

## **Strategic priorities of modernization of Ukrainian economy in after-crisis period**

### INTRODUCTION

Contemporary trends of economic development of Ukraine provide a wide range of issues for the research in the sphere of elaboration of strategy for the modernization of the Ukrainian society. Deep and long-lasting systemic crisis (1991–1999), caused by the transition of our country from the totally planned economy to the one based on market laws, was changed by the period of high economic growth (2000–2007), followed by the collapse of world financial markets (2008–2009) and unpredictable after-crisis time. In order to work-out an efficient long-term plan of social-and-economic development of our country it is necessary to comprehend and take account of the drivers of economic growth, as well as of the weaknesses of economic system, revealed by the current economic crisis.

Although in the period of 2005–2007 the GDP of Ukraine grew by nearly 19% and labour productivity – by almost 16% (exceeding productivity growth in the developed countries), it was not accompanied by the processes immanent for the developed countries, where the change of growth dynamics is fuelled by the commercialization of new high technologies.

In the period of economic growth national industrial complex failed to realize the strategy of modernization and restructuring. All changes were spontaneous in their nature and were triggered mostly by the changes of international environment. According to the International Labour Organization, labour productivity in Ukraine in 2008 (calculated as GDP per person engaged in constant 1990 USD at PPP) was 11134 USD, while in the United States – 65480 USD, France – 55052 USD, Germany – 42588 USD, Russian Federation – 18702 USD<sup>1</sup>.

The whole period from 2005 to 2010 can be described as a waste of time for the national economy, as it had to adapt to a set of internal and external shocks of supply and demand. So, in 2005, under conditions of sharp decline in global markets Ukrainian economy was adapting to **active socialization shock** (a 39.3-percent-increase of minimum wage and almost a twofold increase of minimum pension), which on the one hand increased producers' costs, and on the other –

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<sup>1</sup> Key Indicators of the Labour Market 6<sup>th</sup> Edition, International Labour Organization 2009

expanded domestic demand. In 2006–2007, when a further increase of social standards and improvement of external conditions took place, business was forced to adapt to **the shock of rising energy prices** (during the period the price of imported natural gas increased by 69.2%), that is – **a supply shock**, caused by rapidly growing production costs. Beginning of 2008 was characterized by a shocking increase in commodity prices in world markets, causing the need to adapt to a **positive demand shock**. In the second part of 2008 to the mid-2009 – during the escalation of world financial and economic crisis – further increase of social standards and energy prices took place. In the end, this situation led to a mixture of various shocks – supply, demand and active socialization shocks – causing a deep economic and financial crisis in Ukraine.

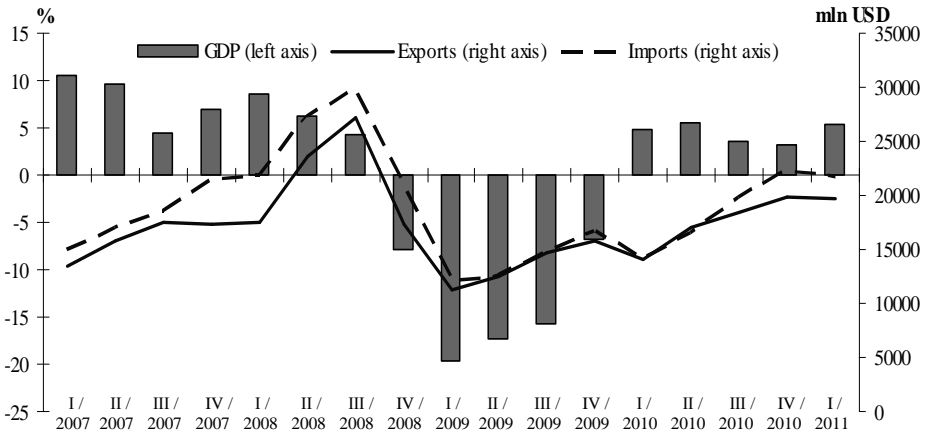
Comprehension of such adjustments leads to a conclusion that supply shocks in conditions of growing demand were not critical, while shrinking demand shocks have led to significant negative consequences for the economic development of Ukraine. According to the experts of the Ministry of economy of Ukraine, the lack of modernization and quality improvements in the manufacturing process have become the biggest obstacle to reducing the negative consequences of the demand collapse in the world commodity markets. So, the world crisis proved that the opportunities to employ the extensive type of economic growth for Ukraine had already been exhausted. Therefore it is necessary to implement the strategy of advancing development, i.e. implementation of a number of structural reforms in all spheres of the economy that would ensure annual mid-term high economic growth.

#### CRISIS AS A MECHANISM TO REVEAL THE WEAKNESSES OF ECONOMIC SYSTEM

Ukraine during 2008–2010 went through difficult times, having suffered from the global financial crisis, increasing protectionism, political changes in the country and other factors. In 2009 Ukraine experienced the highest among the CIS countries reduction of GDP in constant prices (-14.8%). At the same time, governments of Belarus, Kazakhstan, Azerbaijan, Kyrgyzstan, Tajikistan and Uzbekistan were able to successfully contend with global crisis and avoid recession of production. The reduction of real GDP occurred in Armenia (-14.4% compared with 2008), Russia (-7.9%) and Moldova (-7.7%). In Ukraine it amounted to -19.6% in the first quarter of 2009 in comparison with the first quarter of 2008 (Figure 1).

Drop in the production output along with the deteriorating crisis of payments caused a simultaneous fall in exports and imports of goods and services. Graphical analysis (See Figure 1) shows that the trend line of the GDP dynamics

and foreign trade indicators during the crisis period have positive correlation. This may be explained by the high degree of interdependence between the results of economic development of Ukraine and its external trade.



**Figure 1. Impact of the world crisis on the dynamics of real GDP and foreign trade of Ukraine**

\* GDP growth expressed in% to the relevant quarter of the preceding year in constant 2007 prices

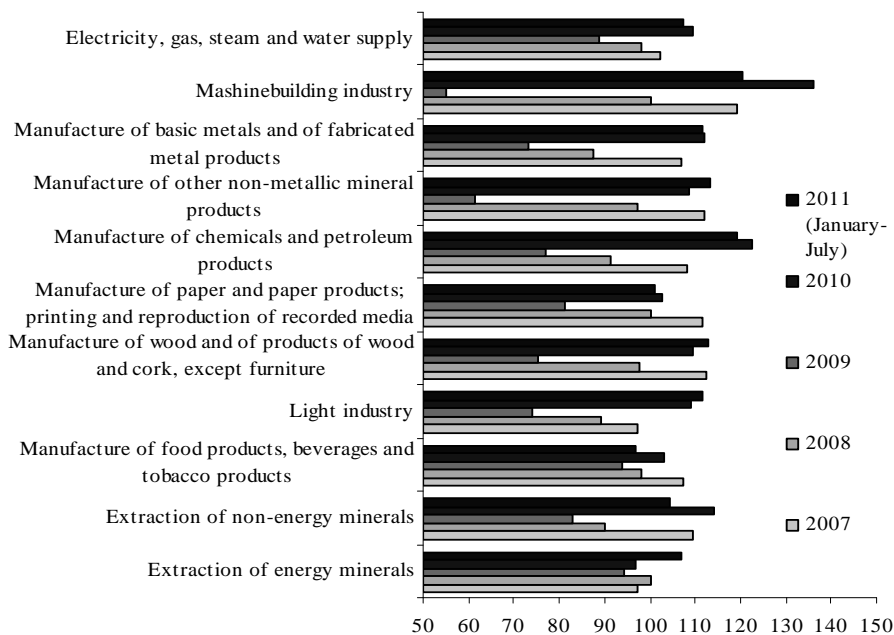
Source: Author's calculations on the basis of State Statistics Service of Ukraine ([www.ukrstat.gov.ua](http://www.ukrstat.gov.ua)), Balance of Payments of Ukraine ([http://www.bank.gov.ua/Statist/index\\_PB.htm](http://www.bank.gov.ua/Statist/index_PB.htm))

The reduction of output occurred in all branches of industry in Ukraine, and especially – in the exports-oriented ones. In particular, in 2009, chemical and petrochemical production dropped by 23% in comparison with 2008, metallurgy – by 26.7%, mechanical engineering (machine building industry) – by 44.9% whereas agricultural production – only by 1,8% (Figure 2). The fall in output of industry caused a chain effect for the cargo transport enterprises, whose turnover fell by 21.9% in 2009. The lack of liquidity led to the reduction of construction turnover in all regions and in all types of construction activities, whose volumes in 2009 decreased to 51.8% of 2008 level.

Whereas in the CIS countries the decline of industrial production was accompanied by a low rate of inflation or even fall in commodity prices, in Ukraine, on the opposite, there was a significant increase in producer prices and inflation, as a result of companies' efforts to maintain their profitability. In the period from 2006 to 2009 the price index of industrial production increased by 2 times.

Global financial crisis and the consequent lack of foreign loans to cover the huge trade deficit led to massive devaluation of the Ukrainian hryvnia. The devaluation caused a reduction of negative balance of trade, which dropped to 5.7 billion USD in 2009, as well as massive withdrawal of hryvnia deposits from the

banking system. Reduction of deposits along with shrinking access to monetary resources of the National Bank of Ukraine actually prevented commercial banks to suspend their lending operations. Banking institutions employed extensive policy to return previously issued loans in order to receive money, necessary to pay deposits to the people. This led to a decrease in working capital of enterprises (banking loans provided almost 40% of total financial resources of enterprises) and, consequently, – to further reduction of output.

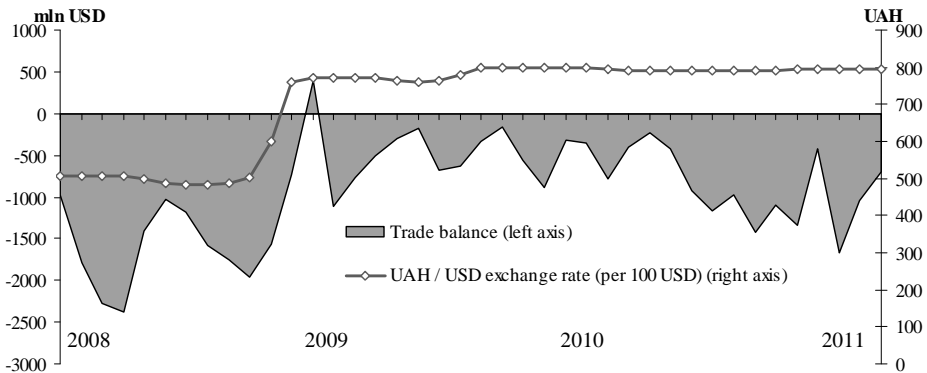


**Figure 2. Indices of industrial production in Ukraine**

Source: Author's calculations on the basis of State Statistics Service of Ukraine ([www.ukrstat.gov.ua](http://www.ukrstat.gov.ua))

Thus, poor economic situation in the world, amplified by the high vulnerability of Ukrainian economy, caused by accumulated internal imbalances and low quality of economic growth, became a catalyst for the deployment of economic crisis in the national economy.

The dynamics of the official exchange rate during 2008–2009 was caused by significant fluctuations in supply and demand of foreign currency in the Ukrainian inter-bank foreign exchange market (Figure 3). Starting with the first half of 2008 till the beginning of September 2008, due to the predominance of foreign currency supply over demand, national currency of Ukraine constantly felt upward pressure on domestic interbank money market. This allowed National Bank of Ukraine to support positive foreign exchange interventions to prevent exports reduction.



**Figure 3. Impact of UAH / USD exchange rate on the foreign trade balance of Ukraine**

Source: Author's calculations on the basis of: Official exchange rate of UAH to foreign currencies (average for the period) [Electronic resource]. – Access mode: [http://www.bank.gov.ua/Statist/Stat\\_data/Exchange\\_r.xls](http://www.bank.gov.ua/Statist/Stat_data/Exchange_r.xls); Short-term merchandise trade statistics: Monthly series for some 70 economies [Electronic resource]. – Access mode: [http://www.wto.org/english/res\\_e/statis\\_e/daily\\_update\\_e/monthly\\_trade\\_e.xls](http://www.wto.org/english/res_e/statis_e/daily_update_e/monthly_trade_e.xls).

In September 2008, due to a lower external demand and collapse of prices for the goods of the leading export-oriented industries the volume of foreign currency supply declined, whereas the demand for it increased respectively. National currency was deeply depreciated against the U.S. dollar as a result of the world financial crisis (see Figure 3). National Bank of Ukraine carried out stabilization interventions, and as a result, the volume of international reserves in 2008 decreased by 2,8%. In December 2008 the deficit of foreign currency gradually decreased, allowing the National Bank to reduce the amounts of negative interventions. As a whole, the official exchange rate decreased by 52,5% to 7,7 UAH. per USD during 2008, causing instability in the internal financial market, leading to credit system crisis and abrupt drop in production volumes

The analysis of the impact of exchange rate on the balance of foreign trade of Ukraine showed a weak inverse relationship between the indicators. Determination coefficient ( $R^2$ ), calculated on a monthly basis for the period from January 2008 to April 2011, showed that only 44,8% of net merchandise exports variation was fuelled by the UAH / USD exchange rate variation. Only in the four-month-period of sharp devaluation of hryvnia (from October 2008 till the end of January 2009), when the official UAH / USD exchange rate fell by 35%, the correlation with trade balance was extremely high:  $R=0,91$ ;  $R^2=0,82$ . That is why, in general, the results of foreign trade of Ukraine were influenced not so much by the monetary policy of the NBU, as by the price fluctuations at world commodity markets. Price dynamics at partner countries' internal markets, as well as the extent of use of trade restrictions were more influential factors of the external trade of Ukraine.

The growing trade deficit was financed by means of raising external borrowings, resulting in the increase of the gross external debt of Ukraine, expressed as a percentage of exports of goods and services, from 74.2% in 2004 to 118.7% in 2008, and to 191.6% in 2009.

Raising wages in the pre-crisis period (2005–2008) grew into one of the most important and most urgent issues of government policy. In fact, it was due to a significant lag of Ukraine in the level of incomes of population not only from the standards of developed countries, but also from those normal for the most of emerging market economies. However, wages should not be considered in isolation from the trends of basic macroeconomic proportions, the level of optimization of which determines general economic dynamics.

During the period of 2005–2008 a hypertrophied growth of wages took place, which led to the deformation of macroeconomic proportions of GDP and restrained the opportunities for further economic development. Thus, the share of social spending in total state expenditures and GDP increased steadily. Compared to 2004, real disposable income increased by 71.1% in 2008, whereas GDP increased only by 21.6%. As a result of long-term regular growth of social spending, their share in the consolidated budget in 2005–2008 increased to 22–28% compared to 12–15% in 2000–2004.

Exhausted possibilities to maintain price competitive advantages, caused, except for the aforementioned factors, also by the technological obsolescence of production processes, redundant energy consumption, low solvency of national enterprises, narrow assortment of goods, whose production is accompanied by significant negative externalities both for the natural environment, and population created a real threat of extrusion of Ukrainian producers not only from the international markets, but also from their own domestic market

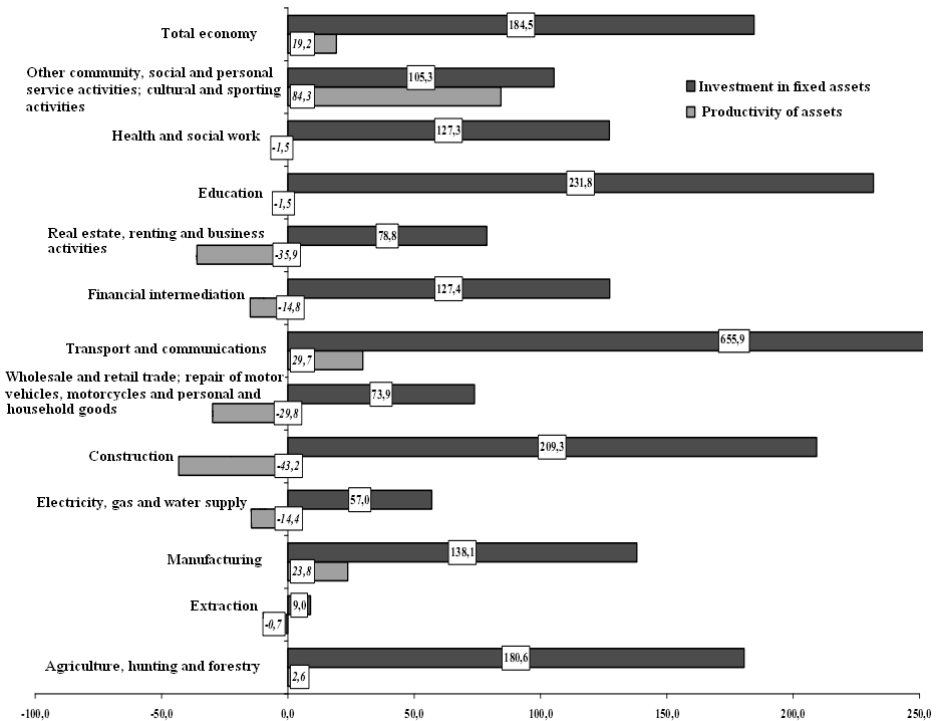
#### TENTATIVE DRIVERS OF THE SHORT-TERM RECOVERY OF NATIONAL ECONOMY

On the beginning of 2010 domestic export-oriented production in Ukraine was stimulated by the increased economic activity of the main partner-countries. The gradual recovery of external investment demand, particularly, from Russia, stimulated production and consequently exports of Ukrainian machinery, including heavy machinery. The highest growth was observed in the production of vehicles and equipment. This industry was constantly contributing to positive dynamics of industrial output during the whole year.

Growing steel prices in global markets contributed to the development of metallurgical industry in Ukraine. In its turn, the revival of steel industry had a positive impact on the dynamics of related and supporting industries – mining and cargo transport.

In general, throughout 2010 the improving dynamics of export-oriented industries resulted in an overall 11.2% growth of industrial output in Ukraine. Mechanical engineering (machine building industry), chemical and petrochemical industry and metallurgy were the leading industrial sub-sectors in terms of economic growth, demonstrating 36.1%, 22.5% and 12.2% of annual output increase correspondently (See Figure 2).

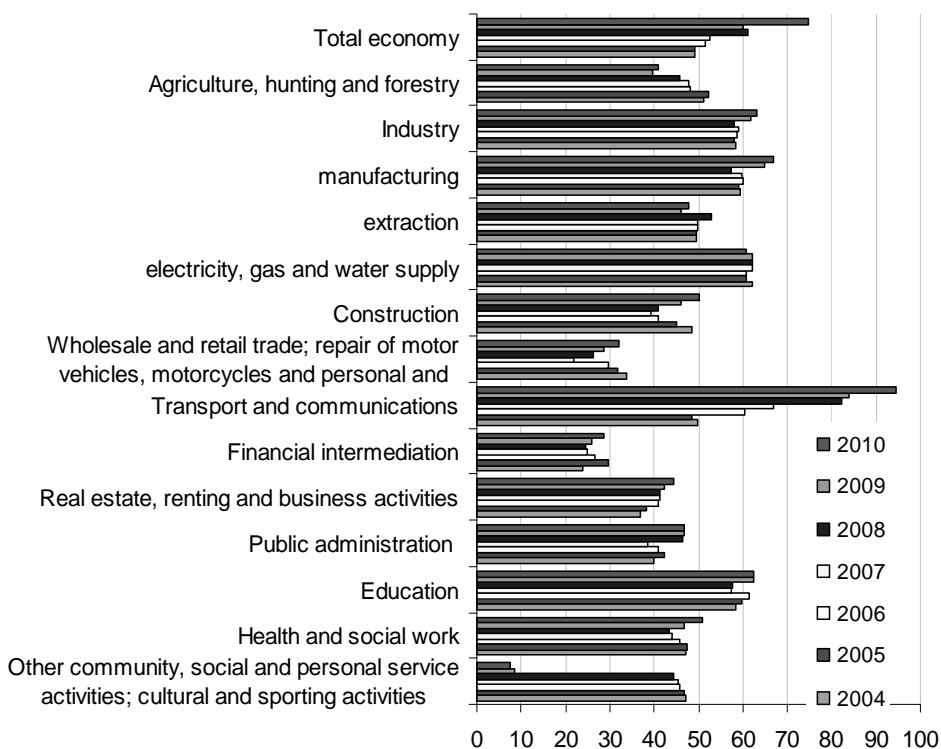
In the first quarter of 2011 the economic dynamics of Ukraine was determined by a set of driving forces, among which, – economic recovery of the key trade partners, permanently high households' real incomes growth rates, and increasing amounts of public funding. However, long-term economic growth, which constitutes a strategic goal for any country, is usually based on investment in capital, innovations, development of scientific and technological capabilities, human capital etc. In the economy of Ukraine, however, the crisis of capital formation has not yet been overcome. Capital productivity growth at an average annual rate of 2.6 between 2002 and 2008 is obviously insufficient to facilitate the shift towards the intensive type of economic growth (Figure 4).



**Figure 4. Dynamics of investment in fixed assets and assets productivity, 2008 (2001 = 100%)**

Whereas investment in fixed assets almost doubled during the period the growth of assets productivity amounted only to 19,2%. Moreover, some types of economic activities even suffered a substantial loss of assets productivity. Among them – construction; real estate, renting and business activities; wholesale and retail trade; financial intermediation; electricity, gas and water supply.

World financial and economic crisis caused a strong negative impact on the dynamics of investment processes in the country. The volume of investments in fixed assets in 2009 fell by 41.5%, and turned into the main factor of depressive trends in the economy. At present, insufficient amounts and imbalances in the structure of investments in fixed assets along with the limited internal and external sources of funding are causing further deterioration of fixed assets (Figure 5).



**Figure 5. The degree of depreciation of fixed assets by economic activities in 2004–2009, %**

Source: author's calculations on the base of State Statistic Service of Ukraine ([www.ukrstat.gov.ua](http://www.ukrstat.gov.ua))

Surprisingly, export-oriented sectors had the most exhausted assets at the end of 2008, namely – chemical and petrochemical industries (depreciated by 68.3%), metallurgy (63.7%) and mechanical engineering (65.8%). Production of



transport vehicles in recent years revealed the most dynamic growth of output and investment, including FDI inflows. However, at the end of 2008 it had one of the highest levels of depreciation of fixed assets, compared to other types of industrial activities – 82.4%.

In 2009, fixed assets growth index shrank to 102.6% against an average 105% indicator for the period of 2005–2008.

Accounting for the abovementioned problems, it is not surprising, that the structural dynamics of Ukrainian industry by technological waves (super-cycles) in 2005–2008 was not changed. Industrial production of the fifth technological super-cycle accounted for only 3% of the total industrial output, the share of the fourth super-cycle constituted about 50%, the share of the third one fell from 51% to 46%. All this proves the lack of effective structural policy in Ukraine.

The share of innovative firms in the total number of enterprises was constantly low: in 2004 it reached 13.7%, in 2005 – 11.9%, in 2006 – 11.2%, in 2007 – 14.2%, in 2008 – 13%, in 2009 – 12.8%. This indicator is extremely low, as it doesn't cover the minimum threshold of 25%, and is much lower than the level, observed in the developed countries (60–70 percent). The minimum rates of enterprise innovative activity among the EU old Member States, for example, are observed in Portugal (26%) and Greece (29%), but they are twice as high, comparing with Ukraine.

On the whole, obsolete equipment and technologies can turn into insurmountable obstacles in the strive for the international competitiveness and productivity growth of capital and labour. Therefore, restoration of the growing dynamics of investment is one of the main prerequisites for further economic development of Ukraine and increase of its competitiveness.

## OBJECTIVES OF NATIONAL ECONOMY MODERNIZATION

The crucial objectives of modernization of national economy of Ukraine are the following:

- creating conditions for the development of key economic sectors, which will be determined by the quality of human capital, level of technological sophistication, as well as the state of production infrastructure;
- supporting national high-tech sectors;
- fostering investment in the modernization of fixed assets and production technologies;
- streamlining government efforts to maintain and promote local manufacturers, small and medium enterprises, increasing competition;
- stimulating innovative activities of SMEs, building regional and local knowledge triangles;

- reducing tax pressure on business and creating more favourable national business environment;
- decreasing dependence of national economy from the external factors via stimulation of positive structural shifts;
- stabilizing and promoting the development of financial markets, improving the reliability of national banking system;
- balancing social priorities with economic resources for the sake of avoiding socialization shocks of economic development; ensuring social policy aimed at eradicating poverty, improving living standards and social security system, opening new employment opportunities, and, at the same time, accounting for the real possibilities of the budget and economic sectors;
- assuring effective integration of Ukraine into the world community.

Largely, the aforementioned set of objectives poses basic challenges to the national government of Ukraine, as well as to the Ukrainian businesses, which now face the ultimatum – either to modernize and find niches in the global market, or to loose the intense global competition, and turn into a raw materials suppliers and technologically and import dependant market.

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## *Summary*

The article is a continuation of the author's research, "Compensation model of economic growth of Ukraine", published in the monograph "Convergence of Economic Models of Poland and Ukraine" (Krakow, 2009). The article explores trends of the economic development of Ukraine in the time of global economic and financial crisis (2008–2011). The influence of the crisis is regarded as a possibility to unveil the weaknesses of national economic system.

Author argues that short-term economic recovery of Ukraine in 2010 is built on very uncertain drivers. Therefore economic policies need to be revised. Author comprehends a number of key drawbacks in order to work out strategic priorities of modernization of Ukrainian economy in after-crisis period.

## **Priorytety strategiczne w modernizacji gospodarki Ukrainy w okresie pokryzysowym**

### *Streszczenie*

Artykuł stanowi kontynuację badań autora „Model kompensacji wzrostu gospodarczego Ukrainy”, które zostały opublikowane w monografii „Konwergencja modeli ekonomicznych. Polska i Ukraina” (Kraków, 2009). W artykule podjęto badania nad trendami rozwoju gospodarczego Ukrainy w czasie globalnego, ekonomiczno-finansowego kryzysu (2008–2011). Oddziaływanie kryzysu uznawane jest za czynnik odsłaniający słabości narodowego systemu ekonomicznego.

Autor dowodzi, że krótkookresowa poprawa sytuacji gospodarczej Ukrainy w 2010 r. oparta jest na bardzo niepewnych podstawach. Stąd polityka gospodarcza powinna zostać zrewidowana. Autor wskazuje na liczne kluczowe bariery w celu wypracowania strategicznych priorytetów modernizacji gospodarki Ukrainy w okresie pokryzysowym.