

# The Influence Of The Gross Regional Product On The Formation Of The Financial Potential Of The Region

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## Abstract

The relevance of the research topic is due to the fact that in the current economic conditions, the availability of sufficient financial resources in the regions of Ukraine is a prerequisite for the formation of their strong financial potential and the basic basis for ensuring sustainable economic development of the regions. Therefore, the issues of shaping and enhancing the financial capacity of the region, as well as improving the efficiency of the use of available resources, are of particular importance today. In the work a comparative analysis of the dynamics of the financial potential of the region with the help of statistical-accounting and indicative methods is carried out. In the process of research, scientific methods were used: induction and deduction - in assessing the volume of financial potential and its effectiveness; statistical analysis - in the process of analyzing the financial potential of the region; economic and mathematical modeling - to substantiate strategic directions of formation of financial potential of the region. The result of the study is clearly defined tendencies of economic development of the regions of Ukraine on the basis of their financial potential and reasons for deepening differentiation of development.

**Keywords:** gross regional product, financial potential, region, method.

## 1. Introduction

In the current context of systemic reforms aimed at forming an effective socially-oriented national economy and public finance system in Ukraine in order to achieve similar European practices as a condition for association with the EU, a major strengthening of investment and innovation processes in all spheres of social life especially in generation of financial resources based on the formation of financial potential as the basis of financial sufficiency for the sustainable development of society. This determines the high relevance of the topic of the study.

## 2. Materials and Methods

The methodological basis of the article consists of general scientific, special methods and approaches of research, in particular: systematic approach – to identify the peculiarities of formation of financial potential of the region; method of scientific abstraction, induction and deduction - in assessing the volume of financial potential and its effectiveness; statistical analysis and grouping – to substantiate strategic directions of formation of financial potential of the region.

## 3. Results and Discussion

An important aspect in shaping the financial capacity of the regions is the national principle of ensuring that the

public service provision, guaranteed for all citizens, regardless of their place of residence. This is achieved by equalizing the financial capacity of all units of the budgetary system in this way: the excess of funds beyond their guaranteed level of financial capacity is removed, centralized, and used to provide subsidies, subsidies and transfers to the less financially secured links in the budgetary system (Onishko, 2003; Onishko, 2017; Prokopenko *et al.*, 2017).

Historical experience has shown that the process of forming regions (as integral socio-economic systems-complexes) is rather slow. After all, one of the decisive conditions for the complex formation of these systems is the establishment of stable functional complementary relationships between their structural units (Kosozoriv, 2012; Lemishko O., 2017; Perevozova *et al.*, 2019). The financial potential of the region is influenced by external factors, reflects the possibilities of the resource complex of the region, which functions as an economic reproduction system: the financial resources embodied in the material and technical base are expended and replenished due to the functioning of the production process (Onishko, 2003; Babenko *et al.*, 2018). Gross regional product is the volume of production of a region for a certain period minus its costs (Fedosov, Oparin, Lovochkin, 2002). Gross regional product includes indicators of all components of the region's financial potential: financial potential of regional households, financial potential of business activity of the region,

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export investment components of financial potential, financial capacity of local authorities and national component of financial potential of the region (Prokopenko, Gudz, Tymoshenko, 2018).

Reproduction of the financial potential of the region is largely governed by state regulation under the influence of society's development goals, taking into account the interests of the country, and depends on the stimulating and deterrent factors, shown in figure 1

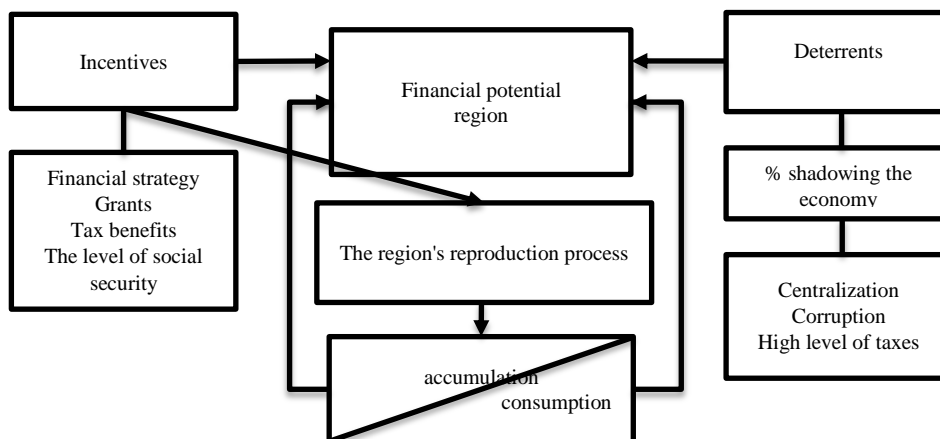


Fig.1. Reproduction process of financial potential of the region (Davydenko and Buryak, 2019)]

That is why it takes some time to show the established trends of regional development. In the practice of European regional scientists in the analysis of the pace of development of the regions used for this purpose 5-7 years (Chuzhikov, 2018, Abuselidze, Mamaladze, 2019). This to some extent complicates the isolation of the effect of specific factors of financial potential on the immediate result. After all, all varieties of elements of financial potential have the same value in money and the same direction. That is why to analyze tendencies of formation of financial potential of a region it is necessary to use the approach not from the standpoint of individual factors, but the influence of the whole system set involved in a certain region of financial potential. In this case, the gross regional product is an indicator of the effect of the financial potential of the region in understanding its strength. The indicative level of financial potential is the value of gross regional product per person (Krupka, 2001;

Thus, the approach we have chosen to assess the magnitude of the financial potential of the regions has the following advantages (Boronos, 2011, Kosozoriv, 2012):

- a) it is calculated on the basis of official statistical records;
- b) neglects direct calculation in terms of value of all components (which is not always possible);
- c) the reverse approach is applied, that is, the result obtained most fully and reliably attests to the amount of financial potential in the socio-economic system of the region - its strength and power.

Most important is that the indicator of the value of the gross regional product of the region, calculated per capita, is not an absolute indicator, but a relative one, and is therefore a comparative indicator of the financial potential of the regions (table 1).

Table 1

Dynamics of financial potential of the region in accordance with indicative calculation method 2005-2017, million UAH \*

Regions	2005	2006	2007	2008	2009	2010	2015	2016	2017	2017 to 2005 times
Vinnitsia	5966	7328	9159	12061	12145	14332	37270	46615	58394	9,8
Volyn	6285	7397	9711	12340	11796	13916	30387	34310	49987	8,0
Dnepropetrovsk	11909	15239	20868	30918	27737	34709	65897	75396	97137	8,2
Donetsk	12490	15725	20197	26028	23137	28986	26864	32318	39411	3,2
Zhytomyr	5554	6636	8485	11545	11419	14616	30698	38520	49737	9,0
Transcarpathian	5373	6576	8452	10626	10081	12278	22989	25727	34202	6,4
Zaporozhye	10683	13369	18022	23232	20614	23657	50609	59729	75306	7,0
Ivano-Frankivsk	6916	8157	10055	12940	12485	14814	33170	37220	46312	6,7
Kiev	37453	46128	64828	82185	82857	96564	216013	265952	90027	2,4
Kirovohrad	6394	7723	9546	13515	13096	15533	39356	47469	55183	8,6
Lugansk	8131	10085	13628	18338	16562	19788	10778	14251	13883	1,7
Lviv	6657	8351	10915	13902	14093	16353	37338	45319	58221	8,7
Mykolaev	7801	9769	12227	16175	17050	20276	41501	50091	60549	7,8
Odessa	8619	10379	13827	19638	20341	22544	41682	50159	62701	7,3
Poltava	11574	14330	18500	22476	22337	29652	66390	81145	106248	9,2
Rivne	6269	7724	9695	12217	11699	13785	30350	33958	42038	6,7
Sumy	6497	7848	10249	13622	13631	15711	37170	41741	51419	7,9

Ternopil	4603	5819	7510	9688	10240	11713	24963	29247	38593	8,4
Kharkiv	9025	11353	15645	21294	21228	23639	45816	57150	69489	7,7
Kherson	5713	6744	8122	11944	12256	14346	30246	36585	45532	8,0
Khmelnysk	5764	7023	9100	11932	11780	13602	31660	37881	49916	8,7
Cherkasy	6681	8209	10331	14581	14393	17325	40759	48025	59697	8,9
Chernivtsi	4654	5650	7369	9771	9383	10939	20338	23365	31509	6,8
Chernihiv	6474	7714	10081	13213	13121	15406	35196	41726	55198	8,5
Ukraine	9372	11630	15496	20495	19832	23600	46413	55899	70233	7,5

Note. \* Compiled by the authors according to the reports of the State Statistics Service of Ukraine for the respective years <http://ukrstat.gov.ua>.

Shown in table 1 data show that the level of GRP per capita in Ukraine for the period 2005-2017 has increased 6.0 times. At the same time, in the first five years (2006-2010), the volume of GRPs per person increased 2.5 times, and over the next five years (2011-2015) only 2 times, that is, the growth rate slowed down.

These are given in table 1 data also confirm that there is a negative trend in Ukraine - a significant unevenness (asymmetry) of financial capacity in the regions. This is reflected in the fact that the discrepancy between the polar values of the financial potential indicators was: in 2006 as 1.00: 3.70; in 2010 as 1.00: 3.15, and in 2017 as 1.00: 5.6. Compared with the national level, the smallest increase in GRP over the last 7 years (2010-2017) occurred in Odessa, Chernivtsi and Transcarpathian regions. In particular, it decreased in the Luhansk and Donetsk regions as a result of hostilities in their territory. The highest increase of GRP during this period occurred in Kirovograd, Rivne, Sumy, Cherkasy and Kherson regions.

A comparative analysis of statistical accounting and indicative calculation methods is carried out. For analysis, it is appropriate to use data not of absolute static indicators but dynamics of formation of financial potential of the region for the whole analytical period (2005-2017). Considering that the absolute values of the indicators of the financial potential of the region, calculated by statistical accounting and analytical methods, are predicted to be quite different, the relative rankings of the regional regions were used for the analysis to compare the success of the functioning of the regions.

Each region receives a rank as a relative indicator to track the nature of a rating change over a given period, which reveals the type of dynamics: increasing or decreasing the pace of development against baseline and prior periods. Comparison of the rankings of the regions according to the indicative and statistical calculation methods for the periods 2005, 2010 and 2017 is shown in Table. 2.

Table 2.

Comparison of the results of calculating the financial potential of the region using statistical and accounting and indicative methods \*

Region	Financial potential of the region (calculated by the statistical and accounting method of calculation) million UAH						Financial potential of the region (calculated by the indicative method of calculation), UAH					
	2005	rank	2010	rank	2017	rank	2005	rank	2010	rank	2017	rank
Vinnitsia	41019,4	18	116441,6	18	335007,3	9	5966	18	14332	18	583949	
Volyn	25457,5	17	73401,6	19	172015,7	23	6285	16	13916	19	4998714	
Dnepropetrovsk	189980,6	2	583015,9	2	2911915,0	2	11909	2	34709	1	971372	
Donetsk	241233	3	662999,3	3	655893,6	5	12490	1	28985	3	3941120	
Zhytomyr	30958,4	20	87381,7	21	235081,5	15	5554	21	14616	16	4973716	
Transcarpathian	25244,7	23	75391,4	22	231513,0	16	5373	22	12278	22	3420222	
Zaporozhye	85913	4	216002,3	5	1320095,0	3	10683	4	23657	5	753064	
Ivano-Frankivsk	35302,2	15	100550	16	268128,3	11	6916	10	14814	15	4631217	
Kiev	285422	1	1172114,5	1	3143893,0	1	8673	6	26140	4	900273	
Kirovohrad	35996,7	7	74578,4	14	189718,6	21	6394	15	15533	13	5518312	
Lugansk	89215,4	6	241474,1	6	236122,7	14	8131	8	19788	9	1388324	
Lviv	69735,2	12	209017,4	11	532440,2	7	6657	12	16353	11	5822110	
Mykolaev	39326,8	9	114172,9	9	289051,8	10	7801	9	20276	8	605497	
Odessa	79924,4	8	246414	7	676818,3	4	8619	7	22544	7	627016	
Poltava	67956,7	5	179723,2	4	341377,2	8	11574	3	29652	2	1062481	
Rivne	27239,3	19	82368,3	17	199928,4	20	6269	17	13785	20	4203819	
Sumy	34341,5	11	95116,3	12	217304,3	18	6497	13	15711	12	5141913	
Ternopil	22820,5	22	65396	23	174342,1	22	4603	24	11713	23	3859321	
Kharkiv	86652,9	10	270667,7	8	619958,0	6	9025	5	23639	6	694895	
Kherson	28618,5	16	82473,5	13	221230,1	17	5713	20	14346	17	4553218	
Khmelnysk	31543,5	21	91223,6	20	247451,5	12	5764	19	13602	21	4991615	
Cherkasy	36312,8	13	117839,6	10	244780,6	13	6681	11	17325	10	596978	
Chernivtsi	17554,9	24	54547,4	24	159427,4	24	4654	23	10939	24	3150923	
Chernihiv	30377,6	14	80336	15	207292,0	19	6474	14	15406	14	5519811	

Note. \* Designed by the authors.

According to the data of the financial potential of the regions of Ukraine, calculated using statistical accounting and indicative methods, significant differences have been established, both for the studied period and in terms of

individual areas, which is explained by the structure of the used financial resources and those that are in potential. This is especially true for the last period - 2017. This is due to the impact on the calculation of the national

component of the financial potential of the region, which is a fairly conditional indicator and directly depends on the population of the region, but does not take into account the indicators of temporarily displaced persons and the real redistribution of financial resources and population in general. Significant impact on the financial potential of the region is also played by the financial potential of the banking sector in the region, which in the last analytical year decreased by an average of 20%, although this did not affect the overall dynamics of the financial potential of economic entities and the financial potential of households in issuing households and deposits attracted.

#### 4. Conclusion

In today's environment, the formation of a gross regional product is an important prerequisite for ensuring economic stability, so analyzing its structure and supporting underdeveloped regions is a strategically important task. Despite the importance of regional financial potential in solving territorial problems, the theoretical and practical basis of methods for its complex assessment has not yet been developed, which negatively affects the use of existing opportunities to increase the financial flows of specific regions.

As a result of the analysis of the dynamics of the volumes of financial potential of the regions during the analyzed period, significant asymmetries were revealed, which is caused by the influence of factors of the external and internal environment, both positive and negative content, as well as different levels of economic development of the regions. At the same time, it was proved that the level of financial potential of the region is influenced by the level of the shadow economy, the role of significant reserves for increasing financial capacity in the context of all its components was determined, for which the appropriate mechanisms and models of attracting financial resources were proposed.

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#### 6. Conflict Of Interest

The author declares that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancy have been completely observed by the authors.

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