Research Article

Economic Growth of Regions of Ukraine on Conditions of Disproportional Regional Development

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Abstract

It is substantiated that the quality problems of economic growth, interregional differentiation, which are primarily related to the structural economy transformation are relevant for both economically developed countries and for countries with economies in transition. The study of the disproportions of economic growth of the regions based on the tools using "backwardness funnels" is carried out in the paper. Backwardness funnels are characterized by the presence of certain quantitative lag parameters such as the depth of the funnel and the speed of dragging into the funnel. The calculations make it possible to estimate and summarize the corresponding time lag of the regions, the degree of inter-regional differentiation by the level of development and, to a certain extent, the availability of reserves to ensure the process of economic growth of the territories. The increase in the number of regions that have been trapped in backwardness funnels indicates an increase in interregional differentiation within Ukraine. The analysis makes it possible to conclude that in most regions the indicators of the lag period from the average Ukrainian GDP by one person up to four years, and in some regions up to five to six years are increasing. A model of regional economic policy formation is proposed, which is aimed at solving strategic issues of socio-economic development of the regions that form the mission (goal) of this policy (ensuring quality economic growth). The strategic targets of regional economic policy in Ukraine are offered. Among the most important strategic goals in the context of decentralization reform in Ukraine is increasing the internal potential of the socio-economic regions development and exploiting the territorial competitive advantages.

Keywords: Backwardness funnels; Economic growth rate, Gdp; Inter-regional differentiation; Region; Regional economic policy.

1. Introduction

The problems of quality economic growth have always been relevant to economic science. They are so complex and multifaceted nowadays that the process of their theoretical understanding and methodological determination is still incomplete. This process is especially relevant during the restructuring and reformation in the economy and society. The quality of economic growth, which is characterized by the efficiency of the use of resources, improving the well-being of the population, and technological modernization of production becomes a real reflection of the socio-economic development of the state. Therefore, a strategic goal for any country is to provide the conditions and opportunities for long-term economic growth.

2. Theoretical Background

Various aspects of these issues have become the subject of research by many scholars. Thus, Herrendorf et al. (2014) emphasize that in the modern world the growth of

economies of highly developed countries is ensured mainly not by increasing factors of production, but by the introduction of advanced technologies, improving the quality of human capital and institutional environment that shows its

predominantly intense nature. Belyakova et al. (2021) and Chernenko et al. (2021) also turn the spotlight on that the central problem of long-term economic growth is changes in technology and the economic structure of production systems. Scientists emphasize that the development of improving the technological efficiency of the economic structure and technical and technological renewal of production systems of territories are priorities of regional policy. Patterns on the impact of technology and learning on the long-term economic growth of leading and outsider regions were considered by Batabyal & Nijkamp (2014) as a basis for economic policy development .

Structural transformation of the economy is the basis for achieving a new quality of economic growth on the basis of an innovative model of development associated with the rapid development of information and communication

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environment, scientific knowledge, the introduction of advanced technologies. Saleem et al. (2019) focus their attention on this issue.

Fyliuk et al. (2019) emphasize the close interrelation between economic competitiveness of the country and the paces of its economic growth: the higher are the paces of economic growth in the country, the more chances national competitiveness has to increase and vice versa.

An important prerequisite for stable economic development and economic growth in the country, according to Khalid & Marasco (2019) is high investment activity, which is achieved not only by increasing the implemented investment resources, but also by their efficient use in priority sectors of the economy.

Research confirms that Ukraine has an investment attractiveness in attracting foreign investment in such areas: as tourism Kinash et al. (2019) and Zelinska et al. (2020; 2021) a methodological approach to the economic evaluation of tourism development in Ukraine is proposed and its results confirming the possibility of investing in the tourism business are presented; construction industry Kneysler et al. (2020) where the authors substantiate the methodological approach of attracting investment in the industry development of infrastructure and IT technology Boronos et al. (2018) which proposes a model of transformation of economy and society from the point of view of investment attractiveness. Analyzing the impact of the spatial association of various provinces in China on technological advancement and economic growth, Wu et al. (2019) conclude that foreign direct investment is a decisive factor for sustainable economic growth. At the same time, Angelopoulou & Liargovas (2014) examining the relationship between FDI and economic growth over a long period (1989-2008) in three different groups of countries: Member States of European Union, European Monetary Union and countries with transition economies indicate that there is no close link between foreign investment and economic growth. However, scientists focus on the significant differences between these groups of countries, one of which is the degree of economic integration. According to Simionescu (2016), structural changes and economic growth of the country substantially depend on investment in education, science and technologies. Such type of investment provides the highest economic return and also is of great social importance for human development. Bian et al. (2015) make a point that economic growth should be treated as an important macroeconomic category, which is an indicator not only of an absolute increase in social output, but also of the ability of the economic system to meet increasing population needs, improving quality of life. That is why economic growth is one of the main goals of society along with economic freedom, economic efficiency, etc (2019).

Studying the system of factors that affect the quality of economic growth, (2016) analyze the socio-psychological factors and evaluate the quality of economic growth from the perspective of increasing citizens' satisfaction with life. Empirical studies by the example of Chinese districts

have shown that spatial differences in economic development have little effect on life satisfaction, since the population living in different regions is unlikely to experience this change personally. However, short-term temporary changes in economic development have some impact, as the population of the territory experiences these changes directly. In turn, Bjørnskov et al. (2008), in their study concluded that faster GDP growth and faster government consumption growth in the country, compared to neighboring countries, cause positive trends in life satisfaction. Their findings comply with predictions of aspiration theory and comparative group comparison theories. Sarracino (2013) investigated the impact of economic growth on income levels and, accordingly, population expenditures, their structure, overall productivity, and the state of development of the country's economy, emphasizing that income and expenditures are one of the main indicators of improving living standards. Salvati et al. (2016) estimate economic growth by value-added per capita, sustainable development index, and quality of natural capital. Their research resulted in proposals to provide an information base for the implementation of sustainable development policies in countries characterized by persistent socio-economic differences.

Scientists from different countries in the study of economic growth processes raise the issue of the emergence and overcoming of regional disparities in economic development. Thus, Samburova (2014). argues that the downward trend in regional disparities is a consequence of the financial and economic crisis, China's regional policy and rising labor costs. Ohlan (2013) conducting research on the circs of disparities in socio-economic development at the district level in India puts emphasis upon the importance of the development level of the infrastructure sector of services, industrial and agricultural production.

In their studies Ukrainian researchers Simkiv et al. (2021) and Popadinets et al. (2021) concluded that the disproportionality of economic development of Ukrainian regions can be offset by attracting foreign investments in priority development areas, in particular, tourism, logistics, education, agriculture.

The analysis of scientific publications on the outlined issues shows that the quality of growth is determined by structural and institutional changes in the economy within the framework of the global practice and at the center of such a paradigm is a human personality with his / her needs and interests. In view of this, the purpose of the article is to carry out a comprehensive analysis of theoretical studies of economic growth features, formation of new quality of economic growth of regions. The abstract characteristic of this growth is its borders: qualitative, quantitative, spatial, temporal and estimation of disproportions of economic growth of regions of Ukraine based on the use of tools «backwardness funnel".

3. Research Objective, Methodology and Data

With this in mind, the purpose of the article is analysis of theoretical studies features of economic growth, the

formation of a new quality of economic growth regions abstract characteristics which are its boundaries: a qualitative, quantitative, spatial, temporal and assess imbalances growth regions of Ukraine through the use of tools" craters backwardness".

To diagnose trends and determine the spatial and temporal characteristics of the economic growth of regional economic systems, it is advisable to use the tool "backwardness funnel". According to Popkova (2014) "backwardness funnels" arise under the pressure of economic expansion of developed territories, which thus create the conditions for their own economic and political hegemony, which will facilitate the emergence of additional opportunities for their development. "Backwardness funnels" reflect the mechanism of loss of opportunities for development by individual regions due to the lag in time and the need to counteract the negative impact of globalization.

Backwardness funnels are considered as a universal tool of dynamic analysis, which allows to study the growth processes of territorial economic systems at different hierarchical levels: from local to international. This method allows one to determine whether the region under study is in the "backwardness funnel". In order to calculate these parameters compared to the value of GDP per identity of the region under study with the highest GDP. The main parameters that are calculated are:
- funnel depth - a temporary lag of the region from the developed regions. Economic content of backwardness funnel depth demonstrates the time, that the area is behind the more developed;
- speed delay in the funnel - strengthening or weakening temporary lag over time. Indicates how much lag increased by 1 year.

The change in the depth of the funnel is calculated by the formula:

$$D = (Y_i - Y\_GDP_{C\text{-developed}}) - (Y_{i-1} - Y\_GDP_{C\text{-developed}}),$$

D – change in the depth of the backwardness funnel over two consecutive periods of time,

Y_i – the years of calculating the lag from the average Ukrainian index, where $i = 1…m$;

$Y\_GDP_{C\text{-developed}}$ – the year when GDP per capita in the region Cj coincides with GDP per capita in the country.

The speed of dragging into the "backwardness funnel" is calculated by the formula:

$$Speed = D/(Y_i - Y_{i-1}),$$

Speed – speed of dragging into the "backwardness funnel"

4. Results and Discussion

The concept of economic growth as a result of extended reproduction has long outlived its usefullness. That is why today the question arises about defining new qualities of economic growth, aimed not only at the development of production, but at the development of the "welfare industry", which is considered as a complex of industries and economic activities aimed at ensuring a high standard of living for the population. The question requires the development of the concept of a new quality of economic growth, which should be based on the processes of intensification of economic development of the region.

This intensification must occur at the expense of factors that will provide not only quantitative growth, but also qualitative changes in the structure of
consumption and accumulation and changes in social parameters of territorial development. The identification and intensification of the effects of economic growth for certain stages of the development of any economic system should not only help to stimulate economic activity in the region, but also
to develop policies aimed at accelerating these processes.

The development of such a concept should take into account the existing disproportions of the economic development of the regions of the country, as well as the disproportions of economic growth.

Today, economic growth is a key issue of macroeconomic policy in all countries of the world. Developed countries and regions, while securing high levels of income, are concerned about the social impact of growth. At the same time, the backward regions have a completely different problem – how to make the achievement of sustainable long-term growth rates on a qualitatively new innovative basis one of the priority directions of the state economic policy.

In Ukraine, a system of factors that would guarantee dynamic growth rates in combination with the structural transformation of the national economy has not yet been formed. The basis of such transformation should be the formation of a new quality of economic growth. The abstract characteristic of this growth is its borders: qualitative, quantitative, spatial, and temporal. In economic practice, economic development goals are, in most cases, of catching up character and do not take into account promising changes in economic growth levels and, consequently, the competitiveness of individual regions compared to each other in the future.

On the basis of this methodology was Calculations for the funnel retardation regions of Ukraine. Checklist years to analyze selected 2001, 2004, 2007, 2010, 2013, 2016, 2019 year (Official site of the State Statistics Committee of Ukraine). Consider the results of calculations to compare the rate of economic growth regions of Ukraine with medium-ukrainian indicators (Table 1, Table 2, Table.3, Table 4).

In the 1990s, Ukraine's economy was in a stage of economic crisis, which was accompanied by a decline in GDP, industrial and agricultural output (in 1998, industrial output was 49% and agricultural production was 51% in comparison to 1990), and budgetary deficits (in 1994 the deficit amounted to 9.3% of GDP), the growth of public debt (in 1994 the public debt reached 56.1% of GDP), inflation (consumer price index in 1994 was 501%), the decline in living standards, increase in the unemployment rate (in 1998 unemployment rate was at the level of 3.7%), the spread of hidden unemployment, etc. As in other post-socialist countries, the transition of the domestic economy to market conditions, structural changes in the economy, and the breakdown of business ties between enterprises were the main causes of this economic slowdown.

Table 1

Calculation of "backwardness funnels" for the regions of Ukraine for the period of 2001 – 2004

Region	GDPcj 1998, $	Y_GDPc-developed	Y1–Y_GDPc-developed	GDPcj 2001, city.	Y_GDPc-developed	Y2–Y_GDPc-developed	D	Speed
ARC	1124	1996	2	1937	1999	2	0	0,00
Vinnitsa region	1239	1996	2	2104	2000	1	-1	-0,33
Volyn region	1024	1996	2	2077	2000	1	-1	-0,33
Dnipro region	1858	1999	-1	3562	2001	0		
Donetsk region	1799	1999	-1	3509	2001	0		
Zhytomyr region	1249	1996	2	1987	1999	2	0	0,00
Transcarpathian region	796	1995	3	1677	1999	2	-1	-0,33
Zaporizhzhia region	2071	2000	-2	3795	2001	0		
Ivano-Frankivsk region	1092	1996	2	2142	2000	1	-1	-0,33
Kyiv region	1751	1999	-1	3255	2001	0		
Kirovograd region	1124	1996	2	1860	1999	2	0	0,00
Lugansk region	1389	1997	1	2439	2000	1	0	0,00
Lviv region	1141	1996	2	2159	2000	1	-1	-0,33
Mikolayiv region	1425	1996	1	2563	2000	1	0	0,00
Odessa region	1563	1998	0	2828	2001	0	0	0,00
Poltava region	1936	1999	-1	3423	2001	0		
Rivne region	1259	1996	2	2118	2000	1	-1	-0,33
Sumy region	1524	1998	0	2631	2000	1	1	0,33
Ternopil region	980	1996	2	1605	1999	2	0	0,00
Kharkiv region	1610	1998	0	2799	2001	0		
Kherson region	1288	1996	2	1925	1999	2	0	0,00
Khmelnitsky region	1347	1997	1	2028	1999	2	1	0,33
Cherkassy region	1485	1997	1	2203	1999	2	1	0,33
Chernivtsi region	986	1996	2	1411	1997	4	2	0,67
Chernihiv region	1385	1997	1	2407	1999	2	1	0,33
Kyiv	2868	2001	-3	5965	2004	-3		
Sevastopol	968	1996	2	1682	1999	2	0	0,00

GDP^{Yi}cj – GDP per capita in the region C_j, where C_j – the name of the region where j = 1…n; Yi – years of calculation of the lag from the average Ukrainian index, where i = 1… m;

Table 2

Calculation of "backwardness funnels" for the regions of Ukraine for the period of 2007 – 2010

Region	GDPcj 2004 $.	Y_GDPc-developed	Y3–Y_GDPc-developed	D	Speed	GDPcj 2007, $	Y_GDPc-developed	Y4–Y_GDPc-developed	D	Speed
ARC	3633	2001	3	1	0,33	8101	2005	2	-1	-0,33
Vinnitsa region	3534	2001	3	2	0,67	7328	2005	2	-1	-0,33
Volyn region	3339	2001	3	2	0,67	7397	2005	2	-1	-0,33
Dnipro region	6058	2004	0	0	0,00	15239	2008	-1		
Donetsk region	6385	2004	0	0	0,00	15725	2008	-1		
Zhytomyr region	3074	2001	3	1	0,33	6636	2004	3	0	0,00
Transcarpathian region	3207	2001	3	1	0,33	6576	2004	3	0	0,00
Zaporizhzhia region	5353	2004	0	0	0,00	13369	2007	0	0	0,00
Ivano-Frankivsk region	3958	2001	3	2	0,67	8157	2005	2	-1	-0,33
Kyiv region	4513	2002	2	2	0,67	10918	2006	1	-1	-0,33
Kirovograd region	3632	2001	3	1	0,33	7723	2005	2	-1	-0,33
Lugansk region	3997	2001	3	2	0,67	10085	2006	1	-1	-0,33
Lviv region	4049	2002	2	1	0,33	8351	2005	2	0	0,00
Mikolayiv region	4284	2002	2	1	0,33	9769	2006	1	-1	-0,33
Odessa region	5245	2004	0	0	0,00	10379	2006	1	1	0,33
Poltava region	5533	2004	0	0	0,00	14330	2008	-1		
Rivne region	3475	2001	3	2	0,67	7724	2005	2	-1	-0,33
Sumy region	3795	2001	3	2	0,67	7848	2005	2	-1	-0,33

Ternopil region	2741	2001	3	1	0,33	5819	2004	3	0	0,00
Kharkiv region	5045	2004	0	0	0,00	11353	2007	0	0	0,00
Kherson region	3287	2001	3	1	0,33	6744	2004	3	0	0,00
Khmelnitsky region	3337	2001	3	1	0,33	7023	2005	2	-1	-0,33
Cherkassy region	3309	2001	3	1	0,33	8209	2005	2	-1	-0,33
Chernivtsi region	2771	2001	3	-1	-0,33	5650	2004	3	0	0,00
Chernihiv region	3764	2001	3	1	0,33	7714	2005	2	-1	-0,33
Kyiv	16697	2008	-4			35210	2014	-7		
Sevastopol	4557	2002	2	0	0,00	10079	2006	1	-1	-0,33

The situation changed in 1999, after the country achieved macroeconomic stability. World experience shows that annual per-capita GDP growth of 4-6% is satisfactory for any country. In the period 2000-2008 Ukraine had a real growth rate of 3 times higher (6.9% on average over the period) than in such developed countries as the USA – 2.3%, Japan – 1.4%, the EU – 2.2%.

Table 3
Calculation of "backwardness funnels" for the regions of Ukraine for the period of 2013 – 2016

Region	$GDP_{cl}2010, \$$	P	$Y5-Y\_GDP_{C\text{-developed}}$	D	Speed	$GDP_{cl}2013, \$.$	$Y\_GDP_{C\text{-developed}}$	$Y6-Y\_GDP_{C\text{-developed}}$	D	Speed
ARC	13933	2007	3	1	0,33	22675	2009	4	1	0,33
Vinnitsa region	12145	2007	3	1	0,33	20253	2009	4	1	0,33
Volyn region	11796	2007	3	1	0,33	19249	2009	4	1	0,33
Dnipro region	27737	2011	-1			44650	2016	-3		
Donetsk region	23137	2011	-1			38907	2016	-3		
Zhytomyr region	11419	2007	3	0	0,00	19551	2010	3	0	0,00
Transcarpathian region	10081	2006	4	1	0,33	17088	2010	3	-1	-0,33
Zaporizhzhia region	20614	2009	1	1	0,33	30656	2012	1	0	0,00
Ivano-Frankivsk region	12485	2007	3	1	0,33	23379	2011	2	-1	-0,33
Kyiv region	21769	2009	1	0	0,00	40483	2014	-1		
Kirovograd region	13096	2007	3	1	0,33	22082	2011	2	-1	-0,33
Lugansk region	16562	2008	2	1	0,33	25950	2011	2	0	0,00
Lviv region	14093	2007	3	1	0,33	24387	2011	2	-1	
Mikolayiv region	17050	2008	2	1	0,33	24838	2011	2	0	0,00
Odessa region	20341	2009	1	0	0,00	27070	2011	2	1	0,33
Poltava region	22337	2011	-1			38424	2014	-1		
Rivne region	11699	2007	3	1	0,33	18860	2008	5	2	0,67
Sumy region	13631	2007	3	1	0,33	21722	2009	4	1	0,33
Ternopil region	10240	2006	4	1	0,33	16644	2008	5	1	0,33
Kharkiv region	21228	2009	1	1	0,33	29972	2012	1	0	0,00
Kherson region	12256	2007	3	0	0,00	17910	2008	5	2	0,67
Khmelnitsky region	11780	2007	3	1	0,33	19920	2010	3	0	0,00
Cherkassy region	14393	2007	3	1	0,33	24558	2011	2	-1	-0,33
Chernivtsi region	9383	2006	4	1	0,33	14529	2007	6	2	0,67
Chernihiv region	13121	2007	3	1	0,33	22096	2009	4	1	0,33
Kyiv	61088	2017	-7			97429	2018	-3		
Sevastopol	16966	2008	2	1	0,33	25872	2011	2	0	0,00

The foreign policy of the state, which provided a stable course for economic reform – structural transformations, deregulation, balance of stable monetary policy and support for export development are the main factors that contributed to economic growth. It is also worth noting such factors as an increase in domestic demand for goods and services during this period by increasing real incomes of the population, expanding export markets by increasing the competitiveness of Ukrainian goods. Positive changes occurred in all regions of Ukraine. The highest level of economic growth was recorded in Kyiv, Dnipropetrovsk, Donetsk, Poltava, Zaporizhzhia and Kharkiv regions. The highest rate of dragging into the "backwardness funnel" for the regions of Ukraine was observed in 2007 in the following regions: Vinnytsia, Volyn, Ivano-Frankivsk, Rivne, Sumy.

However, it should be noted that in 2010, most regions

that were in the "backwardness funnel" experienced positive trends related to bridging the gap between GRP per person and the average Ukrainian GDP per person. Among them are the following: Autonomous Republic of Crimea, Vinnytsia, Volyn, Ivano-Frankivsk, Kyiv, Kirovohrad, Luhansk, Mykolaiv, Rivne, Sumy, Khmelnytskyi, Cherkasy, Chernihiv regions and the city of Sevastopol.

In 2013, Kyiv, Dnipropetrovsk, Donetsk and Poltava regions were among the regions that maintained high economic growth rates and therefore, were not in the backwardness funnel. The rest of the regions were in a state characterized by stable rates of lag and funnel depth. At this time, 2-3 years were the dominant speeds of the regions lagging behind the average Ukrainian GDP per capita. Transcarpathian, Ternopil and Chernivtsi regions had even higher lags (4 years), thus, they had off chances of securing economic growth in the near future.

Compared to 2004, which is considered to be one of the control years where the depth of the funnel and the rate of dragging into it are recorded, in 2013 the number of regions in the "backwardness funnel" increased from 11 to 19. This situation occurred due to the financial crisis in the country. As practice shows, the peculiarities of monetary policy have always had a significant impact on the development of the economy of the state and each region, in particular. Its instruments, such as the exchange rate, inflation, interest rates remain the main components in assessing the state of the economy, levels of its disproportionality and prospects. They determine the dynamics of GDP, income and expenditure of the population, enterprises, the ratio of aggregate supply and demand, the dynamics of investment, balance of payments and so on. Therefore, the financial crisis of 2008-2009 had a negative impact on the economy of the state and its regions.

However, in 2019, due to macroeconomic instability and hostilities in eastern Ukraine, the situation deteriorated significantly. The number of regions in "backwardness funnels" has increased to 19, indicating an increase in inter-regional differentiation. The calculations of the depth of the funnel also confirm the increase in years of lag in most regions from the average GDP per capita in the country to 4-5 years. Transcarpathian, Ternopil, Kherson regions are characterized by even higher lags (6

The increase in the number of regions that have been trapped in backwardness funnels indicates an increase in interregional differentiation within Ukraine. However, given the depth of the funnel, we can state the increase in the years of regions' backwardness by the average GDP per capita. While in 2004 the backwardness depth index in 6 regions was negative, indicating a downward trend in backwardness, in 2013 this indicator was positive in all regions where the backwardness was recorded, that is, 19 regions were in the "backwardness funnel" and there was a lack of positive dynamics and tendency to reduce backwardness of regions.

The upside is that the rate of region dragging into the "backwardness funnel" in 2013 was slower than in 2007. For some regions (Vinnytsia, Volyn, Ivano-Frankivsk, Kyiv, Luhansk, Rivne and Sumy regions), the funnel dragging rate in 2007 reached 0.67 per year, but in 2013 in all regions this figure did not exceed 0,33. This indicates a decrease in the pace and scale of the regions lagging behind the average Ukrainian GDP per capita.The situation improved a little in 2016. High economic growth rates during this period were observed in Kyiv, Dnipropetrovsk, Donetsk, Kyiv and Poltava regions. The number of regions in "backwardness funnels" decreased from 19 to 15 compared to 2013. However, it is worth noting that for most regions the indicators of the period lagging behind the average Ukrainian GDP per capita up to four years are increasing. Even higher lags (5 years) are recorded in Rivne and Ternopil regions, and for Chernivtsi the value is 6 years. The funnel dragging rate for these regions is 0.67 per year. It should be added that in 2016, the backwardness indicator in 3 regions was negative (Transcarpathian, Ivano-Frankivsk, Kirovohrad), which indicates the presence of positive dynamics in the economy of these territories and the tendency to reduce the lag.

years), and for Chernivtsi and Luhansk its value is 8 and 9 years, respectively. It is also worth noting that in 2016 the backwardness depth indicator in 5 regions was negative, which allowed us to claim that the gap was reduced, in 2019 this indicator was positive in all regions where the lag was positive. This fact testifies to the lack of positive dynamics and the tendency to reduce the backwardness of the regions.

Table 4

Calculation of "backwardness funnels" for the regions of Ukraine for 2019

Region	GDP$_{ci}$ 2017$	Y_GDP$_{C\text{-developed}}$	Y7–Y_GDP$_{C\text{-developed}}$	D	Speed
ARC	-	-	-	-	-
Vinnitsa region	27249	2011	5	1	0,33
Volyn region	23218	2011	5	1	0,33
Dnipro region	53749	2018	-2		
Donetsk region	27771*	2011	5	6	2,00
Zhytomyr region	23678	2011	5	2	0,67
Transcarpathian region	19170	2010	6	3	1,00
Zaporizhzhia region	37251	2015	1	0	0,00
Ivano-Frankivsk region	27232	2011	5	3	1,00

Kyiv region	46058	2015	1	2	0,67
Kirovograd region	29223	2011	4	2	0,67
Lugansk region	14079*	2007	9	7	2,33
Lviv region	28731	2012	4	2	0,67
Mikolayiv region	30357	2012	4	2	0,67
Odessa region	31268	2012	4	2	0,67
Poltava region	48040	2018	-2		
Rivne region	24762	2011	5	0	0,00
Sumy region	26943	2011	5	1	0,33
Ternopil region	20228	2010	6	1	0,33
Kharkiv region	35328	2014	2	1	0,33
Kherson region	21725	2010	6	1	0,33
Khmelnitsky region	24662	2011	5	2	0,67
Cherkassy region	30628	2012	4	2	0,67
Chernivtsi region	16552	2008	8	2	0,67
Chernihiv region	26530	2011	5	1	0,33
Kyiv	124163	2020	-4		
Sevastopol	-	-	-	-	-

* Data taken without taking into account the temporarily occupied territory of the Autonomous Republic of Crimea, Sevastopol and parts of the area of anti-terrorist operation

The speed of dragging of the region into the "backwardness funnel" significantly increased in 2019. For some regions (Zhytomyr, Kirovohrad, Lviv, Mykolaiv, Odesa, Khmelnytskyi, Cherkasy, Chernivtsi regions) the funneling velocity reached 0.67 per year. In the Transcarpathian and Ivano-Frankivsk regions, this indicator increased to 1.00, and in Donetsk and Luhansk to 2.00 and 2.33 per year, respectively, indicating an increase in the pace and scale of the backwardness of Ukrainian regions. The situation in Donetsk and Luhansk regions is extremely critical, which is explained by the deployment of hostilities in their territory, which in turn has exacerbated the instability in the economy and caused the economic crisis in the country as a whole. In addition, the main problems of regional development, which have increased the degree of inter-regional differentiation and need to be addressed, are the low competitiveness of the development related to the need to overcome existing regional disparities, reducing barriers to effective state regulation of regional markets, the formation of civil society and the development of new strategic areas of regional policy in Ukraine. The model and, which was used this time was one of the causes of disintegration tendencies that threaten the consolidation of Ukrainian society. Regional policy must balance the promotion of the most promising areas and the introduction of an effective mechanism to address economic and social disparities, promote social

regional economy; structural imbalance of the industrial complex of Ukraine, high level of energy and capital intensity of production; low investment and innovation activity of regions (overexposure to traditional resources, reduction of labor costs); slowdown in lending to the real economy by international financial institutions; the uncontrollable hryvnia devaluation.

This analysis confirms that Ukraine needs new approaches to the formation of regional development priorities and the implementation of regional policies that can minimize the risks of current global challenges; to transform regional differences into new opportunities for quality economic growth of the state; to ensure a high standard of quality of life for a person, regardless of his/her place of residence, by integrating regions in a single political, legal, informational and cultural space. Therefore, urgent task today is to define the characteristics of regional integration.

Thus, the authors propose a model of regional economic policy formation aimed at solving the strategic issues of socio-economic development of the regions that form the mission (goal) of this policy (ensuring quality economic growth) (Fig. 1).

Therefore, during its elaboration the authors defined the criteria for strategic vision of the development of regions (self-sufficiency, self-organization and self-government), which testify to the rejection of the paternalistic model of relations of its subjects.
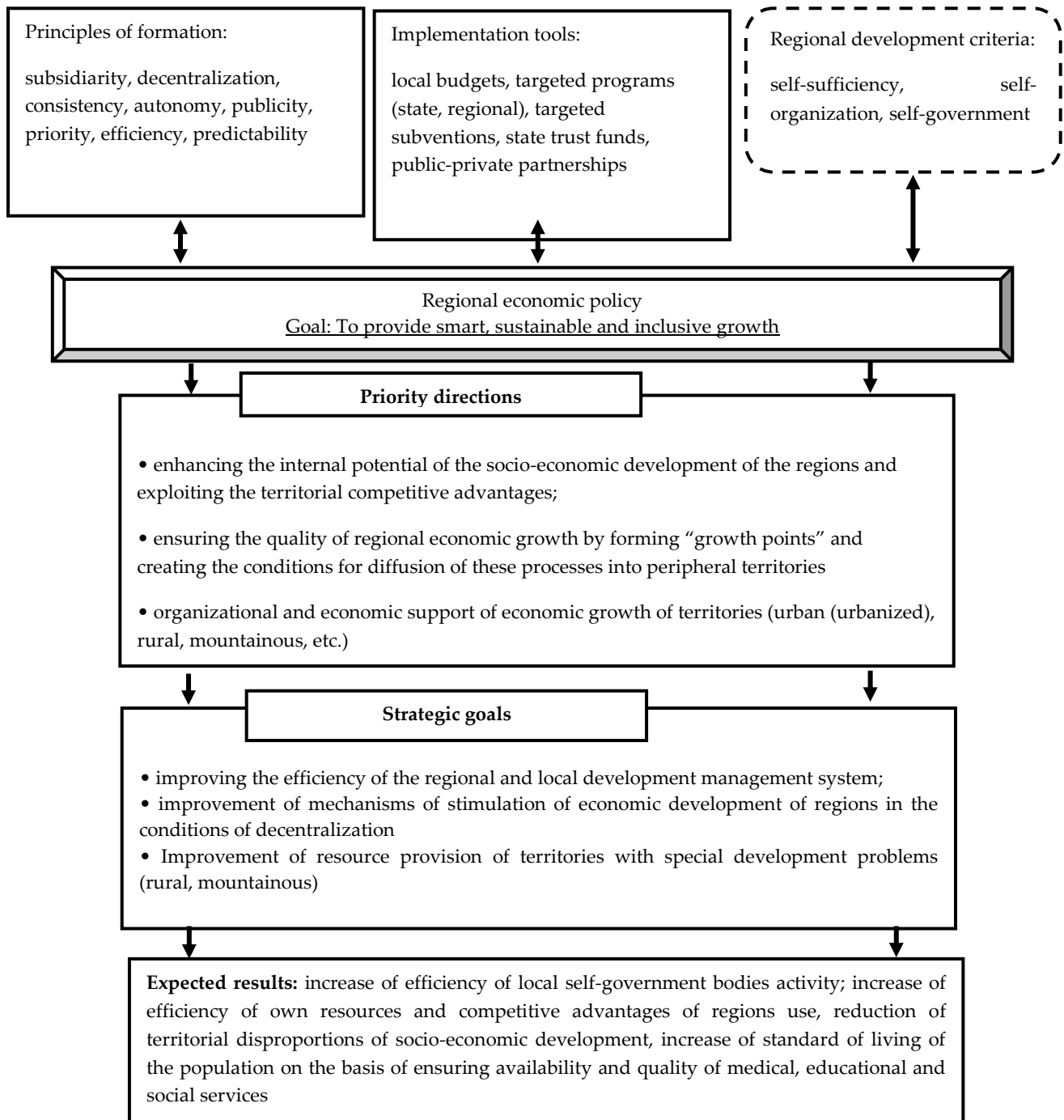
| Principles of formation: subsidiarity, decentralization, consistency, autonomy, publicity, priority, efficiency, predictability | Implementation tools: local budgets, targeted programs (state, regional), targeted subventions, state trust funds, public-private partnerships | Regional development criteria: self-sufficiency, self-organization, self-government |

Regional economic policy
Goal: To provide smart, sustainable and inclusive growth

Priority directions

• enhancing the internal potential of the socio-economic development of the regions and exploiting the territorial competitive advantages;

• ensuring the quality of regional economic growth by forming "growth points" and creating the conditions for diffusion of these processes into peripheral territories

• organizational and economic support of economic growth of territories (urban (urbanized), rural, mountainous, etc.)

Strategic goals

• improving the efficiency of the regional and local development management system;
• improvement of mechanisms of stimulation of economic development of regions in the conditions of decentralization
• Improvement of resource provision of territories with special development problems (rural, mountainous)

Expected results: increase of efficiency of local self-government bodies activity; increase of efficiency of own resources and competitive advantages of regions use, reduction of territorial disproportions of socio-economic development, increase of standard of living of the population on the basis of ensuring availability and quality of medical, educational and social services

Fig. 1. Model of formation of regional economic policy

STRATEGIC GOALS OF REGIONAL ECONOMIC POLICY

Goal 1: Improving the effectiveness of the regional and local development management system

Goal 2: Improvement of stimulation mechanisms of economic development of regions in the conditions of ...

Goal 3: Improvement of resource provision of territories with special development problems (rural, mountainous)

Objective

- completion of the reform of local self-government and decentralization of power

- formation of a clear system of distribution of powers between the governing bodies of different levels and their resource support

- improvement of communal infrastructure management processes

- expanding the capacity of local governments to finance the costs of socio-economic development of regions

Objective

- stimulating structural shifts in the regional economy in accordance with the principles and priorities of the smart specialization strategy

- increasing the level of innovation of the regional economy

- intensification of attraction of domestic and foreign investments

- creation of conditions for the development of small and medium-sized enterprises

Objective

-stimulation of agricultural production, forest processing (for mountain areas)

-promoting diversification of rural and mountainous economies

-development of infrastructure of rural and mountain areas

- development of human capital

Expected results

- minimal intervention of the "center" in managing the socio-economic development of the regions

- maximum consideration of

Expected results

- formation of regional points of economic growth in places of concentration of economic activity

- stimulation of innovative

Expected results

- increasing the efficiency of agricultural production

- creation of new jobs

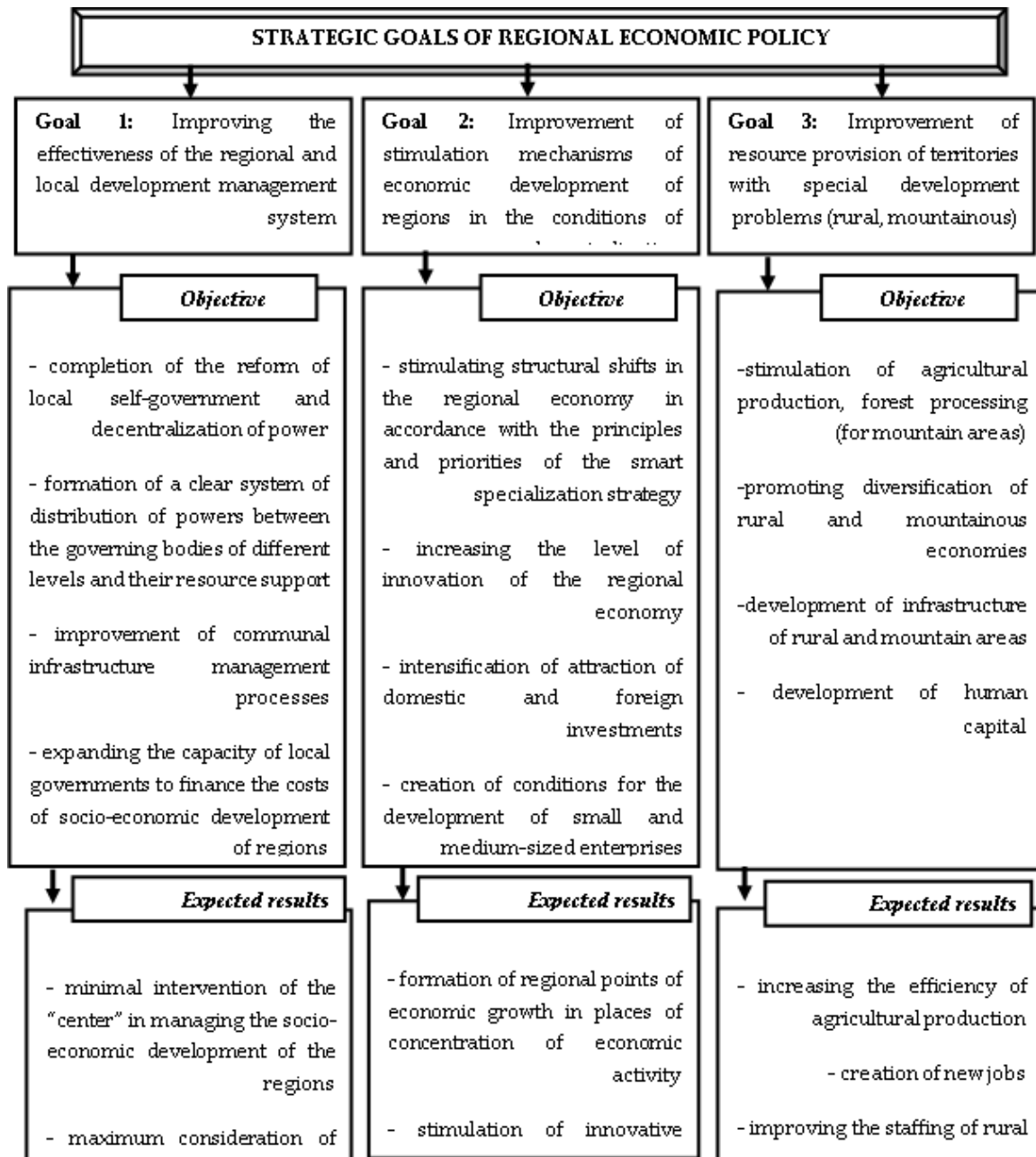- improving the staffing of rural

Fig. 2. Strategic benchmarks of regional economic policy in Ukraine
Note. Compiled by the authors.

In accordance with the stated goal, priority directions of regional economic policy are proposed, in particular: increasing the internal potential of the socio-economic development of the regions and exploiting the territorial competitive advantages; creating incentives for the formation of economic growth points at regional level and strengthening their links with the periphery; organizational and economic support for the economic growth of territories (urban, mountainous, sparsely populated, demarcation and border areas, etc.).

The implementation of these priorities of regional economic policy should ensure quality economic growth by accumulating, mobilizing and improving the use of available resources in the region, improving the investment climate in the regions, the formation of a developed infrastructure at the regional level (transport, production, investment, social, and communication support), etc.

The proposed model also identifies and substantiates strategic goals of regional economic policy (improving the effectiveness of the regional and local development management system; improving mechanisms to stimulate regional economic development under the conditions of decentralization; improving the provision of territories with special development problems) to achieve which a number of objectives must be fulfilled (Fig. 2).

5. Conclusion

Conducted calculations and the results of estimating the depth and speed of lagging behind the regions of the

average Ukrainian value presented in the tables allowed us to estimate and summarize the relevant time lags of the regions, the degree of inter-regional differentiation by the level of development and, to a certain extent, the availability of reserves to ensure the process of economic growth of the territories.. The withdrawal of regions from the "backwardness funnels" is first and foremost related to the qualitative changes in the structure of the regional economy and, accordingly, the search for such priorities of regional economic policy that will provide new quality of economic growth.

Priority directions of regional economic policy are proposed, which should ensure high-quality economic growth through accumulation, mobilization and increase of efficiency of use of available in the region resources, improve investment climate in regions, form infrastructure support for development of regions.

Strategic priorities of regional development are defined, in particular: increase of internal potential of socio-economic development of regions and effective use of territorial competitive advantages; ensuring the quality of economic growth of regions by forming "growth points" and creating conditions for diffusion of these processes into peripheral territories; improvement of organizational and economic support of spatial and economic transformations in the context of different types of territories (urban, rural, mountainous, etc.).

The methodological tools that have been used in the study can be applied while analyzing economic growth processes both at state and international level.

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