. There has been several improvements in the legal framework of foreign investments. Nevertheless, one the biggest problems for the foreign investors in Ukraine are the outdated legislation and poor corporate governance. Ukraine lacks nationalization law and this makes foreign investors much more careful. Ukraine's law on joint-stock companies was developed in 1991, and has not been changed (Ukraine: Broadening horizons, 2005). It has been noted, that Ukraine's stock exchanges lags 10 years behind compared with Russia. The EBRD assessment on Ukraine's legal framework's development was negative in 2004, with „very low compliance” with international standards.

Evidently, the most critical problem of Ukraine's FDI is a very high corruption. Ukraine was on the 122 place among 146 countries in 2004 in the corruption index calculated by Transparency International (IMF, 2005).

The first two very significant foreign investments were made in the fourth quarter of 2005. According to State Statistics Committee (SSC) of Ukraine the FDI inflow was as much as \$6.85 bn in Q4 2005. The main investments were made to metallurgy and financial sector. Mittal Steel<sup>3</sup>, one of the largest steel companies in the world, acquired a controlling stake in the mill Kryvorizhstal through a repeat privatization tender. The acquiring company is a subsidiary of Mittal Steel registered in Germany. The size of the investment was \$4.8 bn and due to that investment Germany became the leading investor in the country.

Another significant investment was made by Raiffeisen Banking Group from Austria. The sale of Aval bank added \$1.1 bn to Ukraine's FDI stock. The financial sector has been very attractive for foreign investors after the removal of all entry barriers to foreign banks. In July 7 the Ukrainian government confirmed a new law on "Banks and Banking Activities", according to what both domestic and foreign banks are treated equally in the Ukrainian banking sector.

**Figure 12 Quarterly FDI inflow into Ukraine (mln USD)**



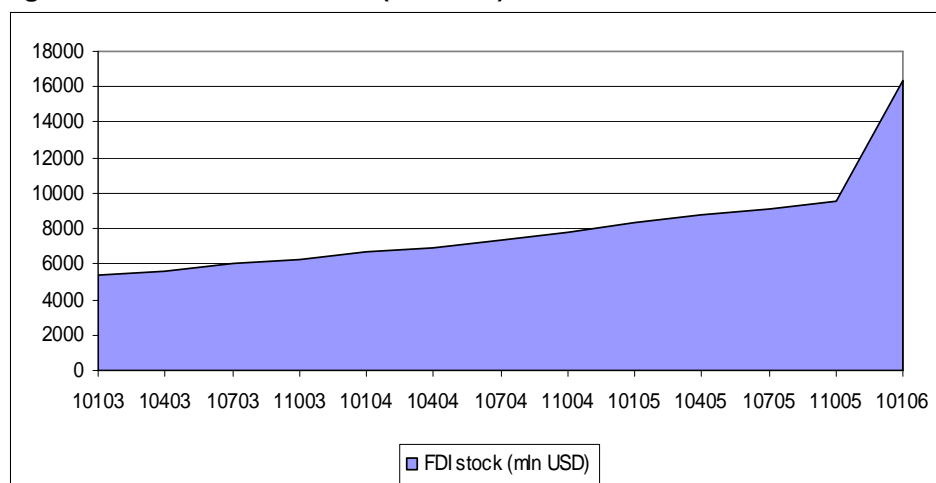
Source: State Statistics Committee of Ukraine; author's calculations

<sup>3</sup> The headquarter of Mittal Steel is in London, Great Britain.



The total FDI stock has increased from 5.5bn in January 2003 to \$16 bn in January 2006 (see Figure 13). The FDI stock almost doubled during 2005 compared with that of 2004.

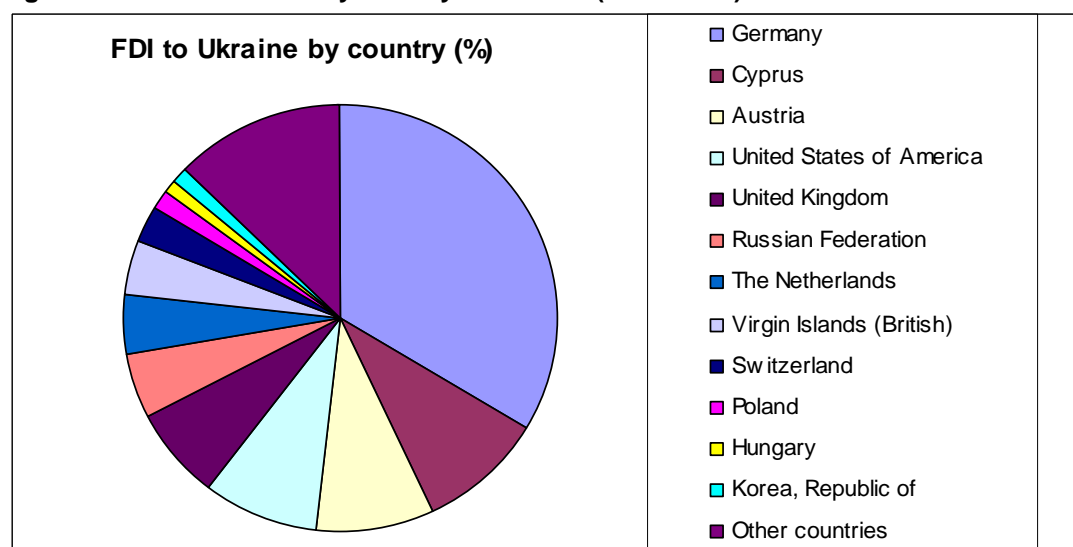
**Figure 13 FDI stock in Ukraine (mln USD)**



Source: State Statistics Committee of Ukraine; compiled by the author

The FDI distribution by country in Ukraine is illustrated in Figure 14. About one third of total FDI originates from Germany, followed by Cyprus and Austria. The major investments from Germany and Austria have been already described above, namely investments to metallurgy and financial sector. The majority of FDI from Cyprus to Ukraine is Ukraine's own capital reinvested.

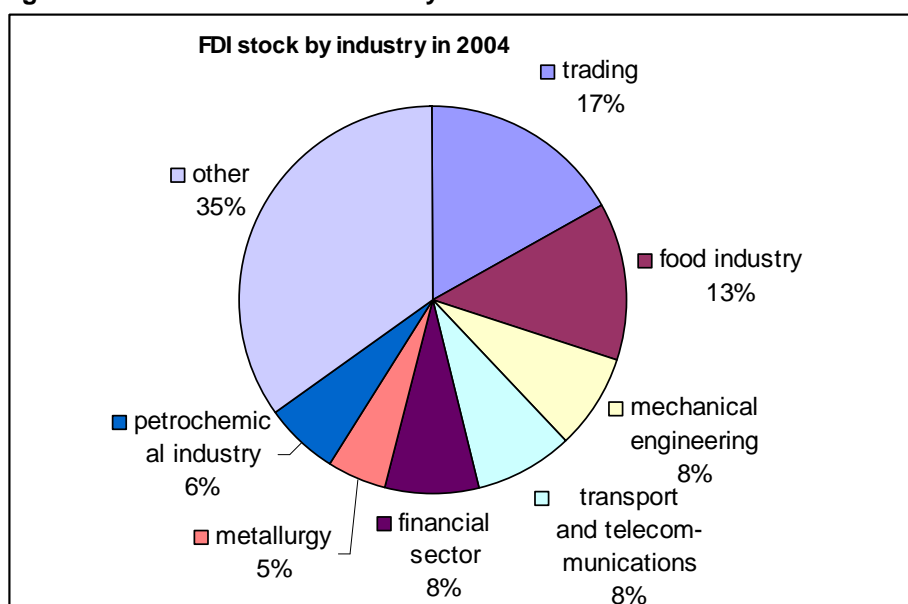
**Figure 14 FDI distribution by country in Ukraine (01.01.2006)**



Source: State Statistics Committee of Ukraine; author's calculations

The FDI distribution by industries in 2004 is given on Figure 15. The highest share of investments has been made to trading sector. The investments to metallurgy were quite moderate before the huge investment by Mittal Steel in 2005. The other more attractive sectors for FDI have been food industry, mechanical engineering, transport and telecommunication, financial sector and petrochemical industry.

**Figure 15 FDI stock distributions by industries in 2004**



Source: Invest in Ukraine, 2005.

Table 13 gives an overview of biggest companies in Ukraine by turnover in 2004. The biggest firms are in metallurgy industry. Three biggest firms in Ukraine belong to that sector. There are five metallurgy firms in top 10 biggest firms in Ukraine. That also explains the dominance of base metal in the Ukraine's export. There are two telecommunication firms in top 10 biggest firms of Ukraine.

There are also four railway transport enterprises in the top 25 of Ukraine's firms. The growth of turnover of biggest firms has been very different, but the average growth of turnover is more than 25%. The average return on shareholders funds in 2004 was 56%, indicating that very large companies in Ukraine have been profitable.

**Table 13 Biggest foreign companies in Ukraine by turnover in 2004**

	Company name	Industry	Total assets (th USD)	Return on share-holders funds	Op. Rev. Growth 2004
1	ZAPOROZHSTALY OAO	Metallurgy	845460	31,57	59
2	DONECYKSTALY ZAO	Metallurgy	471389	121,18	195
3	MITTAL STIL KRIVYY RIG OAO	Metallurgy	1229663	45,72	35
4	ARS ZAO	Wholesale	302470	88,90	22
5	UKRAINSKIY MOBILYNY ZVYYAZOK ZAO	Telecommu- nication	882511	62,53	78
6	DNEPROBLENERGO OAO	Electricity	444127		22
7	BAYP KO	Metallurgy	155798	-15,62	222
8	DANKO ZAO	Metallurgy	103698		6
9	KIEVSTAR DZH ES EM ZAO	Telecommu- nication	848171	62,12	74
10	LUKOYL ODESA Z INOZEMNIMI INVESTICIAMI	Oil	81237	11,40	67
11	NAFTOPEREROBNIY KOMPLEKS GALICHINA OAO	Oil	140425	-48,40	111
12	NAFTOHIMIK PRIKARPATTTYA OAO	Oil	145079	13,66	110
13	DONECYKA ZALIZNICYA GP	Railway transport	814124	-0,19	19
14	PRYDNIPROVSYKA ZALIZNYCYA GP	Railway transport	761024	-1,45	9
15	NIZHNEDNEPROVSKIY UBOPROKATNYY ZAD OAO	Metallurgy	465714	17,94	68
16	DONECKIY METALLURGICHESKIY ZAVOD OAO	Metallurgy	164514	27,03	34
17	ODESYKA ZALIZNYCYA GP	Railway transport	645659	2,33	15
18	LYVIVSYKA DERZHAVNA ZALIZNYCYA	Railway transport	773173	1,34	11
19	SUMSYKE MASHINOBUDIVNE NVO IM FRUNZE OAO	Machinery	344333	10,88	32
20	DNIPROSPECSTALY ELEKTROMETAL LURGICHESKIY ZAVOD IM A M KUZYMINA OAO	Metallurgy	205376	18,37	107
21	SHIDENERGO OOO	Electricity	166758	64,93	7
22	PIVDENNA ZALIZNYCYA	Railway transport	603746	-0,02	17
23	NK ALYFA NAFTA OOO	Metallurgy	84613		41
24	AT KARGILL (CARGILL A T ) ZAO	Wholesale	133047	25,52	39
25	FILIP MORRIS UKRAINA ZAO	Tobacco	139110	47,94	24

Source: Amadeus 2006; author's calculations.

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## 6 Ukraine's accession to WTO

Ukraine made the first application for the WTO membership in 1995, but the negotiations have been slow. The Ukrainian government has made the WTO accession its priority and the negotiations are much intensified. The last meeting of the Working Party was held in November 2005. Positive outcome of Ukraine's future accession to the WTO mostly depends on the results of bilateral negotiations with such countries as Australia, Argentina, Japan and the USA. Ukraine and USA signed a bilateral WTO accession agreement on market access in March 2006, and Ukraine became one step closer to WTO membership. Bilateral market access negotiations are continuing on the basis of revised offers on goods and services. The main negotiation points are ([http://www.dfat.gov.au/trade/negotiations/accession/wto\\_ukraine.html](http://www.dfat.gov.au/trade/negotiations/accession/wto_ukraine.html)): subsidizations of agriculture, registration requirements for engaging in importation, import licensing and other non-tariff barriers, fees and charges on imports, intellectual property protection, consistency of sub-federal measures with the WTO, provide fair and adequate access to Ukraine's sugar market under Ukraine's Tariff Rate Quota (TRQ) mechanism for imports.

Ukraine's hope to join WTO in 2005 did not work out, but the possibility to join WTO in 2006-2007 is quite realistic.

There have been several concerns about the competitiveness of the Ukrainian export with the membership of the WTO. Eremenko and Lisenkova (2004) have found based on the partial equilibrium model that the Ukrainian economy would gain USD 343 mln with the WTO accession and the possible losses from metallurgy industry are outweighed by total gains. According to World Bank, the country's GDP could grow by an additional 2.3 to 2.8 percent by WTO membership, if the services sector were opened to foreign direct investment, import tariffs lowered and access to foreign markets improved for Ukrainian exports.

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## 7 Conclusions and policy implications

Ukraine has turned to the road of transition to market economy and is aiming to join the EU. Current study analyzed the situation of Ukraine's industrial and regional development in the light of possible interest of foreign investors and foreign economic relations in general.

The main source of the Ukraine's GDP production comes from manufacturing (40,2% in 2004). Other important fields of economic activity are metallurgy, agriculture, transport retailing and construction. The fastest growing industries over 2004-2005 period in Ukraine have been food industry, wood products, cellulose production, chemical production, metallurgy and machine building. There has been quite significant decline of production in coke and refinery industry and leather and footwear industry. It is important to note that the main exporting industries (mineral products, chemical products, machine building) have increased their production during last few years.

The chemical industry accounts for about 10% of total industrial fixed assets and more than 5% of employees in Ukrainian industrial sector. Main centers of chemical production are Dnipropetrovsk, Sumy, Cherkasy, Donbas, and Rivne. The pharmaceutical sector is limited by opaque regulations that converge very slowly to EU standards, healthcare system is only in the beginning of transition and intellectual property rights are underdeveloped. The leading companies are Arterium, Darnitsa, Farmak, Styrol, Brshchagovsky and Biostimulator. Most Ukrainian firms are based on Kyiv or Kharkiv.

Two biggest chemical companies were owned by domestic capital, but 5 out of 10 biggest firms were foreign owned at the end of 2004.

Metallurgy is the key industry of the Ukraine's economy. Metallurgy is the most important export article of Ukraine and the production of metal is important input factor for machine building and metal-working industries and metal is the main source of engineering materials. Around 40 per cent of Ukraine's export volume in 2004 and 2005 came from the export of base metals. Metallurgy and metal processing made over 25% of Ukraine's total industrial production in 2005. Ukraine steel industry is very much depending on

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export demand. Domestic demand is only 25% of steel production. Ukraine has one of the worlds lowest cost to produce steel, but at the same time it is technologically old-fashioned, and needs substantial amount of investments to improve the infrastructure. Metallurgy has become one of the most attractive industries for foreign investors. In 2004 around 5% from total stock of FDI to Ukraine was invested to metallurgy industry, but at the end of 2005 the share of investments to metallurgy was already 33%.

Machine-building is the largest Ukrainian industrial sector. It accounts for over one-third of the employed and about a quarter of the total cost of industrial main assets. The largest engineering centers are Novokramatorsk Machine-Building Plant, Kramatorsk Plant "Energomashspetsstal", Mariupol Heavy Engineerinf Plant, Kharkiv Turbine Plant, etc. The major electric engineering facilities are concentrated in Kharkiv, Zaporizhzhya, Kyiv, Donetsk, and Dnipropetrovsk.

Light and food industry embrace over 3,300 enterprises of different forms of ownership and subordination. Light and food industry is well developed in Ukraine and almost completely satisfied the needs of population in consumer goods.

The light and food industry is foreign dominated. Four biggest firms in the sector are foreign owned and there are three more foreign owned firms in top 10 of the sector by turnover. The return on capital is on average more than 25%, explaining high interest of foreign investors in the light and food industry. The turnover growth has been very diverse ranging from decline of 70% to increase of 90%.

According to the report, the main problems in light industry (leather and footwear cluster, home furnishing cluster, textiles and apparel cluster) are: poor quality of fabrics and trim; lack of cooperation or collaboration between firms; poor access to export markets; inadequate sales and marketing skills; inadequate access to capital; problems with VAT reimbursements with input.

Foreign banks' share in Ukrainian banking market remains relatively low. From total share capital of banks in Ukraine, only 10% belong to foreign residents in 2005 (see FSCapital on Figure 5). The number of foreign banks has increased from 7 in 2000 to 9 in 2005, but this makes only 5% of total bank number in Ukraine (see FBSN\_100 on

Figure 5). Bank with at least partial foreign ownership<sup>4</sup> encountered 14% form total number of banks in 2005. There has been an increase of assets in all foreign banks, but the growth has been quite moderate indicating that there are some obstacles for foreign banks activities in Ukraine.

The study discussed also the regional development of Ukraine. The results are that Volyn shows highest growth numbers and the author suggests, that the proximity of EU border contributes to the fast development of Volyn's region. Other fast growing regions include City of Sevastopol, Kirovohrad, Zakarpattya and Crimea. Zakarpattya gains from the cross-border cooperation with the Czech Republic and Hungary. There are special economic zones (SEZ) formed in both Zakarpattya and Crimea. The special economic zone attracts foreign investments and enhances cross-border cooperation that contributes to economic development. Kirovohrad is another fast-growing region in Ukraine. The region of Kirovohrad had also the highest export growth in 2004 (200%) among all regions of Ukraine. Volyn, Chernivsti and City of Sevastopol had very significant growth of production in the first quarter of 2006 – 35-55%. There has been a decline of industrial production in Kherson and Odesa during last two years. The growth in Kyiv region has been moderate, but very stable, with around 15% during last 2 and half years.

The share of EU(25) in total export of Ukraine has increased over time. The EU enlargement in 2004 has had clearly positive role on Ukraine's export and the significance of the EU(25) has increased to 30% in total volume of export. The share of the CIS countries has remained rather stable, around 26% in last years. One quarter of total export goes to Asian countries, although no single Asian country has a clear dominating position in Ukraine's export.

The fastest growing regions in Ukraine are those that are also the main industrial regions. The results show that Poltava, Sumy, Zaporizhzhya and Dnepropetrovsk are the regions of high and stable export growth. After two years of rapid growth the Donetsk

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<sup>4</sup> According to Commercial Code and the Regime of Foreign Investment Act of 19 March 1996, significant foreign ownership is considered from minimum 10% of bank's charter capital.

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oblast had a negative export growth of 1.4% in 2005, but generally Donetsk remains one of the strongest industrial regions in Ukraine.

The Ukraine's export is clearly dominated by base metals. Both in 2004 and 2005 around 40% of total Ukraine's goods export was the export of metals. The significance of metal export is even increasing. Ukraine's second most important export is mineral products (around 13% in 2004 and 2005), mainly gas and petroleum. Ukraine has also quite strong position in chemical production and machinery. The share of chemical products has increased to 8,75 in total export of Ukraine in 2005. The share of machines has slightly decreased compared in 2005 with 2005, but is still more than 8% in total export volume. Other more important export articles are plant products, transport and food products.

The trade balance of goods in Ukraine has turned to be negative in 2005. Ukraine's imports exceeded the export by \$2 bn in 2005. Both Ukraine's export and import are dominated by Russian market. The export structure by countries is less concentrated than in import. The author suggests that the broader distribution of export market is a positive sign of the competitiveness of the Ukraine's export. 22% of total export went to Russia, around 6% of export went to Turkey and Italy. Other more important export partners of Ukraine were Germany (3,8%), Poland (2,9%) and USA (2,8%). Ukraine's export is concentrated to neighboring countries as usual to many countries. Nevertheless the moderate share of Poland in total export is somewhat surprising, considering the size and the close distance of Polish market. It can be forecasted that the importance of Poland as an export market will increase, as it is the neighboring EU country.

More than one third of the imported goods to Ukraine came from Russian Federation in 2005. Germany is the second biggest country by import with 9,4%. Other more important import partners are Turkmenistan, China and Poland.

Foreign direct investment flow into Ukraine is claimed to be one of the lowest among the CEE countries. Despite the attractiveness of the market in terms of growth potential and scale, the FDI has remained modest



One of the biggest problem for the foreign investors in Ukraine is the outdated legislation and corporate governance. Ukraine lacks nationalization law and this makes foreing invertors much more careful. Ukraine's law on joint-stock companies was developed in 1991, and has not been changed (Ukraine: Broadening horizons, 2005). It has been noted, that Ukraine's stock exchanges lags 10 years behind compared with Russia.

Evidently, the most ciritcal problem of Ukraine's FDI is a very high corruption. Ukraine was on in the 122 place among 146 countries in 2004 in the corruption index calculated by Transparency International.

The first two very significant foreign investments were made in the fourth quarter of 2005. According to State Statistics Committee (SSC) of Ukraine the FDI inflow was as much as \$6.85 bn in Q4 2005. The main investments were made to metallurgy and financial sector.

About one third of total FDI originates from Germany, followed by Cyprus and Austria. The major investments from Germany and Austria have been already described above, namely investments to metallurgy and financial sector. The majority of FDI from Cyprus to Ukraine is said to be Ukraine's own capital reinvested

Ukraine made the first application for the WTO membership in 1995, but the negotiations have been slow. The Ukrainian government has made the WTO accession its priority and the negotiations are much intensified. The last meeting of the Working Party was held in November 2005. Positive outcome of Ukraine's future accession to the WTO mostly depends on the results of bilateral negotiations with such countries as Australia, Argentina, Japan and the USA. Ukraine and USA signed a bilateral WTO accession agreement on market access in March 2006, and Ukraine became one step closer to WTO membership. Ukraine's hope to join WTO in 2005 did not work out, but the possibility to join WTO in 2006-2007 is feasible.

The general conclusion of the paper is that the cross-border foreign relations have increasingly high importance in Ukraine. The regions bordering the enlarged EU have

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significantly higher economic growth and export. The interest of foreign investors in Ukraine is increasing. There are some industries that are already foreign dominated (light and food industry). In recent years the interest to Ukraine's strong metallurgy industry and the banking sector is rapidly deepening. The main problems remaining for foreign investors are the poor legal framework and high corruption. Ukraine's trade relations have significantly tightened towards the enlarged EU, but the role of Russian export and import is still domination in Ukraine.

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