

# **THE FUTURE OF INDUSTRIALISED CITIES AND REGIONS UNDERGOING STRUCTURAL CHANGES**

***Ukraine***

**Country report  
draft**

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## **INTRODUCTION**

Each region holds its own place in the framework of factors stipulating regional development. Each region combines both positive and negative features, from the point of view of adaptation to the new economic conditions, which can be adversely evaluated according to the changing situation in the country. Ukraine will be better off if not be divided into regions with simply favorable or unfavorable prerequisites to overcome the crisis of the transitional period. Better, from our point of view, would be to single out general issues characteristic to regions of a certain type, along with specific, “non-traditional” issues, solution of which can positively impact the development of the country.

Old industrialised regions are interesting objects for research, as they turned out to be more vulnerable and lost more of economic indicators in comparison with more balanced industrial-agrarian or even simply agrarian regions. Ukraine’s specifics lie in the fact that almost all better developed industrial regions in the country are also old-developed. And all of those regions, without exception, require a structural adjustment of the economy.

Diversification of the economy which occurs in majority of old-developed regions, constitutes a positive factor assisting in overcoming the crisis. The crisis of a mono-industry in the region, even well-developed, may lead to a destruction of all economy of the region. However, the other aspect of structural factor – balance between industry and agriculture – does not work in favor of urbanized regions. Agrarian or low-developed regions have better opportunities for food supply and are less contaminated by industrial waste environment. Highly-developed regions during the crisis are more vulnerable: during destabilization of the monetary system, inflation, barter in inter-regional links, economic conditions are unfavorable and the possibilities to go out of contaminated city are limited to one time a year because of low income of the majority of the population. However, these regions possess advantages, which could enable them to take a lead at the proper restructuring and balancing development. These are regions where extremities of factors (extremely positive or extremely negative factors) play an important role. In this connection, studying these factors and their interrelations constitutes a perspective development and can help improve the economical, social and environmental situations in cities and surrounding regions, and increase positive effects on health and quality of life of the people.

## **PART 1. OVERALL SOCIO-ECONOMIC SITUATION IN UKRAINE. HISTORICAL AND MODERN REASONS OF DEVELOPMENT PROBLEMS OF OLD INDUSTRIALISED REGIONS**

### **Geographical location**

Ukraine is situated in the Eastern Europe, north of the Black Sea. It became independent from the former Soviet Union in 1991. It borders on Russia and Belarus in the north and north-west, on Poland, Slovakia, Hungary and Moldova in the west. Its total area is 603.7 thousand km<sup>2</sup>. Ukraine is administratively divided into 24 oblasts and one autonomous republic (the Crimea). Its capital is the city of Kyiv. Table 1 contains a general information about Ukraine and its regions.

The major part of Ukraine’s territory (95%) is lowland. The only mountains are in the Carpathians and the Crimea, situated in the far west and south, respectively. Nearly three-quarters of the territory consists of the forest steppe and steppe zones. Two national resources – soils and minerals – have underpinned the development of agriculture and heavy industry, and both sectors are significant in the economic structure of the country. Today, almost all of the country’s territory is used for an economic production. The share of technogenically transformed land, including built-up areas, open pits, open-cut mines and other mining areas, is larger than in most other European countries. The density of the population is also above average for Europe. Consequently, relatively few landscapes can be considered close to “natural”. For example, forest covers less than 15 % of the Ukraine, which is half the average of both the world and European situations.

Natural resources were always a main factor in industrial development in the territory of Ukraine. It especially relates to coal, iron and mineral ores, extraction, enrichment and processing of which determines high concentration of mining industries in several Ukrainian regions. Donbas (Donetsk and Luhansk oblasts) is one of the largest old industrialized regions with high concentration of the heavy industry of the former Soviet Union and now Ukraine which is a host of key industry units. Second in size and importance is Industrial Near-Dnieper (Zaporizhzhya, Dnipropetrovsk regions). Both of the above are situated in the east of the country. Other industrial regions in the south (Odessa, Mykolayiv, Kherson), west (Near-Carpathians), or separate big cities, as a rule, are regional centers, and are characterized by a later formation of own industrial structure and development of large numbers of high-tech branches and industries. The city of Kyiv holds a special place and is, on one hand, an old industrial center, on the other, has higher level of investment into high-tech industries and non-productive sphere, which leads to changes in its branch structure.

## Information technologies and communications development

During the last several years, Ukraine established national communications system. According to data of 1999, it covers the following areas:

- digital telephone communications system established for local and long-distance connection. More than 4,000 km of fibre-optical lines were built, connecting Ukraine with neighboring states;
- availability of phone connection is 19.6 per 100 persons. Each year more than 300,000 new numbers are introduced. Private phone services establish up to 50,000 new phone numbers (15%)
- 22 oblasts in Ukraine have access to paging communications;
- printed information is transferred by data communications and phone systems, as well as by a telegraph, however, demand for the latter is in decline;
- mail services meet the country demand. New system of area codes was introduced;
- mobile phone communications are available on territories of 63% of population. Total number of mobile users exceeds 200,000. Major providers include: JV "Kyivstar" GSM, JV "Ukrainian Mobile Communication", Joint-Stock Company "Ukrainian Radiosystems", JV "Bancomsvyaz" (trademark Golden Telecom), JV DCC ("Digital Communications Service of Ukraine).

On the whole, volume of communications increase by 6 % every year.

The component elements of Ukraine's current information environment consist of the following mass media: print, radio and television, documented, networks, postal, etc. All basic types of services (telegraph, telephone, teletype, radio, radio broadcasting and television, documented electric) are provided by state enterprises and private companies. The Ukrtelecom State Association of Electric Communication holds a central place in providing telecommunication services domestically and internationally. The countrywide Ukrpak network provides access to other networks and world computer networks, and offers departmental, private and regional networks of connection to them.

A proper level of computerization is a decisive factor in the modern information environment. As for the development of national microelectronics and the number of computers, Ukraine lags behind European countries by 10 to 20 times. Almost 50% of the computers are concentrated in five of the 27 oblast-level administrative territories of Ukraine. Computers are also extensively used in regions with the largest share of industrial enterprises and direct foreign investment (Tabl.2).

Table 2. Distribution of computers by Oblast

Donetsk Oblast	14,9 %
City of Kyiv	12,3 %
Kharkiv Oblast	9,3 %
Dnipropetrovsk Oblast	8,4 %
Lviv Oblast	5,7 %
Volyn, Ternopil, Khmel'nitskyi oblasts	1 %

Source: *Ukraine. Human Development Report 1997*

Development of Internet in Ukraine proceeds much slower than elsewhere world-wide because of the low level of computerization and technological backwardness. It is hoped that the modernization of the communication infrastructure will improve this situation. The component elements of Ukraine's current information environment consist of the following mass media: print, radio and television, documented, networks, postal, etc. All basic types of services (telegraph, telephone, teletype, radio, radio broadcasting and television, documented electric) are provided by state enterprises and private companies. The Ukrtelecom State Association of Electric Communication holds a central place in providing telecommunication services domestically and internationally. The countrywide Ukrpak network provides access to other networks and world computer networks, and offers departmental, private and regional networks of connection to them.

Compared to other countries, previously in COMECON, by level of Internet development, Ukraine surpassed only Bulgaria (15,600 hosts compared to 7,400 hosts in Bulgaria for the same period), but in July 1997 gave way to Slovakia (10,900 hosts compared to 10,500 hosts for the same period), and in July 1998 gave way to Romania (13,700 hosts compared to 13,300 hosts during the same period). And all this despite that Romania has a population of 23,3 mln, Bulgaria — 8,99 mln, Slovakia — 5,3 mln, while Ukraine's population is 50 mln. Ukraine has more Internet providers than any other Eastern European country. Among all oblasts, first of all,

Kyiv and Kyiv oblast need to be singled out, followed by Dnipropetrovsk and Dnipropetrovsk region, Odesa. On the whole, the tendency is to use Internet intensively in areas attractive to investments.

Exact estimates are not available of the number of users who use Internet regularly, as marketing statistics are not developed. Internet providers are not encouraged to reveal the exact number of its clients. If the number of users with PC and standard IP-connection is counted, then at the end of January 1999, there were 20.600 Internet users in Ukraine. This estimate should be considered when determining the lowest threshold of Internet usage. Among the providers of Internet services the overwhelming majority are non-state companies.

If the estimate considers users working in off-line regime (e-mail only), or using dial-up connection IP-address (most common service among providers), the number will increase to 50,000-70,000 users. We can also assume that a PC connected to provider by a dial-up connection, may be accessed by 2-3 users at once (even though it is not typical). Then the total estimate of users may reach 100,000-120,000. This is the maximum estimate as of today.

By mid-May 1997 there were only 272 WWW sites, by the mid-May 2000 there were more than 1750 sites. By experts estimates, average annual rates of growth of Internet use in Ukraine stand at a level 40% which compares adequately with average rates in Europe and in the world (50-55%).

Language is yet another problem of connecting with the Internet. To date, only a few number of servers in Ukraine offer multilingual information. Also, for a considerable number of Internet users the prices for services and software are too high. To be noted is a professional level of informational sites on problems of small and middle business, development of investment activities, especially in regions of priority development. In the last years, many search servers appeared in Ukrainian language Internet.

### **Ukraine's Development in the Past**

In the beginning of the 20th century, Ukraine has about 5,000 industrial enterprises which employed around 300,000 workers. By 1914, this number grew up to 630,000. Despite the high rate of growth and concentration of production (Ukraine produced 65% of cola and 51% of iron in the Russian empire), the structure of the industry was deformed, both at the level of branch and by territory. Thus, mining industry constituted 60% of the total production volume, while machine-building and metal-processing branches stood at 10%. Location of industrial enterprises was highly irregular in the territory of Ukraine. They concentrated mostly around old industrial regions of Donbas, Near-Dnieper area, and major industrial centers – Kyiv, Kharkiv, Odesa, Mykolayiv. The rest of Ukrainian territory, with exception of some cities (mostly administrative centers of provinces), remained industrially underdeveloped.

Period of socialist years in Ukraine was characterised by complex processes, associated with establishment of a centralized planned economy, re-building of the country after the civil war of the 20-ies, and following industrialisation. Plans for developing the industry were suited to serve the growth of the military potential and meant increased rate of growth of the heavy industry.

In 1940 the industrial output in Ukraine exceeded the level of 1913 by 7.3 times. Despite higher rates of growth of machine-building (the output of 1940 was 50 times more than in 1913), electric power industry (23 times), and some other industries, the structure of industrial production continued to be deformed. Consumer goods production was lagging behind, together with chemical and electric-technical industry, electric devices and transport vehicles building.

Ukrainian economy suffered heavy losses during World War II when more that 16,000 enterprises were destroyed.

In the next stage of the industrial development of Ukraine (1945 – first half of the 1960-ies), most industrial assets were being re-built and renovated, and new ones constructed. However, even at the high rates of industry growth, it was not translating into wider usage of technology and diversification of production. In the late 1960-ies, Ukraine's industry entered the developed stage.

Priority was given to machine- and aviation-building industries, automated machine-building, electric device building, electronics, chemistry of organic synthesis etc. Western Ukrainian regions (Trans-Carpathian, Lviv, Volyn, Rivne, Ternopil', Ivano-Frankivsk, Chernivtsy) as well as central regions (Chmelnytsky, Vynnytsya, Cherkasy, Kyiv) were most suited for placing the newly developing industries. Development of these industries in those regions was purported by existence in those regions of a well-developed production base, favorable geographic conditions, considerable numbers of work-force, which made them nuclei of industrial growth.

The least developments in industrial structure occurred in regions in the south and east of Ukraine (Poltava, Kharkiv, Dnepropetrovsk, Donetsk, Kyrovohrad, Mykolayiv, others).

Absorption of innovatory patterns was occurring, for example, in Kharkiv and Dnepropetrovsk regions, in conditions of already formed industrial and territorial divisions, as a result of modernization of partial re-specialization of existing industries.

In other old industrial regions (for example, Donetsk), where the industrial infrastructure was formed at a much earlier stage (mainly coal industry, ferrous metallurgy, and low-technology branches of heavy machine-building), it remained too conservative to incorporate new technological changes. In most cases there, adaptation of innovative technologies was occurring, accompanied by development of priority industries, expansion or formation of new industrial centers.

In the 1980-ies, Ukrainian industrial-production complex played a very important role in the Soviet economy. By volume of industrial and agricultural output, Ukraine was second to Russian Federation. Around 20% of GDP of the USSR was being created in Ukraine. Ukraine's input into the Soviet industry constituted 19% of its overall volume, and input into agriculture was even 24%. This is considering that Ukrainian territory was only 2.7% of the USSR territory, with population of 18.2% of the total. Ukraine constituted an important part of many Soviet industries: 17.6% of electric power production, 30% of coal production, 41% of iron, 34.5% of steel, 35% of rolled metal, 72% of manganese ore, 72% of nitrate fertilizers, 20% of phosphorous fertilizers, 20% of calcianated salt, 12.3% of chemical textile, 100 % of corn and beet-root harvesting machines, 97% of engines, 45% of metallurgic equipment, 25% of tractors, automatic machines and spare parts – 25%, shoes – 25%, 60% of sugar, vegetable oil – 33%, dairy preserves - 30%, 25% of butter, meat and meat products – 24%, linen – 28%, cement –17%.

Ukraine actively participated in COMECON. Under its programs, it provided supplies of iron and manganese ore, ferrous metals, coal, coke, metal-cutting equipment, automobiles, airplanes, agricultural machinery, mineral fertilizers, natural gas, electric power, cement, food products.

However, despite existing prerequisites, the industry in 1970-ies and 1980-ies was not transformed to a higher level which could ensure a further post-industrial transformation. These processes were actively occurring in developed Western nations beginning in 1970-ies.

In Ukraine, on the contrary, this period was characterised by a growing stagnation of production. Crisis started to show itself in the second half of 1970-ies – beginning of 1980-ies. At this time, rates of industrial growth began to fall rapidly. Following the breakdown of the USSR, the transition to a market economy and integration into a world economic system began, however, with the reforms being slow and inconsistent, it only continued to exacerbate the overall economic crisis which assumed a shape of an economic collapse. In 1990, industrial output stopped growing, and in subsequent years it was only falling down, but in 1999 it begins to grow again (+4%).

The reason of a chronic crisis which struck Soviet economy, was of a latent, or semi-latent character and is rooted in the genesis of the country's industry, peculiarities of its industrial evolution under command, and then market economies.

All this required a clear understanding by ruling elites of the core of the situation, adopting adequate policies and organization to ensure structural changes in government and, first of all, in industry. At the end of 1980-ies, then communist leadership adopted a state program "Acceleration on the basis of machine-building", which did not produce any positive results. Moreover, attempts of price liberalisation, promoting foreign economic and entrepreneur activities only further reinforced collapse of social-economic system and its disintegration. The reason of this lied in ignoring the economic value laws, which in fact blocked structural adjustment and "gave rise to such phenomena, as system's inability to respond to scientific and technical progress" [6].

- Reasons for lagging behind in modernization of production sphere and cutting down its effectiveness, besides of already named drawbacks of the command economy, were purported by some other factors: High technologies remained entirely in domain of the military sector and were not being implemented to modernize civil economy sector.
- Consumer sphere was underdeveloped, including a service sector, which under a market economy stimulates investment into innovative research.

Besides the abovementioned, as a main heritage from the Soviet system, Ukraine obtained 35% of a former military sector with a deformed branch structure, with predominant portion (over 70%) of heavy industries.

All this prevented progressive restructuring from happening, and disabled a timely transition to a quantitatively higher stage of industrial development.

### **Transformation processes in Ukraine**

The transformation processes undergoing in the former Soviet republics assume a variety of forms. Ukraine holds a special place among them: initially regarded as one of the most developed post-Soviet countries, in 1992 it sank into the abyss of economic depression out of which it has not yet found its way.

In early 1990-ies Ukraine, the second largest European country with population exceeding 50 million, had, according to all Western experts, an extraordinary potential for advancement. This potential was especially visible in agriculture with its unique combination of favorable climate, highly productive soils and proximity to international markets. Its industry, too, has its so far unexplored possibilities. Economy manned by highly-skilled labour force should play an important part in international competitive environment and take steady steps towards successful integration into the global economy.

However, there were few positive economic developments in the last 10 years. Only in 2000, first time after the breakdown of the USSR, the GDP has recorded a positive surplus (6%), and industry grew up by 12.4%. This growth was largely determined by one-time and opportunistic factors, as well as by first positive results of privatisation of market-oriented industries which has been carried out in previous years.

It should be said that any process of modernization of production and change in social life presupposes an existence of an active social subject. At the stage of highly industrialized development, technocratic elites constitute such a group (managers of industrial enterprises, specialists, government agencies, etc.). After Ukraine became independent, old Soviet technocratic elite not only remained in control over the industry, but ascended to real political power in the country. However, it was unable to move the country to post-industrialization, failing to adapt the production system to current market conditions and create a favorable legislative and economic environment. It explains for an investment vacuum surrounding the country's economy.

The real strong social force, similar to that prompting the post-industrial transition in developed countries – new generation of managers and professionals, or a mighty green movement [7] – has not yet emerged. Better conditions and more time are needed to form such an impetus.

Despite the reforms of the last years, state apparatus does not have a rational structure from the point of view of balanced regional development. On the first hand, it concerns complex and multi-detailed structure of ministries and agencies (there are more than 100 of those), majority of which has a branch-oriented character. They all lack one strong center for planning and coordination of economic and industrial policy which, based of example of East European countries, is usually represented by Ministry of Economy. Existing Economy Ministry in many functions duplicates other branch-oriented industries and heavily depends on Cabinet of Ministers decisions. This structure is more or less multiplied at all regional levels. All this has a negative impact on transformational processes because it impedes all attempts of external and internal liberalization, de-monopolization of Ukraine's economy.

We need not forget about high dependency of Ukraine's economy on world and regional markets (Russian, EU and East and Central Europe countries, the US), as well as on internal political stability. Any unexpected fluctuations in this or other sphere can influence rates of economic growth and regional economic policy on the whole. If dependency of a small open economy (such as Ukraine's) on world markets may look normal in the world, in case of predominantly mono-structural export orientation of Ukraine (it first of all export metallurgical production) it increases and therefore economy requires large subsidies in the form of tax breaks or reduced energy costs.

Although a long-term program which government adopted in March 2000, determines complex and serious strategy of reforming the Ukraine's economy, speed of its realization are very low. Still low are rates of privatization in energy and other sectors, and especially in reforming of infrastructure (communications, transport).

Important for the development of the economy of old industrial regions are special economic zones and territories of priority development. History of SEZ in Ukraine's legislation has more than 10 years of development. First Law of Ukraine "On Foreign economic activity" of 1991 has launched series of legislative acts in this sphere. Status and territory of these zones are determined by Verkhovna Rada of Ukraine in accordance with laws of Ukraine on special economic zones by adopting a special law on each of such zones. Next important step in this direction was made by passing the Law of Ukraine "On General Principles of Creation and Functioning of Special (Free) Economic Zones" (1992). However, from the moment of adoption of this very

important law in the parliament, there were no amendments or changes made to it, even though experts for a long time stressed it needed improvement. That law determined goals for creation of SEZ – “attracting foreign investments and facilitation of investment climate, activation jointly with foreign investors of entrepreneurial activities, growth of export of goods and services, introduction of new technologies, supply to internal market of high quality products and services, market methods of economy, development of the market infrastructure, improvement of use of natural and labour resources, intensification of Ukraine’s social and economic development”. From this point of view, SEZ have yet to justify their existence. For example, according to data from Cabinet of Ministers of Ukraine, amount of investments, attracted to SEZs, equals 305 mln US dollars – 24% of the amount budgeted for approved projects. That money was aimed at creating 25.000 and keeping 37.000 working places, however, only 30.000 work places were preserved in the result. In general in Ukraine there were more than 100 laws and legislative acts adopted in connection to special economic zones.

Now in Ukraine, according to laws adopted, there are 11 special economic zones in 9 regions with a special investment regime, for instance, in Donetsk region (22 towns and 5 districts), Luhansk region (6 towns and 3 districts), Chernihiv region (7 districts), as well as in towns Shostka and Kharkiv.

In the middle of 1999, another package of economic acts on creation of SEZs and introduction of special regime has been prepared for territories of priority development, and first of all, in depressed regions. These documents were aimed at establishing favorable investment climate and working places, stimulating business activity, and transferring the focus of social-economic processes at the regional level and increasing region’s responsibility for their results.

According to preliminary estimates of Ministry of Economy of Ukraine, at the expense of introduction of SEZs and special regime of investment activity on territories of priority development during the next 5-7 years 200.000 working places will be created.

It should be noted that to promote the development of internal production in Ukraine including transferring “gray” industries into formal economic sphere and to attract foreign investments important factors are the following: liberal internal and external economic regime, macroeconomic and political stability, transparency and relative stability of legislation, including tax and customs legislation, simplified administrative procedures, possibility of effective court redress, clearly defined and protected ownership rights, absence of administrative pressures, functioning infrastructure of transport and communications. Special tax breaks and creation of free economic zones constitute only the first step in this direction but it does not exclude meeting all the conditions of economic and political stability.

### **Problems of European Integration.**

The Partnership and Co-operation Agreement (PCA) which came into force on March 1, 1998, sets up fundamental principles of political and economic relationships between Ukraine and the European Union (EU), and promotes further strengthening of co-operation based on the values common for both parties.

Activities under the PCA allow both parties to co-ordinate and consolidate their political and economic strategies. In particular, from an economic perspective, the PCA is an important step forward towards Ukraine’s accession into the legal environment of a common European market and the World Trade organization (WTO). It is also a tool to foster the development of a market economy in Ukraine.

The entire implementation of the PCA and the ultimate deployment of the country’s potential is the highest priority in the Ukraine-EU relationships. However, in a wide range of issues the PCA leaves to both parties a possibility of the further construction and extension of the relationships. Indeed, the extent and dynamism of the further approximation between Ukraine and the EU in each field of cooperation can differ, and will depend on the willingness of both parties.

At the European Summit in Helsinki in December 1999, the EU Council approved the EU Common Strategy towards Ukraine, the implementation of which shall support Ukraine’s integration into the European economy, and consolidation of its European identity.

In this connection, in September 2000, according to the Edict of the President of Ukraine, the Program for Ukraine’s Integration into the EU has been prepared. The Program structure has been devised keeping in mind the experience of EU candidate countries. It embraces practically all spheres of social life of the country, with a view of meeting the criteria formulated by the EU Council in Copenhagen, in June 1993.

The Program is a document, which has a comprehensive structure, and is based on a complicated methodology. It contains 140 sections and subsections (the full text of which is presented in the Addendum), and consists of the following parts:

- Current status (description of the current readiness of Ukraine in a given area towards achieving the goal of integration. Assessment of the current level of compliance of legislation and the regulatory scheme of Ukraine with the EU basic rules and principles);
- Short-term (2000-2001), medium-term (2002-2003) and long-term (2004-2007) priorities (formulation of top goals which may be reached within their respective periods of time);
- Institutional and financial needs (appraisal of resources needed to implement the defined priorities).

Responsibility for the full-scale implementation of the Program rests with the Cabinet of Ministers of Ukraine.

The following political, legal and institutional prerequisites to the Program implementation have already been created to date:

- The co-operation institutions stipulated by the PCA, which are the Ukraine-EU Co-operation Council and Committee, and the Ukraine-EU Parliamentary Co-operation Committee, carry out their activities;
- A common working program for the PCA implementation is being put into practice. Its annual update is based upon the Ukraine-EU joint monitoring of a course and progress of its implementation.
- The following political dialogues have been opened:
  - on the top level: annual Ukraine-EU summits;
  - between the Ukrainian and European Ministers of Foreign Affairs, as well as the Ukraine- EU G-3 dialogue;
  - on the sectoral and regional levels;
  - within the framework of international, all-European and regional institutions.
- The EU Program for technical assistance to Ukraine has been developed.
- The bilateral co-operation between Ukraine and the EU Member-states has been established.

The ways and a pace of the implementation of specific priorities and the Program in whole will depend upon the progress of economic reforms in Ukraine, as well as approximation of the Ukrainian legislation.

In 2000 TACIS signed the Indicative Program for years 2000-2003 which is a key element for clear implementation of Partnership Agreement on the side of Ukraine. Ukrainian side suggested that program TACIS is to be used to support realization of Government of Ukraine of a program for European integration. Sides agreed that TACIS program on trans-border cooperation could play an important role in the development of trans-border and regional cooperation in the context of EU expansion.

In December 2000 Ukraine closed down Chernobyl atomic station which was one of the positive moments to establish good ties with European community for Ukraine. Political events at the beginning of 2001 had influenced the decision of PACE to consider Ukraine's exclusion from its membership because of human rights violations. This means that internal political instability leads to distrust and protest on the side of other European states. It does not mean, however, that Ukraine will not continue efforts of a civilized entry into European community.

## **PART 2. CHARACTERISTICS OF THE SPECIFIC PROBLEMS OF OLD INDUSTRIAL REGIONS OF UKRAINE – THE SITUATION TODAY**

### **Economical situation**

The national economy today shows indications of a lasting economic crisis caused and sustained by both expected (primary) and derivative (secondary) factors. The first include decline in production volumes, degrading economic structure, losing markets for, mostly, processing industry and, consequently, narrowed market for high-tech products. The second encompass financial instability, sluggish investment process, decreased tax amounts, growing domestic and foreign government debt, etc. Gross domestic product that serves as decisive evaluation indicator in modeling current economic transformations reached 207758.8 mln UAH in 1990 (1996

prices level) or \$111596.28 mln., falling in 1998 to 101100 mln.UAH or \$41273.729 mln (Table 3). Only in 2000, Ukraine was able to maintain stable positive dynamics of GDP (6%) and of industrial production (12.9%), there was also some growth of earnings observed.

Overall level of industrial potential of regions of Ukraine fell, with three regions producing 47.3% of all industrial products – these are Donetsk, Dniepropetrovsk and Zaporizhzhya regions, their share in Ukraine's export stands at the similar level. Share of half of Ukraine's regions in overall export does not exceed 10%. There are considerable differences between regions, disintegration grows between regions inside Ukraine: highest level of inter-regional economic ties exists only among Donetsk, Dniepropetrovsk, Luhansk and Zaporizhzhya regions which are all old industrialized regions. This creates considerable environmental pressing on their territories, exacerbates social problems.

Following developments in Ukrainian economy can be regarded as positive in terms of its market perspectives:

- De-nationalization of property, emergence of non-government sector in economy and of private entrepreneurs (table 4);
- Budding national commodity, labour and capital markets with predominantly market price setting;
- Introduction of hryvnia, developing national financial and banking system and regulated currency market;
- Diversification of foreign economic relations, identifying new channels for commercial and investment collaboration;
- Higher level of economic freedom on the whole.

Another positive factor is, probably, the practice-tested ability displayed by the government, by business community and by people to endure unprecedented economic constraints – hyperinflation, regular non-payments, lack of social protection, etc. The nation has presumably developed certain immunity against spontaneous actions taken by economy management bodies.

It is the negative phenomena and trends, however, that are of concern to us:

- The public administration structure has not been modernized according to objective laws of a market economy development. In particular, the privatization process did not result in bringing about efficient owners;
- Viable system of market institutions has not been put into place;
- High-tech production facilities have been lost, as well as former leadership in numerous areas of fundamental research; brain drain has reached a critical mark;
- Exaggerated proportions have set in between physical and financial sectors of economy, as well as within each of them. Domestic and foreign government debt is growing at fast rates without any foreseeable prospects even for its servicing, to say nothing of paying;
- Domestic investment crisis has become systemic. Direct foreign investments are evidently insufficient and slow in coming to Ukraine (table 5). On October 1, 1999, the total amount of all direct foreign investment in Ukraine was 2,935 bn \$, which is tens of times less than similar figures for Eastern European countries per capita. Rates of investment flow are diminishing since 1994. In 1996, it was 60% of the previous figure, in 1997 – 43%, in 1998 – 31.6%, in 1999 – less than 10%. The number of enterprises created with foreign investment also fell: if in 1997 their number grew by 1272, in 1998-99 only by 487. There is a permanent decrease of investment climate in Ukraine. Despite series of government decrees aimed at attracting foreign investment, the opposite was observed. Investors re-orientated on enterprises with fast return of capital with a maximum profit. This explains investors' interest to sales sphere (15.8% of investments) and food industry (21% of all investment). External loans from international financial organizations, indispensable for transit economy, have had some negative implications curbing the initiative aimed at identifying alternative, primarily domestic, funding sources for social needs;
- Financial status of population has fallen dramatically. The gap between the incomes of the richest 10% and the poorest 10% has reached 14-15 times, whereas the corresponding figure for the West is 4-6 times;
- The share of shadow economy has soared up to an unprecedented scale (40-60%).
- There is also a difference in investment attractiveness of regions (map 1).

It is our belief, however, that the negative trends in 1991 – 1999 socio-economic development did not result from market reforms, but from lack of consistency in their implementation, that is, from mostly subjective reasons. Ukraine still remains in the state of transition.

Despite visible similarities of modern processes in economy of the regions (oblasts) of the country, there is sufficient difference in dynamics of production, structural transformations etc. By the sum of development indicators, Ukrainian regions have different ratings (map 2). Better understanding of essence of these processes, their factorial basis, and therefore establishing information base of the regional development of industry and policy planning, is only possible on the basis of appropriate typology of old industrial regions. Such typology should be of a highly complex character and consider a number of mutually dependent and generalized indicators.

By standardization and integration of indicators characterising concentration and accumulation of industrial production we singled out the following types of oblasts – over-industrialised, highly industrialised, industrialised and low-industrialised. Sub-types were determined according to ratio of high tech industries and other peculiarities in industrial structure of oblast. Table 6 presents subtypes of each industrial type of the region.

Table 6. Typology of oblasts of Ukraine by level of concentration and accumulation of industry, peculiarities, ratio of its high-tech level and structure of its branches

Type	Sub-type	Oblasts
Overindustrialised	A. With high proportion of coal, electric energy and chemical and chemical metallurgic cycles of ferrous and non-ferrous metals, with predominant development of middle and low-technology branches of machine-building and metal-processing, chemical industry etc.	Donetsk
Highly industrialised	A. With high proportion of coal, electric energy and chemical and chemical metallurgic cycles of ferrous and non-ferrous metals, with predominant development of high and middle-technology branches of machine-building and metal-processing, chemical industry etc	Luhansk, Dniepropetrovsk, Zaporizzhya
	B. With predominant development of high and middle-technology branches of machine-building, light, food, chemical, wood and other industries	Kyiv, Kharkiv, Lviv
Industrialised	A. With predominant development of high- and middle-technology branches, machine-building, food, light and other industries	Symy, Cherkasy, Crimea
	B. With predominant development of middle and high-technology branches of machine-building, electric power and petrochemical industries, as well as forestry and wood industry, food, chemical, construction materials industries etc.	Khmelnytsk, Poltava, Ivano-Frankivsk, Zakarpatska, Zhytomyr, Vinnytsya
	C. With major portion of industries of port industry production, with dominance of middle-technology branches of machine-building and metal-processing, electric power, food, construction materials production etc.	Odesa, Mykolayiv
Low-industrialized	A. Represented by middle-technology branches of machine-building and metal-processing, chemical industry and electric power industry, and local raw materials branches (wooden products, construction materials production etc.)	Chernihyv, Volyn, Rivne, Chernivtsyi
	B. Represented mainly by middle-technology branches of machine-building and metal-processing, local raw materials production and processing (mining of non-ore materials, non-ferrous metallurgy, food industry, construction	Kyrovohrad, Kherson

	materials production, and heating industries (brown coal, or oil-processing)	
	C. Mainly represented by local raw materials processing (food industry, construction materials production) with dominant portion of middle-technology branches of machine-building and metal-processing, light industry, etc.	Ternopil'

Crisis in the industry of Ukraine, beginning from 1990, acquired systemic character, significantly damaging the picture of territorial/regional specialization, correlation between individual branches and industries. Even today, slowing down of the collapse does not give enough reasons to perceive it as the beginning of stabilization and possible growth.

Industrial production in the country on the whole in 1998 constituted 49% of the 1990 level. Rates of fall of production vary by branch. Most fall occurred in the light industry (only 25% production compared to 1990 level), construction materials production (23%), machine-building and metal-processing (36%), the least fall was in electric power production (63% of 1990), glass and tableware production (54%), ferrous and non-ferrous metallurgy (46%). This unprecedented collapse in production has taken place against a backdrop of hyperinflation, which reached its peak in 1993 when consumer price indices for food products grew 122 times and 112 times for non-food items in comparison with the previous year.

Differentiated production recess rates by industries caused substantial changes in the national industry structure as a whole and in the old industrialised regions in particular (Table 7 – Example of Donbas).

Table 7. Dynamics in Industries Structure by Output Costs, %

Major industries	UKRAINE		Donetsk oblast	
	1990	1998	1990	1998
Industry as a whole	100,0	100,0	100,0	100,0
- electric power industry	3,36	16,23	4,92	12,37
- fuel industry	5,03	12,47	11,72	18,95
- ferrous metallurgy	11,61	25,33	33,71	45,08
- non-ferrous metallurgy	1,16	1,72	3,14	0,22
- chemical industry	5,84	6,04	4,41	2,83
- machine building, metal processing	32,34	14,64	18,29	9,61
- forestry, timber, pulp and paper	2,74	1,46	0,86	0,14
- construction materials production	3,47	2,80	3,05	2,72
- glass and porcelain / earthenware industry	0,44	0,59	0,77	0,42
- light industry	11,44	1,50	7,41	0,29
- food industry	19,39	14,25	10,40	5,19
- microbiological industry	0,20	0,04	0,00	0,00
- flour / cereal and fodder industry	0,79	1,18	0,05	0,76
- medical industry	0,73	0,88	0,11	0,06
- printing industry	0,24	0,32	0,08	0,17
- other industries	1,24	0,54	1,08	1,18

Industries experiencing the greatest decline in production tend to account for smaller share in the overall industry structure over the period under review, and vice versa. On the whole, the following general conclusions ensue from the study of industry structure dynamics and its current state:

1. The period under review saw drastic increase in the industry structure “heaviness” due to a larger share belonging to material-consuming, energy-consuming and eco-consuming heavy industry branches – power industry, fuel industry, ferrous metallurgy and other industries.
2. Overall scope and shares of high technology production, primarily, machine building, have fallen dramatically. The same is true of consumer goods manufacture, primarily, light industry.

If those tendencies are not reversed in the near future, the country will lose its status as a highly-industrialised country, and will become industrialised, or even low-industrialised.

In conditions of the general economic crisis and relative liberalization of the economy and foreign trade, the abovementioned tendencies of structural dynamics of the industry are connected to several factors: relative demand in world markets for production of heavy industry (electric power, ferrous metals, some chemical products etc.), as opposed to lack of demand for high technology products of Ukraine which were not able to convert from their military orientation into mass civil production – which rendered the light industry as a non-competitive. In essence, the export of metallurgy products is often aimed to hold on to foreign markets and ensure foreign currency revenues at any cost, rather than to ensure high economic efficiency. In 1999, the physical volume of metal product exports grew by 26.5 per cent, while its monetary worth dropped by 7.5 per cent. Attempts at expanding exports by lowering prices lead to antidumping actions against Ukrainian exporters and ultimately diminish the profitability of metallurgy product supplies. Regional industry developments are more or less contingent with tendencies mentioned above. In connection to this, depth of fall of industrial production and intensity of changes in branch structure is defined by its peculiarities, rate of high-tech branches and other factors. The conducted analysis demonstrates that the least fall of production (index of industrial production - correlation of 1998 level to 1990 level exceeds 45%) is noted in Odesa, Mykolayiv, Zaporizzhya, Poltava, Kyiv, Vinnytsya, Ivano-Frankovsk, Khmelnytsky, Cherkasy and Rivne oblasts (table 8). In those regions, the analysed period was also marked by the most intensive changes in the structure of branches of industry (table 9). They were marked by rapid growth of portion of electric power production (all five atomic power stations are situated there), of oil and oil-processing industries (Poltava, Ivano-Frankivsk and Odesa oblasts), non-ferrous metallurgy (Zaporizzhya and Mykolayiv oblasts), some branches of chemical industry of the general chemistry – processing of transit raw materials (Odesa region), general chemistry (Cherkasy oblast), tires production (Kyiv oblast), food industry (Khmelnyskyi, Cherkasy, Mykolayiv oblasts), ferrous metallurgy (Zaporizzhya, Poltava oblasts). Major part of these regions belong to industrialised and highly industrialised type.

Table 8. Types of Ukraine's regions by depth of fall of the industrial production in 1990-1999

Fall of industrial production	Index of industrial production (1999 to 1990, in % )	Oblasts
Deep	Less than 40	Volyn, Symy, Zhytomyr, Zakarpattya, Kyrovohrad, Luhansk, Lviv, Kherson, Chernihiv
Deeper than average	40-45	Crimea, Dniepropetrovsk, Donetsk, Ternopil', Kharkiv, Chernivsti
Less than average	45-60	Vinnytsya, Ivano-Frankivsk, Kyiv, Poltava, Rivne, Khmelnytskyi, Cherkasy
Low	More than 60	Zaporizzhya, Mykolayiv, Odesa

Table 9. Types of Ukrainian regions by intensity of changes in branch structure of the industry in 1990-1999

Intensity of change	Coefficient of relative structural change <sup>1</sup>	Oblasts
Low	Less than 70	Luhansk, Dniepropetrovsk, Donetsk, Kyrovohrad, Symy, Vinnytsya, Zhytomyr, Zakarpatska, Ternopil', Cherkasy, Chernivtsi, Crimea
Less than average	70-80	Kharkiv, Volyn, Lviv, Chernihiv
Higher than average	80-90	Zaporizzhya, Poltava, Rivne, Khmelnytskyi, Odesa, Kherson, Kyiv
High	More than 90	Mykolayiv, Ivano-Frankivsk

The rest of the regions are characterised by deep or deeper than average levels of fall of industrial production and correspondingly – by a low or less than average levels of intensity of changes in industry branches. Less fall in production in areas more resistant to crisis (electric power, metallurgy etc.) is leveled by a bigger fall of less

<sup>1</sup> Value of coefficient of relative structural movements was calculated by the following formula:  $I = \sum |f_1 - f_2|$ , where  $f_1$  – share of a certain industry in structure of industry in base year (1990),  $f_2$  – share of the same industry in 1999.

resistant industries in these regions. This situation explains a considerable fall of production there and puts them in a row of the regions most affected by crisis.

Most low-industrialised, some of the industrialised and heavily industrialised regions belong to this category, as well as over-industrialised Donetsk oblast.

It can be summarized that the sharp fall did not occur in regions where heavy industries were developed such as mining and raw materials processing (local and shipped), and production of electricity, and those which have a considerable export potential.

In regions where those branches were underdeveloped or their development was hampered by drop of production in others, sharp decrease in production was noted.

### **Social problems of old industrialised regions**

The economic depression had wrought terrible social consequences. After a decade of continuous decline in living standards, in 1999 average monthly income per capita was 103 UAH – about US\$25 at the current exchange rate – in real terms down from the 91 UAH (\$37) in 1998.

Unemployment and labour market. Transformation processes going on over the past few years and involving closing mines down, decreasing coal production and numbers of labourers engaged in this industry, have aggravated social issues considerably: unemployment sprang up, strikes were held and all sorts of offences were committed. Level of unemployment in Ukraine at the beginning of 90-ies was relatively low (official data estimated it to be no more than 0.5% in all years until 1995). It began growing from 1993. The first largest and most comprehensive survey, even carried out in Ukraine by the International Labour Office is carried out only in 1995 [11]. However, data given by official state statistics and ILO differ significantly, the estimates obtained by ILO methodology exceed national statistic estimates by 2 times. It further complicates analysis, especially since national statistics do not always consider part-time employment, unpaid and partially paid administrative leave, short-time jobs etc. For example, although the registered unemployment rate in Ukraine remains low at around 0.5%, almost one in every three workers in Ukrainian factories in 1995 was in hidden unemployment.

According to the population economic activity survey, made in 1999 by the ILO methodology, currently in Ukraine the number of unemployed constitutes 12 % of all economic active population.

Table 10. Unemployment rate, %\*

	1995	1998	1999
UKRAINE	5,6	11,3	12,0
Donetsk region	4,8	9,2	10,7

*According to ILO methodology*

*Unemployment rate (%) is a percent of the number of unemployed to the economically active (labour force) or able-bodied population of working ages.*

The number of officially registered unemployed is significantly lower. For instance, on January 1, 2001, the level of officially registered unemployment in Ukraine comprised only 4.2% of all able population [12].

Shadow economy has reached an unprecedented scale (40-60% of the economy). The labour market is characterized by excessive numbers of workers accompanied by general recess of the industry, which brings about increase of hidden unemployment and growth of shadow employment. The latter may bring major or second-major income to the population.

Sociological studies demonstrate that the portion of informally employed among Ukraine's unemployed is about 90%, and among able-bodied youth of school age – 70%. Total estimate of workers employed in the shadow economy, stood at 10 mln at the beginning of 1998. For 7 mln of officially registered individual entrepreneurs, there were 3 mln non-registered. During 1995-1998 the number of people employed in informal sector of the economy grew by 54.4%. The largest growth occurred in Kiyv and Kiyv oblast, Dnipropetrovsk, Kyrovohrad, Zakarpattia and Zaporizhzhya oblasts [5].

Shadow employment constitutes one of the results of re-distribution of the workforce after the structural changes in the national economy. Because the average pay in the formal sector remains low, informal employment allows people to survive and also plays a "social stabilizer" role.

Among positive aspects of the shadow employment, we can note preservation of a workforce potential, slowing down the general impoverishment of the population and support for its buying capacity, as well as providing additional supply of consumer goods and services, development of entrepreneur skills. However, these positive

traits are not outweighed by negative factors of existence of the shadow economy which lead to deformation in the labour market, weaken the value levers of its regulation, growth of hidden employment and income stratification of the population, bring about social tensions. Informal unemployment also devalues highly skilled workforce by using them in jobs which require lower skills and are associated with worse working conditions and decrease of other important social and demographic indicators.

### **Demographic situation**

Since Ukraine became an independent nation, the population has shrunk in the wake of a substantial decline in life expectancy. After approaching 52 million earlier in the decade, in 1999 the population fell below 50 million. Average male life expectancy at birth had fallen to 62 years, while for women it was just over 73. The continuing socio-economic crisis has deepened negative trends already existing in Ukraine and has caused a further deterioration unprecedented in peace-time conditions. The number of deaths has continuously exceeded the number of births since 1991. In recent years a rapid increase has been observed. Natural population growth indicator for Ukraine was in 1999 – 7,0, and, for example, for the old industrialized Donetsk Oblast – 9,9. In 1991 it amounted to, respectively, -0,8 and – 2,5. The situation is complicated by the worsening of qualitative indicators – of public health and is considered by specialists to be critical.

Depopulation occurs in all of Ukraine's regions, however, the highest rates of decrease are observed in highly urban and old industrialized regions of Donetsk, Dnipropetrovsk, Luhansk and Kharkiv oblasts. Main reason of depopulation is fall of birth rate: from 13.3 in 1989 to 7.8 in 1999. The lowest birth rate is recorded in Eastern Ukraine, which is also old industrialized and urban part of the country.

Drastic decline in living standards of the population, the high level of real unemployment, below-the-standard labour conditions of the employed, housing deficit and poor public sanitation, falling nutritional levels, lack of or high cost of medical care, as well as environmental hazards have had harmful impact on the health of the population. This trend is revealed by the increasing mortality rates together with the decline in average life expectancy. In 1990-1999, the mortality rate in Ukraine increased from 12.1 to 14.8 per 1000 population.

An important factor in the decline in the health of Ukraine's population is the crisis in the health care system, which is connected with a severe shortage in funding. 3.6 % of Ukraine's GDP is allocated to health care in comparison to 6.2% in Poland, 6.5% in Portugal, 5.9 % in England, 9.0 % in Germany, and 14 % in USA.

Depopulation has an impact on the age composition of the population; it contributes to the ageing process. Children aged 0-15 years make up a smaller and smaller proportion of the total population while individuals of pension age make up a larger proportion. Indeed, individuals of pension age constituted 23.3% of the total population at the beginning of 1999. There were 768 persons not able to work (including children and pensioners) per 1000 able-bodied persons in Ukraine at the beginning of 1999. This situation is more complicated in old industrialized regions (see Donbas Case Study).

### **Migration**

One more factor contributing to the demographic situation in Ukraine is the growing mobility of the population caused by various historical, political and environmental (Chornobyl) factors.

The collapse of the USSR and the emergence of new independent states incited massive migrations of people totaling 9 million among whom were the following: individuals fleeing ethnic conflicts and civil wars; individuals encountering problems when newly emerging states introduced specific procedures for obtaining and renouncing citizenship; individuals reuniting with families; and individuals returning to their historical homeland (in case of formerly deported peoples).

The difference in living standards in the newly independent states arising from the differences in the rate and sequences with which reforms have been conducted has also stimulated migration flows, within, into and out of the state. The direction of these flows in Ukraine's case has changed in the last five to six years. For instance, in 1991-92 Ukraine had a positive migration balance and population grew at the expense of migration. From 1994, migration remained on the positive, but demonstrated tendency to falling. Last year, migration was the lowest of –44.800 people. It should be noted that in 1999 negative migration balance was mostly formed because of outflow of population to CIS countries (44.300 people). Migration balance between Ukraine and CIS and Baltic states fell down and registered at –500 people compared to 32.500 people in 1998.

Last year negative balance of migration was observed in most regions of Ukraine. There were no special tendencies of migration characteristic to old industrialized regions in comparison to the country as a whole.

## **Problems of Youth and other social problems**

The current transition process in Ukraine has brought rapid social change; increasing poverty and marginalization, unemployment and changes of societal norms and values which challenge health and development in all age groups, but particularly among the young people.

Young people are especially vulnerable as they have special, often unique needs and problems as they emerge from a period of rapid growth and development. Youth is usually dependent upon adults to meet their needs for physical survival, as well as emotional maturity. Given the current pressures on parents in Ukraine it is not surprising that neither of these needs are adequately being met, thus, resulting in a deterioration of psychological health in an increasing number of children and youth.

The level of crime committed by young people in the last decade has increased by 12 %. Juvenile crime makes up 25 % of all crimes committed in Ukraine today. The highest growth of crime was registered in 1999. In Dniepropetrovsk and Donetsk regions there were 105 and 96 criminal groups discovered respectively. Homicide rate grew by 11% in 1999 and now equals 112., of which 27% are done by criminal groups from Donetsk region, and 16% - from Odesa region. Research shows that 68% of criminals were unemployed and not studied at the time of committing the crime. Thus, unemployment predetermines situation with crime in many Ukraine's regions, especially those undergoing massive restructuring.

The level of education in Ukraine corresponds to standards of developed countries by many parameters. Educational sphere has a great potential to facilitate Ukraine's integration into the world community. Adult literacy is estimated at 99%. By index of education, different regions of Ukraine are homogenous and reflect the same level (0,887) [Human Development Report, 1998]. The same index is used to characterize countries such as Israel, Portugal, Hungary. Highest levels of education in Ukraine are recorded in Kharkiv, Kyiv and Lviv oblasts. This parameter, however, may not be sufficient enough for the country to overcome economic crisis. Release of qualified workers from production goes as intensively as of blue-collar workers, and there are no conditions created for use of qualified work force neither for their higher pay. In old industrialized regions situation is exacerbated by their traditional industrial export orientation as a source to earn foreign currency, and no money is allocated to encourage growth of non-productive sector and high-tech industries.

Population of Ukraine gives a highly negative evaluation to the present socio-economic situation in the country. The results of the first all-national public opinion poll on human rights and freedoms in Ukraine, which reflects on the knowledge of rights and freedoms, knowledge of and degree of confidence in human rights institutions were following: 71.6% of respondents rather disagree with the idea that human rights and freedoms are currently observed in Ukraine. Highly unstable is a political situation in the country.

Environmental problems. The continuous decrease of industrial production did not bring a proportional reduction of pressure on the environment. Situation in old-industrialised regions (for instance, in Donetsk region) is characterised as the most unfavorable and hazardous, an example of which can be seen on Map 3 of air pollution.

Analysis of all components allows to conclude that "social attractiveness" (combination of all indicators characterizing human life) of old industrialized regions of Ukraine, first of all, of Donetsk, Luhansk, Odesa, is very low, while their investment attractiveness remains at quite high level.

## **PART 3. STRATEGIES FOR FUTURE DEVELOPMENT OF UKRAINE AND ITS OLD INDUSTRIALISED REGIONS**

### **Principles of elaborating strategies for country's economic development.**

Under current socio-economic conditions positive role is played by mighty economic frame emerging on the Ukrainian terrain through implementing market regional policy model on the national level. It operates as an important strategy in rehabilitating the national economy.

The model operating both as an independent political and economic category, and as a part of the national strategy for Ukraine's socio-economic development, shall be underpinned by social regional growth theories. Basic production facilities, decisive for the whole national industrial complex, shall be set up in different regions of Ukraine. They will guarantee increased rates of economic development for each region and for the country as a whole.

To implement this strategy in economic policy it is necessary, first, to examine each region's specific economic features, namely, natural resources potential and available financial and labour resources. Then, taking into account current possibilities for and restrictions upon their best uses, as well as the region's main challenges, priority industries shall be identified for each region whose development will raise the efficiency of their operation. In doing so special attention shall be given to strengthening the potential of export-oriented regions.

Accomplishing the above-stated strategic objective for regional policies hinges currently on meeting two mandatory requirements. The first addresses the need to keep intact Ukrainian economic complex' territorial integrity, while the second, in accordance with sustainable development Concept, deals with maintaining environmental and economic balance in the regions' development.

An important element in reforming national economic relations is, primarily, human resources. Given people's slowed down economic activity and, consequently, their lower living standards, this component of the regions' initial potential is especially affected. This is borne out by limited consumer demands due to lower incomes, by increasing number of population groups requiring social protection, by deteriorated health indicators, etc.

It is noteworthy that demographic and professional training processes specific for various regions in Ukraine are used as subsidiary point of reference in identifying the region's production specialization and in transforming the country's economic complex structure- and territory-wise. It is no less important in terms of Euro-integration in formulating methodological basis for regional cooperation and integration.

Despite all the destructive changes, industry continues to play not only an important role in production complex, but continues to affect the social and natural environment of the country and its old industrial regions.

Therefore, modernization and rational development of industry should be viewed as key in a technological break-through of the national economy in the 21st century, which will bring about improvement of the living standards of the population, and re-naturalization of the environment.

Realization of these strategic tasks requires the development of a complex industrial policy of the country, which would be based on a multi-level analysis of the industrial development not only in regions, but in industrial centers and "knots" (key-regions), and would highlight major tendencies and major directives for a perspective development.

Following principles should be laid in the foundation of strategy for a perspective development:

- Consideration of stage-evolutionary character of the development of industrial production, and a broad use of the world experience and practice of countries which entered a post-industrial stage.
- Full accord of perspective development of the industry, its scale and specialization to national interests of the country, maintaining its security (economic, environmental, social, political)
- Adequacy of the development of regions to their existing potential, rational use of resources
- Orientation of development on growth and effective functioning of industry, increase of quality of production, and ensuring competitiveness of production.
- Strengthening external role of the country on the base of industrial development, growth of export potential of the country and its regions, rational participation in international division of labour;
- Ensuring environmental policy in industrial production, reduction of environmental pressure.
- Strengthening of social orientation of industrial policy which could bring about improvement of living standards and quality of life of the population

Main task for industrial development today is to lead the country out of the crisis. Current crisis is purported not only by a change in conditions for its functioning (transition from a command to a market economy, collapse of inter-regional economic ties), but by the structure of the economic system itself (management, bureaucracy, technological, functional, others), all of which was formed during the previous command economy system.

### **Perspective directions of development of old industrialised regions**

Analysis of peculiarities and development tendencies of the industries in Ukrainian regions, study of foreign experience, allows to draw some perspectives for industrial development of the country regions. More or less, all these directions have a perspective importance for all regions and are to be implemented consistently and step-by-step.

At the first stage, at the expense of mobilization of local and regional financial resources and attracting foreign investment, or state subsidies and waivers, it is expedient to conduct modernization of the following two types of production:

1. Traditional and new export-oriented industries which will ensure the inflow of foreign currency.
2. Production of consumer goods with high liquidity and fast capital turnaround (food industry, some branches of light industry, construction materials production, wood processing etc.) Development of these industries could limit import of consumer goods and capital outflow from regions, and will increase investments into a local economy.

At the second stage, as the country will emerge from economic crisis, more preconditions will appear for modernization and reconstruction of the main branches of industry – electric power production, heating industry, construction materials production etc. At the same time, this will serve as a powerful impetus for activation of middle-technology industries, and ultimately, high tech branches of the machine-building.

At the third stage, as the production growth will be steady, there will be preconditions to mobilize investment resources to produce innovations, full conversion of industrial production to new technologies and forms of production organizations. Among other methods, creation of zones of technologic development – innovation centers, techno-parks, and further on, techno-polis structures.

Besides this strategy, there are some others, aprobated in countries of West and Central Europe and acceptable for development practices of old industrialized regions of Ukraine.

Some of them are already implemented with more or less degree of efficiency. First of all, it is “Export and Integration strategy”. It is aimed at the growth of export-oriented industries that provide inflow of foreign currency to the state budget at the expense of sale of goods at external markers as well as by foreign investments.

Quite perspective today can be a strategy of providing subsidies and tax incentives for problem regions and centers – “strategy of forming regions of priority development and Special Economic Zones”. At present time, this strategy is being implemented in old industrialized regions of Donbas and near-sea regions (Odesa and others). Implementation of this strategy in legal respect is based on the Law of Ukraine on Special Economic Zones and some laws on special economic zones adopted for some regions and cities of Ukraine.

Not less perspective, but less implemented into regional practices is “Infrastructure strategy”. On the first hand, it concerns formation of European network of transport corridors (Ministerial Conference on Crete), some of which should pass through the territory of Ukraine (corridors 3,5,9, “Europe-Asia”, “Baltic Sea - Black Sea” etc.) Projects for some of them are already developed or are at the last stage of development. No doubt that realization of these projects will serve as a strong impulse to regional development, and will serve as an important factor of Ukraine’s integration into Europe. Connecting Ukraine to European transport and communication networks will particularly serve the development of a strong recreation and tourist region of Carpathians, activate high- and middle-technology industries around the line Uzgorod-Lviv-Ternopil-Khmelnyskyi-Vinnytsya-Cherkasy-Dnipropetrivsk-Donetsk and the line Lviv-Rivne-Lutsk-Zhytomyr-Kyiv-Poltava-Kharkiv. Besides, it will promote modernization and intensification of traditional industries in Donbas and Near-Dnieper.

Serious complex of measures which are implemented in Ukraine are projects of airport modernization and granting them status of international airports (Donetsk, Dnepropetrovsk, Krivyi Rig etc.) which is another factor of development of these territories.

For Ukraine as a country with high level of science and technology development (rocket-building, aircraft-building, super-solid compounds, technological equipment for some branches of industry etc.) one of perspective directions is a strategy of developing new form of innovative activity – technological parks, innovation centers etc. First steps are made in this direction, for instance, technological parks begun to be formed at the base of some academic institutes in Kyiv and Kharkiv. Existing concepts in this sphere require improvement, and more perspectives for its development should be sought in expending the technoparks and innovation centers sphere and their organization based on European samples.

No less acute remains a problem of protecting the environment. In this regard, measures to re-profile some enterprises on production of nature protection equipment would be appropriate.

As European experience shows, strategies need to rely on institutional basis. For instance, this concerns development and adoption of laws and other legislative acts. Some steps are already made by Ukraine in this direction. For example, this concerns the above mentioned laws on special economic zones, decrees of Cabinet

of Ministers on networks of international transport corridors, Decrees of President on development of mono-functional cities and some other documents. Important is to adopt the Law of Basics of Development Stimulation of regions and depressed territories, the draft of which is developed by Ministry of Economy of Ukraine and is accepted for consideration by Verkhovna Rada (Parliament) of Ukraine.

### **Strategies of European Integration**

An intensive approach to integration and bilateral relations should replace the extensive approach (where the number of events, trips and visits, and signed agreements overshadows their practical output, and political symbolism drives attention away from constructiveness and beneficial cooperation). Such "renewed" activity could be started in several priority directions<sup>2</sup>:

1. *Development of a national strategy for European integration.* Such a strategy should become a document of "principal steps". It would be comprehensively strengthened by a material and intellectual plan of action that clearly defines the authority and responsibilities of various bodies, their reporting etc. Internal Ukrainian adaptation to European realities and the transformation of integration into a powerful generator for domestic change can be regarded as the main goal of strategy according to President Kuchma's Decree No. 615, dated June 11, 1998, entitled "The Strategy of Ukraine's Integration into the EU".
2. *The reaching of a correlation of values, norms and principles of Ukraine's internal political and social life with the norms and principles of the Euro-community.* The following should be mentioned in this connection:
  - the democratization of the process of state decision-making (through the re-training of officials and the creation of conditions necessary for the effective activity of the mass-media and non-governmental institutions in controlling the processes of making and implementing decisions);
  - develop mechanisms to attain a general national consensus concerning the main directions of Ukraine's European policy;
  - the creation of mechanisms of civilian control over state institutions;
  - the conducting of a comprehensive educational campaign for primary and high-school students (assisted by the preparation of specific manuals) aimed at explaining the advantages of and the necessity for integration into the European community;
  - organization of a youth exchange program based on existent European models;
  - the development of state policy for Ukrainian students/professionals studying abroad, the purpose of which would be the accumulation of a competitive national intellectual potential;
  - the organization of a coordinated long-term "Euro publicity campaign". Its goal, through the skillful use of the principles of mass-media techniques and influence over a mass audience, would be the orientation of society to the benefits of integration.
3. *The search for a strategic partner among European states.* However paradoxical it may seem, the US is Ukraine's main lobbyist in Europe, especially in Euro-Atlantic structures. The "Europeanization" of Ukraine's continental lobby could commence in the following spheres:
  - the intensification of cooperation with West-European states; the establishment of a wide-ranging dialog between experts and scholars which could promote closer ties between Ukrainian and West-European political élites;
  - Ukraine's active participation in discussions concerning NATO's new Strategic Concept and NATO's role in Europe, with an accent on the strengthening of the European pillar of the Alliance;
  - the intensification of the dialog with the EU and the WEU in the spheres of domestic and security policy, as these institutions will determine the future of continental security policy;
  - the intensification of regional cooperation (particularly with neighboring countries' border regions) and partnership in the effective resolution of regional conflicts;

Taking into consideration experience of previous cooperation, similar positions and strategic interests, Germany could be such a partner for Ukraine.

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<sup>2</sup> Ukraine 2000 and beyond: Geopolitical Priorities and Scenarios of Development / The monograph of the National Institute for Strategic Studies and National Institute for Ukrainian-Russian Relations. Kyiv, NISS, 1999. 384 p.

4. *The creation of conditions necessary to attract European investments.* This direction will certainly demand the most serious efforts since it deals with fundamental changes in Ukrainian economic life. In the meanwhile, it would be prudent to consider the interstate patronage of investments, and measures that would prevent the over-indulgence of officials in servicing foreign investments in Ukraine.

On the other hand, Ukraine could take part in strategic European projects such as the "Trans-European Network" (the development of continental communication systems).

The level and intensity of Ukrainian cooperation with Western European states are integrative indicators of the presence or absence of the government's political will to continue the policy of European integration, to conduct economic and political reforms, and to instill democratic norms and principles into Ukrainian life.

It is also important to transform cooperation with Western European states into an active tool capable to ensure one of the most important national state interests - survival in a competitive international environment, and the ensuring of the prosperity and security of the populace.

#### **Functional and production zoning of Ukraine's territory in view of the country's sustainable development.**

In the foundation of policy aimed at ensuring a sustainable development of old industrialized regions, should be a scheme of functional and production zoning of the country's territory. Such scheme will give a clear vision of patterns of productive use of territories, on one side, and, because of its informational character, will help define a set of constructive measures aimed at reaching a certain level of sustainability in socio-economic and environmental development of particular regions of the country.

Following criteria have been used to establish patterns of functional and production zoning of territory. These criteria for functional and production territorial entities (FPTE) have an areal and zoning character.

1. Level of diversification of production functions of a territory reflecting its saturation with various types of industrial activity.
2. Dominant type of production in a territory, which determines its main functional orientation and specialization in production complex of the country.
3. Taking into account stage-evolutionary character of production development in a territory, particularities of its genesis (primary industrialization, re-industrialization etc.)
4. Taking into account progressive of branch and technology structure of production in FPTE, dominant concentration of high-tech, middle-level or low-technology (mostly in depressed regions) branches and industries.
5. Delimitation of FPTE by defining limits of expansion of the most intensive labour and production links between production centers.

World experience was considered when elaboration the concept of functional and production zoning of various types of production territories, goals and problems of their sustainable development under various conditions. This enabled us to define priorities in consequent development of FPTE, defined by using these criteria.

In the most general way, we define 9 types of these territories which represent areal, zonal and mixed character of location.

Separate type is represented by territory contaminated by Chernobyl catastrophe (more than 5 Curie per sq.km). This territory is practically taken out of production use and represents an alienation zone. It is used only for scientific and technical research, field trips for scientists, and the station itself may remain open for some limited time. Further development of this territory will only be possible after nuclear clean-up will be carried out and "Shelter" be liquidated.

To the first type of FPTE we include multi-functional areals with concentration of major capital city or inter-regional functions, with very high level of industrial concentration, suburban type of agriculture (with priority to post-industrial types of production). In full sense, within the territory of Ukraine, three parts possess features of this type – Kyiv, Kharkiv and Lviv areals. They cover considerable territories and in general coincide with limits of urban agglomerates and zones specializing in suburban type of agriculture. These FPTE are a sort of "engines" which can give an impetus to sustainable development of all the country's territory. In these regions generation and adaptation of technologies happen most actively, new market infrastructure is being established, without which effective functioning and transition to a new post-industrial level of production complex of Ukraine will not be possible.

Most numerous is the second type of FPTE, which includes industrial areals which were industrialized or re-industrialized on the basis of middle-level and high-tech industries (with priority to technologic modernization and partial re-specialization of production). The area of these areals in most cases includes the territory of town or one or a few administrative districts. These are predominantly oblast centers, some other towns and surrounding them districts. After liberalization of foreign trade and transition to a market, high tech and middle-level technology branches of industry which constitute the productive basis in these areals, could not compete in the market and their production systems collapsed rapidly. Despite the difficult socio-economic situation and stagnation of the economy, these FPTE will play a role of “nuclei of growth”, where adaptation and expansion of production and other innovations will occur, and it will be an impetus to intensify the production, making it environmentally- and socially-fit. This will require the industrial production to undergo re-specialization to the current market conditions in country and abroad. These FPTE in perspective have to become important regional “knots” of development of a market sector of the economy, and will ensure effective functioning of regional production complexes in new economic conditions.

Least numerous are the third type of FPTE, which comprises industrial areals with concentration of mining and extraction industries, raw minerals processing or related to them branches of material- and energy-consuming branches of heavy industry (with priority to introduction of environment-friendly technologies on use of raw materials, decrease of technogenic pressure on the environment etc.)

Compared to previous type, these areals are smaller and are limited to territory including a group of industrial centers of mining and processing mineral resources. In these areals, technological specifics of industrial enterprises account for extremely high technogenic pressing on the environment. At the same time, relative demand for products of heavy industry in the world market explains a relatively less collapse of production than in FPTE of the second type, which constitutes their importance for the country's economy. Considering this importance, the focus should be made on subjecting production to environmental standards.

Widely spread in the eastern Ukraine are FPTE of the fourth type, which represent industrial areals with concentrated depressed branches of the mining industry (with priority to branch restructuring and modernization of production, decrease of technogenic pressure on the environment). Depressive nature of the production in these areas purported their full socio-economic stagnation. Restructuring of production in these territories, their socio-economic rehabilitation requires considerable resources (mostly financial) and can be implemented within the framework of special national programs with a focus on sustainable development.

Fifth type of territories represents zones with predominant agrarian specialization and developed food, light industries and construction materials production, other branches (with priority to intensification of agricultural production and modernization of local raw materials processing). On the whole, this type of territories is characterized by a considerably low level of industry and infrastructure development (mostly market infrastructure). However, because enterprises of such kind produce high liquidity production (food) with a fast capital return, it creates favorable conditions for socio-economic development of these territories. Important for them is the development of fully fledged market infrastructure, improvement of the investment climate, rise of productivity, improvement of quality of products.

Zonal in character are also FPTE of the sixth type, which represent forest resource territories of long-term use (with priorities to rehabilitate environmental functions of forests and its rational use). FPTE of this type are located mostly in the north of the country and in Carpathians. Transition to a model of sustainable development requires reduction in industrial use of forest, despite the need for resources. Seventh type of FPTE represents territories with intensive recreational use of inter-regional importance (with priority to development and modernization of the service sphere), characterised by areal-zonal location defined by specifics of location of recreational resources. Zonal character of location is most typical for the near-sea territories, where beach and climate recreation facilities are situated, and for some mountain areas. Areal character of location is characteristic for parts with wide spread of balneological resources (spas, curative springs). Compared to previous types of FPTEs, this type has the lowest technogenic pressing on the environment. With adequate support and financial investment into particular local industries, these territories can quickly transcend to a sustainable development level, and that is dependent on establishing a favorable investment and business climate. Some efforts in this direction have already been made, for example, in free economic zone “Resort “Truskavets” and others.

Eighth type – territories with extensive nature preservation activities, basically nature preserves, with industrial production limited and natural bio-sphere complexes are being maintained. Those are national parks, reserves, nature monuments, and other objects.

There are also territories where it is not possible to determine the dominant type of production. In this connection, we define the ninth type of FPTE, which combines different types of production activity. According to zoning, following map has been compiled (map 4).

It should be stressed that this zoning has a predominantly functional character and allows to forecast dynamics and directions for perspective development of certain regions. However, the question remains about correlation of notions of “functional economic zones” (areals) and old industrialised regions. To our opinion, there is no contradiction in these terms. They define different aspects of the same phenomenon. In foundation for definition of “an old industrialised region” lie criteria of historic and chronological character. They point at a long-term of economic expansion and activities in this or the other region. From this point, almost any region of Ukraine can be characterized as old industrialised. However, in this category there is a group of regions where industrial production has been in existence for long period of time (in case of Donbas 200 years). Not less longer has been industrial production in existence in Kharkiv, Kyiv, Odesa, Lviv, Vinnytsya and other large economic centers. They can also qualify as old industrialized. But if the latter have mostly areal character and were formed around processing industry branches, Donbas represents a considerable old industrialised region, which covers not only Donetsk region but some neighboring regions (Luhansk, partially Dnipropetrovsk) and formed around mining industries. In this instance, it relates to analogous regions in Western Europe (Ruhr and others).

In following years, Donetsk region formed a diverse industrial complex with multi-component structure of production, where largest share belongs not only to mining but to processing industries as well. Functionally, the region belongs to a mixed type. This explains ambiguity in developing strategies of a perspective development of this and other old industrialised regions where the main focus is made not only on developing basic (traditional) branches but also of other spheres of economic activity.

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