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A STATISTICAL STUDY OF INTENSIVE REPRODUCTION FACTORS IN THE UKRAINIAN ECONOMY

Abstract

The article is dedicated to features of economic development in Ukraine during the last five years, as well as the impact of intensive and extensive factors of economic growth. The author undertakes a comparative analysis of major macroeconomic indicators of economic development in the EU countries, USA, Russia, and Ukraine, and elaborates conclusions about the forms of economic reproduction in the selected countries. Finally, the author analyses the 2005 World Economic Forum's competitiveness ranking of 117 countries and assesses the position of Ukraine against previous years, as well as elaborates recommendations regarding development and implementation of the intensive and innovative model of economic growth in Ukraine.

Key words:

Competitiveness of a country, factors of economic growth, growth competitiveness index, intensive and innovative model of economic growth, macroeconomic stability, types of economic reproduction, World Economic Forum.

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The major goal of national economic policy is to balance the co-existence and interaction of various structures, in particular production and reproduction structures, ownership structure, as well as industrial, regional, investment, foreign economic and institutional structures, which as a whole should provide for sustained economic growth and create equivalent conditions for dynamic and balanced socio-economic development of different industries, regions, social groups, and market segments. Efficient economic policy should also enhance the role of intensive factors in economic growth.

It is well known that the basis for economic growth is the resource potential. Increased production volumes and profits can be obtained either by increasing the quantity of production resources or by ensuring a more efficient use of the available resources. The correlation of these factors determines the three types of economic growth: extensive, intensive and detensive.

Extensive economy develops due to accumulation of productive resources and application of traditional technology; the efficiency and productivity remain unchanged. **Intensive** economic growth is based on the implementation of advanced achievements in research and engineering and new technology, increased employee education and qualification level, and improved forms and methods of production organization and cost saving. Thus, an increase in production is achieved by employing more sophisticated production factors and increasing their efficiency.

In the process of extensive reproduction, intensive and extensive factors of economic growth coexist and combine. That is why we can talk about a predominantly intensive or predominantly extensive type of growth. The economy of the former USSR, and consequently the Ukrainian economy, developed mostly extensively. Thus, unit power inputs in Ukraine are twice as high as in the USA and three times as high as in Western Europe, whereas oil intensity of the Ukrainian production is 10–12 times higher than in the developed countries.

Since most extensive resources (land, minerals, etc.) are scarce, whereas the society tends to progressive economic growth, needed is the transition to predominantly intensive economic growth based on resource-saving technology. From the standpoint of society's needs satisfaction, resource saving is adequate to expansion of productive capacity, whereas from the standpoint of ecological effects, resource saving is more efficient than additional use of resources.

Detensive development results in deterioration of technological production level and degradation of the national economy. This type of development was typical of the Ukrainian economy in the late 20th century.

However, in 2000, the situation changed, and as a result, for the 5 last years the Ukrainian economy exhibited rather high rates of economic growth, low budget deficit, low inflation, and improved balance of payments. **This combination of factors may be deemed a favourable macroeconomic environment**.

Moreover, until 2005, the economy of Ukraine was among the most dynamically developing countries of the CIS region. During the last 4 years, the growth rate in Ukraine exceeded 7% per year, and the actual annual investment growth also exceeded 7% (Table 1). Inflation equalled single-digit figures and the exchange rate of UAH (the Ukrainian currency) was stable; at the same time, the country maintained its export competitiveness. Positive balance of payments resulted in accumulation of foreign currency reserves, which in turn favoured monetization of the economy.

Table 1

Macroeconomic Development Indicators of Selected Countries in 2002–2004, % to Previous Year

Year	GDP (in comparable prices)	Industrial Output (in comparable prices)	Producer Price Index	Consumer Price Index	Deficit (–), Surplus (+) of National Budget (% of GDP)	Exchange Rate, UAH/USD (at period-end)
The USA						
2002	101.9	99.9	97.7	101.6	–3.8	–
2003	103.0	100.0	105.3	102.3	–4.6	–
2004	104.4	104.4	108.6	102.7	–5.1	–
Countries of the European Union						
2002	100.9	100.2	99.6	102.3	–2.4	0.9536
2003	100.5	100.3	101.4	102.1	–2.7	0.7918
2004	101.8	101.9	102.3	102.1	–2.9	0.7342
Russia						
2002	104.7	103.8	117.1	115.1	1.4	31.7844
2003	107.3	107.1	113.1	112.0	1.7	29.4545
2004	107.1	106.1	123.8	110.9	3.2	27.7487
Ukraine						
2002	105.2	107.0	105.7	99.4	0.7	5.3324
2003	109.6	115.8	111.1	108.2	–0.2	5.3315
2004	112.1	112.5	124.1	112.3	–3.4	5.3054

Source: National Statistics Committee of Ukraine, National Bank of Ukraine [2: 38; 3: 41].

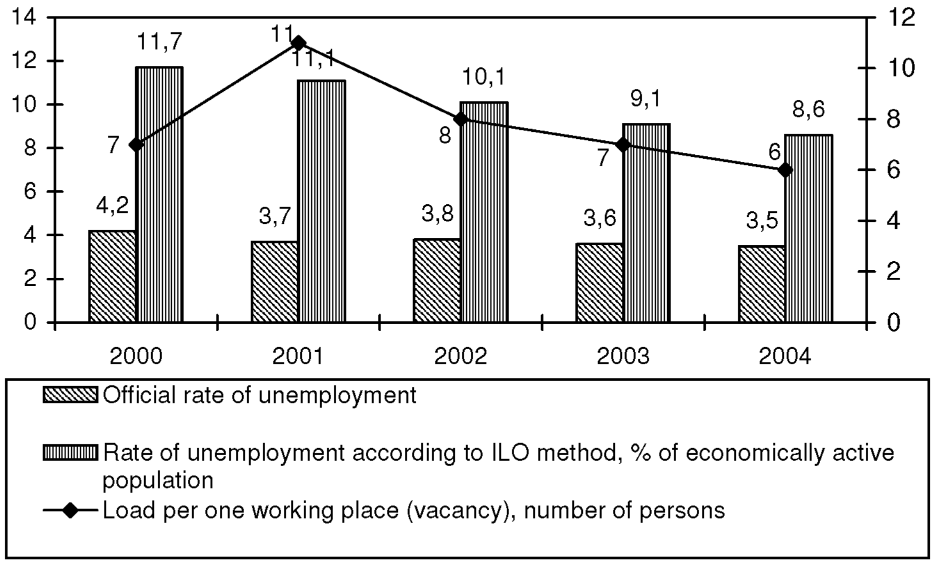
All these positive trends made it possible to increase the income of population despite its very low initial level. From early-2000, nominal wages have almost doubled, both in UAH and USD equivalent. Real wages stabilised in 2000, increased annually by almost 20% in 2001–2002, and maintained substantial growth in 2003–2005. The increase in real wages was accompanied by substantial progress in reduction and out-payment of held-back wages and pensions.

The unemployment rate (both official and calculated according to techniques offered by International Labour Organisation) also decreased (Figure 1).

This progress was rather modest compared to what it could have been: the average indicators of industrial output and level of living in other transition countries are high, and the Ukrainian indicators do not seem to be so impressive on their background. For example, per capita income in many countries of Central and Eastern Europe (CEE) is still 3–7 times higher than in Ukraine. This lagging, as well as uneven distribution, of economic growth raises doubts in the policy pursued, thus inducing to search for more radical ways of improving it.

Figure 1.

Dynamics of Selected Labour Market Indicators in Ukraine



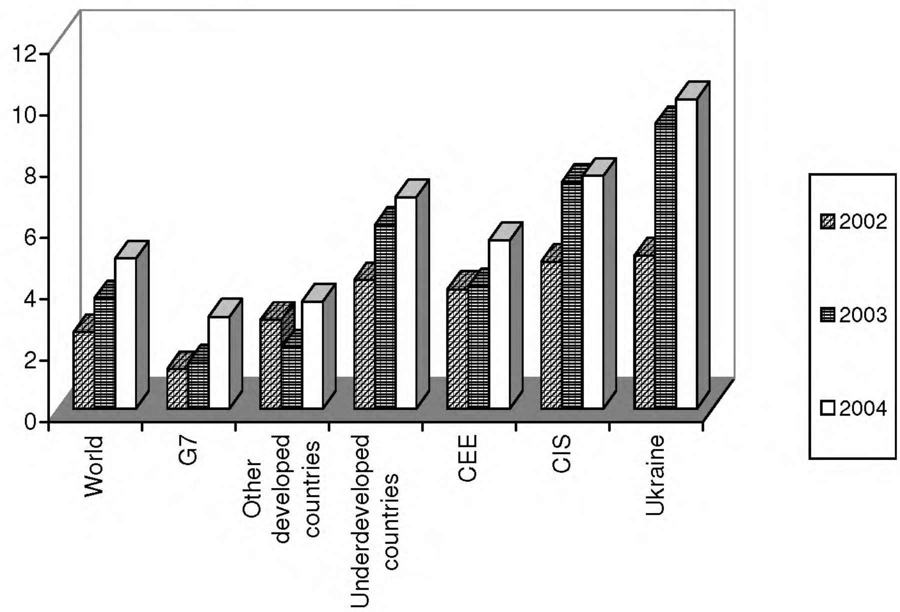
Source: National Statistics Committee of Ukraine, National Bank of Ukraine [2:38; 3:41]

During the last several years Ukraine has substantially approached the above-mentioned countries. Since 1999, its GDP has increased by 32%, whereas the GDP of Hungary or Romania increased by slightly above 15%, and GDP of Poland or Czech Republic – by 10% to 12% (Figure 2). Besides, one should bear in mind the substantial difference in the levels of income in Ukraine and other countries of Central and Eastern Europe observed at the early phases of the transition period.

We should keep in mind the scale of the shadow economy, which, according to estimations, is higher in Ukraine than in CEE countries. This is indirectly proved by relatively high exports-to-GDP and taxes-to-GDP ratios: their continuous increase proves that the GDP growth observed lately could hardly be underestimated. Besides, observed was the accelerated growth of the number of small- and middle-enterprises, which, according to EBRD, are much more introduced in Ukraine than in other CIS countries.

Figure 2.

GDP Growth Rate in Ukraine and Several Other Countries, % to Previous Year



Source: National Statistics Committee of Ukraine, National Bank of Ukraine [2: 38; 3:35]

We suggest that economic recovery is based on two main groups of factors. First, economic policy has substantially improved since 1999 to clear the way for productivity gains (though delayed) in response to market stimuli. In particular, the achievement and maintenance of macroeconomic and regulatory stability provide for a more predictable environment for productive activity. Prerequisites for improvement of and increase in the efficiency of enterprise activity within the system of market stimuli and mechanisms have risen in all sectors of the economy.

Second, such factors of production as labour and capital have been and still are (at least this is true for labour) very "cheap" and, hence, competitive. This is supported with low wages and – at the time of initial economic upswing five years ago – substantial surplus of production facilities. These «advantages» however might have been inherited from the substantial production decline and «disorganisation of production» observed in the preceding decade. Such low costs *ceteris paribus* have motivated businessmen and investors to take advantage of the production potential of Ukraine, thus contributing to GDP and export growth.

During the past five years, the productivity growth in Ukraine was high enough to justify the appreciation of labour and capital. In view of this, the production and income growth has not produced much pressure on prices or balance of foreign trade, whereas an increase in tax collections allowed to avoid excessive deficit of national budget.

However, the experience of the developing and transition economies shows plenty examples of how the growth can come to a halt because of the macroeconomic problems, e.g. inflation growth, loss of foreign currency reserves due to economic overheating, or impact of external shocks. After a while, the slowdown of productivity growth in Ukraine, as against increase in wages and income, may hamper the leading growth of the economy. At that, the fall in competitiveness may produce a simultaneous negative effect on the rate of economic growth, inflation and the balance of payments (observed in 2005). Under such circumstances, the country will, at best, loose favourable macroeconomic environment or, at worst, the development may become extensive. The government, having thoroughly analysed the problem, should do its best to support further economic growth exclusively on the basis of intensive development factors.

For a more balanced national strategy, we need to consider positive experience of the developed countries and the countries that were successful in economic development and reached high competitiveness level. Bearing this in mind, one should pay attention to annual ratings of the acknowledged international organisations. For example, a few months ago, the World Economic Forum and the UNO published – at nearly one time – two different reports with the analysis of the world economy and competitiveness of different countries.

According to the World Economic Forum, Ukraine ranked only 84th out of 117 countries, substantially lagging behind China (49), India (50), Poland (51), Mexico (55), Brazil (65), Turkey (62) and Argentina (72).

Ukraine is on the 50th position in terms of macroeconomic stability. Such a moderate result was caused by the factors that weaken the macroeconomic stability of the country. For example, the rate of inflation in Ukraine, being moderate according to its conventional standards, is still rather high according to international standards. This moves the country down to the 70th position, in vicinity with Guatemala and Uganda.

Business in Ukraine comes across very high interest rates which increase the cost of capital and hamper the development of new business. High interest rates combine with insufficient private sector financing and distrust of the banking sector. It seems that the government spends resources inefficiently, which is reflected in the respective rating – 94th position among 117 countries – that demonstrates the inefficiency of resource allocation in the Ukrainian economy.

At that, the innovation potential of Ukraine is its comparative strength, positioning it the 39th in the innovations sub-rating. This is a good indicator (compared with the country's success in the other spheres rated). It is determined by high «passing» level of university entrants who wish to obtain higher education (over 43%), as well as by corporate R&D expenses, which are comparatively high, if to take into account the country's development phase and the overall competitiveness rating. This means that, given a favourable economic environment, the Ukrainian companies are ready to develop business further.

Naturally, there is no need in inventing new technology in order to generate profits since such new technology may be purchased from other countries. Even though Ukraine shows certain innovation potential, the country does not benefit from purchasing the technology abroad. Ukraine occupies the 97th position of the rank in terms of its ability to adopt new technologies by attracting direct foreign investment. Licence agreements fail to be a substantial source of foreign technology adaptation. More «aggressive» purchase and implementation of foreign technologies can really help Ukraine increase its competitiveness potential.

Ukraine still does not take the full advantage of new innovation factors of growth and has only 76th position in terms of information and communication technologies (ICT). Businessmen do not view the government as being sufficiently aggressive in promoting such technologies, and the ICT implementation figures are still very low. This is particularly true for mobile telephones, personal computers and the Internet access. These tools provide a substantial potential for productivity growth, and our study suggests that the use of such tools should be deemed high priority.

Summarising the aforementioned, we can conclude that certain improvement of Ukraine's position in international ratings is explained not by the *improved macroeconomic situation and business conditions in Ukraine or more substantial influence of the innovative factor, but by the relative economic downturn in the countries that compete with Ukraine in the respective competitiveness group*. Besides, already today we can see both the qualitative and the quantitative signs of deterioration of Ukraine's growth potential in the foreseeable future. We consider the following signs as most important.

First, we believe that the role of certain factors, which have provided productivity and efficiency growth at the initial stage, is decreasing with economic growth. Most such factors may be deemed as extensive factors of economic growth. The matter in question is the one-shot effect from renewed use of old production facilities, elimination of barter and other non-monetary payments, and achievement of certain macroeconomic stability.

Second, the scope and primarily the structure of capital investments require improvement. Recently, investment inflows have substantially recovered, and the total level of investments – about 20% of GDP in 2003 and 2004 – does not look low compared with other countries. Evidently, such investments should have increased the volume and improved the quality of fixed assets (capital) in the economy, thus increasing its growth potential.

However, such an important element of investments as direct foreign investments is still very low. Direct foreign investments play an important role in connection with technological and managerial know-how they generate. Moreover, the need in infrastructure investments is also evident. The lack of financing will generate bottlenecks in the production process, thus blocking further economic growth.

Thus, we may conclude that intensive factors of economic growth, leading to an increase in the efficiency of public production, have been used much less than required by competitive environment.

This does not necessarily mean that the deceleration of Ukraine's economic and productivity growth will occur immediately. Economic growth may continue for a certain period of time owing to power reserve provided by the competitiveness of Ukrainian production costs and to implementation of new production processes on the microeconomic level. Fore example, low production costs can make it possible for the economy of Ukraine to grow at high rates owing to possible increase in the production costs of major Eastern European rivals stemming from their EU accession. The exact time of economic reversal can not be estimated; however, keeping high productivity growth in the long-term should not be considered a matter-of-course. Sooner of later, the Ukrainian economy will face either the cyclic or the structural deceleration of economic growth observed in any market economy.

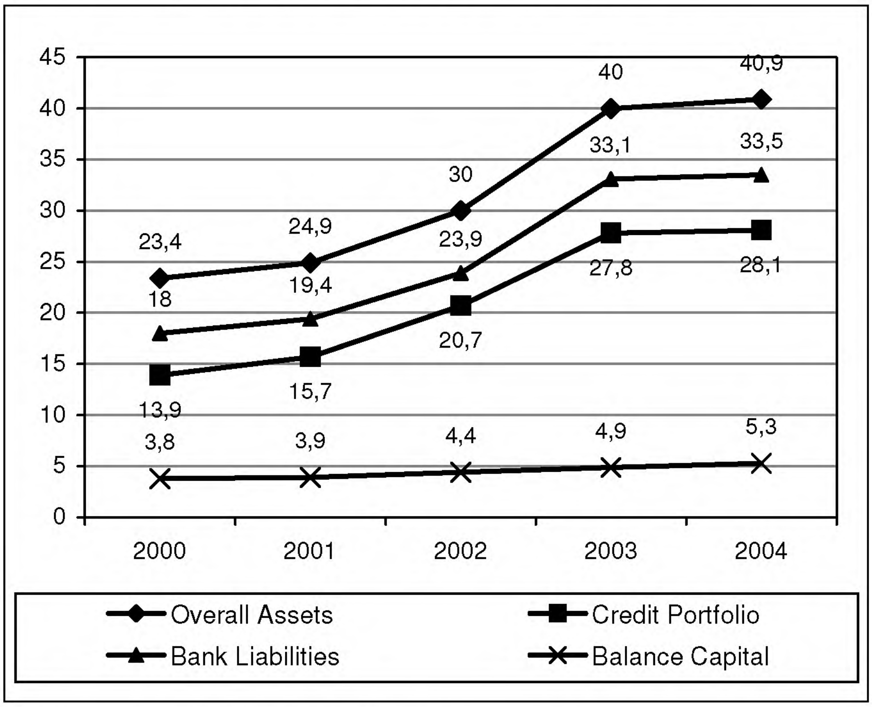
Regardless of the causes of such deceleration, required is the implementation of an adequate macroeconomic and structural policy to alleviate or avoid economic decline. First, the government and the National Bank of Ukraine should pursue reasonable tax, budget and monetary policies in order to maintain the reached level of macroeconomic stability. The exact definition of such «stability» may vary; however, the admission of serious budget deficit or high rate of inflation will definitely disrupt the basis of economic growth. This is supported with the recent and unexpected situation in the Central and Eastern European countries (Hungary and Poland), where a recent easing of tax and budgetary policies generated more economic problems than resolved.

In short- and medium-term, the Ukrainian government should find its position with respect to two key issues of macroeconomic policy. First, the current exchange rate regime should be transformed into a more flexible one in order to avoid the risks related to supporting the *de-facto* fixed rate for too long.

Second, a very rapid increase in the volume of bank loans (Figure 3) recently, reflecting partly the processes of healthy remonetization, can lead to accumulation of bad loans given substantial deceleration of economic growth or any negative impacts of shocks.

Figure 3.

Basic Banking Indicators in Relation to GDP in Ukraine, %



Source: National Bank of Ukraine [3: 75]

To avoid such a danger, the following structural measures should be taken:

- to further strengthen the standards of banking regulation and supervision;
- to increase capitalisation of commercial banks;
- to improve credit quality valuation systems and internal control in commercial banks.

The last year's increase in the rate of inflation also deserves close attention since such processes may disrupt competitiveness and, hence, internal and external financial stability. By the way, during past several years, one-digit inflation rate has been observed in most of the developing and transition economies, including China and South Korea. Some Ukrainian authors have mentioned these two countries as an example of «successful inflationary stimulation of economic growth». Meanwhile, the data on the rates of economic growth and inflation in these countries over a more than ten-year period show that high rates of economic growth may coexist with very low inflation. Evidently, there is another and much more complex key to the secret of high economic growth rate.

This conclusion is supported by recent experiments on the analysis of basic causes of economic growth in any country of the world. The authors of these studies agree that, *ceteris paribus*, there is a positive correlation of economic growth and the quality of the education system, effective adherence to the supremacy of law, development of financial system and market institutions which provide transparency, and certain other investment indicators, such as domestic private investments and direct foreign investments. Meanwhile, there is negative correlation between the economic growth and the variables reflecting the «misalignments» in the governmental policy (too much public sector in the economy, trade and capital restrictions, and political instability).

It should be mentioned that this analysis is not comprehensive because of the methodological problems, and a substantial portion of economic growth in most countries still requires explanation. Nevertheless, these studies show that a thorough analysis of the circumstances in each country is required.

Economic growth is a high priority of the macroeconomic policy for both the transition and the developing countries. The achievement of this priority objective ensures leading growth of production output compared to growth of population, and thus the increase in the living standard. The policy of sustainable growth, structural «rationalisation» and intensification of production is turning an important component of the state regulation of the economy.

Summarising all the aforementioned, we must emphasise that today, again, Ukraine faces the challenge of choosing its further way of development. Ukraine has to choose either the intensive or the extensive model of economic growth. Despite the signs of shifting to the extensive model, we are still optimistic about the ability of the country to implement the required reforms and settle at a more stable – innovative – trajectory of growth, since the current government has declared its commitment to finally settle such complex issues.

Bibliography

1. Глобалізація і безпека розвитку / О. Г. Білорус, Д. Г. Лук'яненко та ін. – К.: КНЕУ, 2001.
2. Річний звіт Національного банку України за 2004 рік, http://www.bank.gov.ua.
3. Статистичний щорічник України за 2004 рік. / За редакцією О. Г. Осауленка. – Державний комітет статистики України, 2005.
4. Тодаро П. М. Экономическое развитие: Учебн. / Пер. с англ. – М., 1997.
5. Шумпетер Й. Теория экономического развития / Пер. с нем. – М., 1982.
6. The Global Competitiveness Report 2004–2005, http://www.weforum.org.

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