ECONOMIC DEVELOPMENT AND ECONOMIC STRUCTURE OF THE MAJOR RUSSIAN METROPOLITAN AREAS

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INVESTIGATED SAMPLE OF METROPOLITAN AREAS

- Group A: largest metropolitan areas serving as macro-regional centers, the fulcrum of national economic growth (6 metropolitan areas)
- Group B: metropolitan areas with regional centers as core cities (29 metropolitan areas)
- Group C: metropolitan areas of local significance (10 metropolitan areas)

- *Population of each investigated metropolitan area exceeds 300 thousand of people*

GROSS METROPOLITAN PRODUCT (GMP) ESTIMATION METHODOLOGY

Gross metropolitan product (GMP) is an indicator to measure the market value of goods and services produced in all economic sectors of a city/metropolitan area during a year

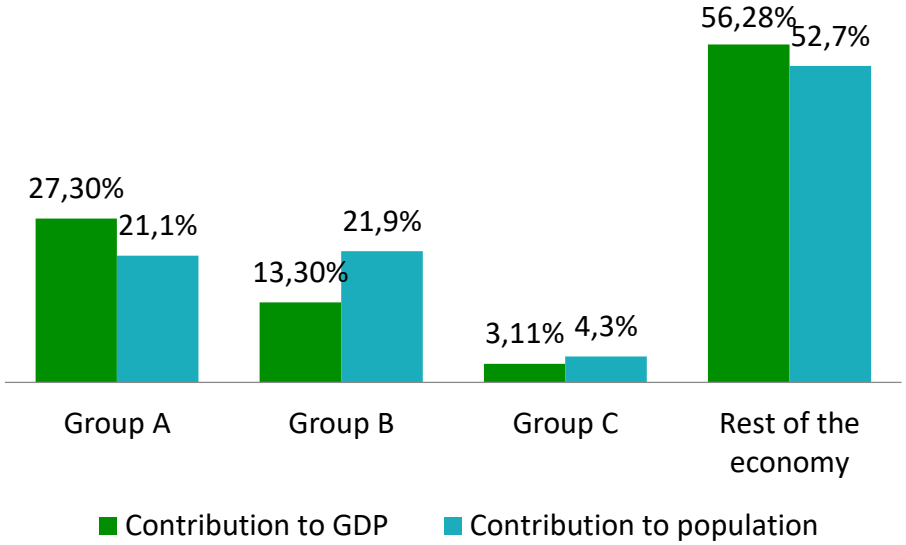
The indicator is estimated based on a method similar to the income approach method for GDP calculation with a number of assumptions made to compensate for the absence of a system of accounts at the city and metro levels from Russia's statistical framework*

* *Precise methodology of GMP calculation is presented at IUE web-site, section 'Analytics'*

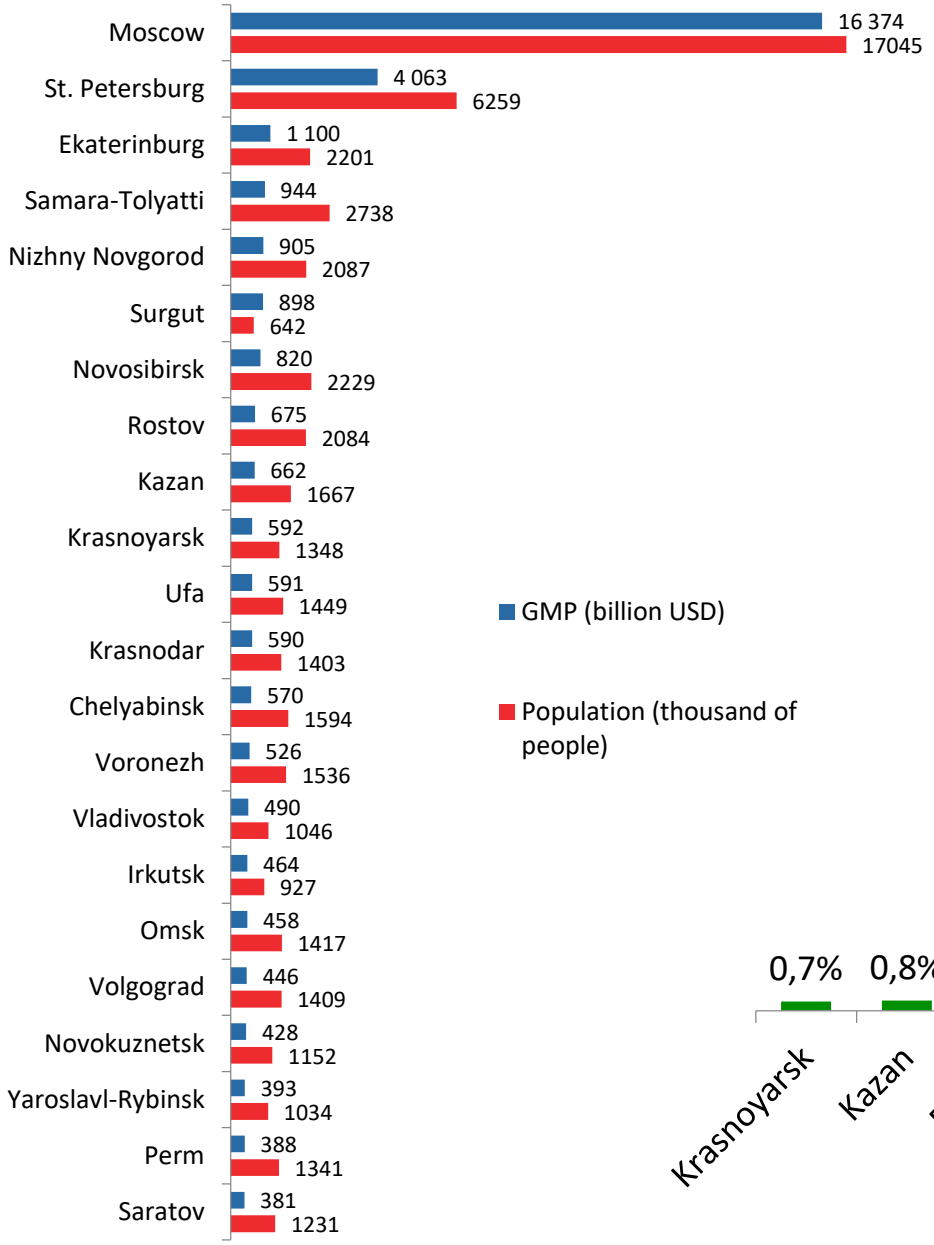
CONTRIBUTION IN GDP OF INVESTIGATED METROPOLITAN AREAS IN 2016

Group A accounts for the largest (out of 3 selected groups) contribution to the Russian economy, group C – for the smallest

Out of all investigated metropolitan areas only for group A contribution to GDP exceeds contribution to country's population

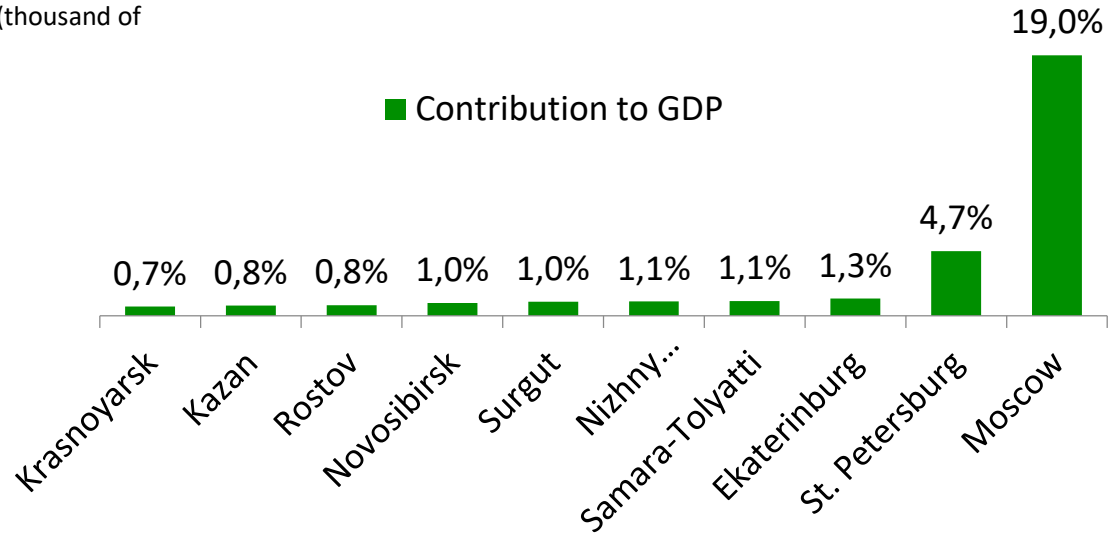


GMP RANKING LEADERS



Moscow, St. Petersburg, Yekaterinburg, Samara-Tolyatti and Nizhniy Novgorod metropolitan areas are topping the ranking of investigated metro areas by GMP

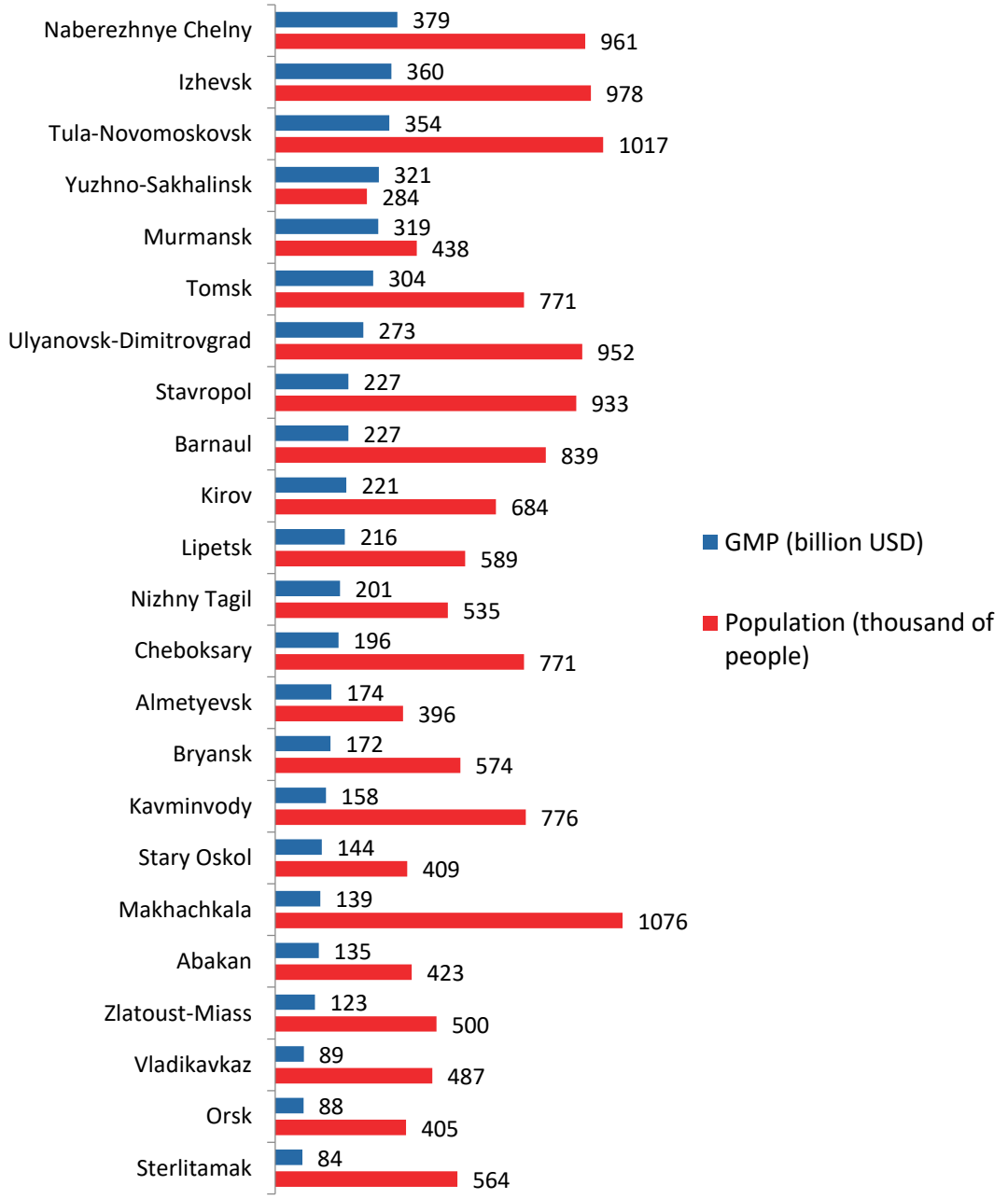
These 5 metropolitan areas account for more than 27% of GDP



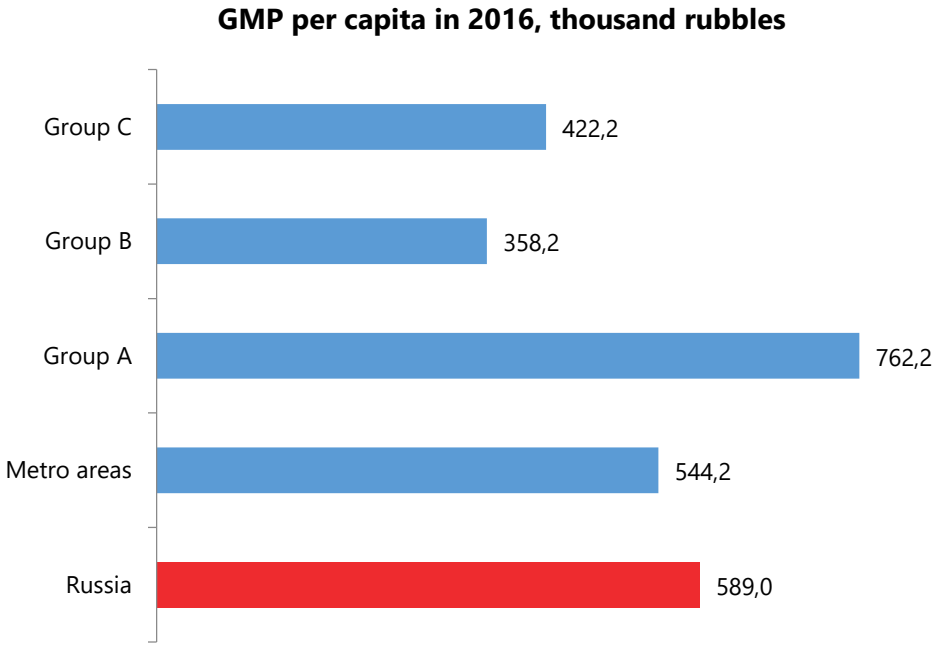
GPM RANKING LAGGARDS

The last places among the studied metro areas took Sterlitamak, Orsk and Vladikavkaz MAs

The largest (Moscow) metropolitan area outperforms the smallest (Sterlitamak) by 194 times

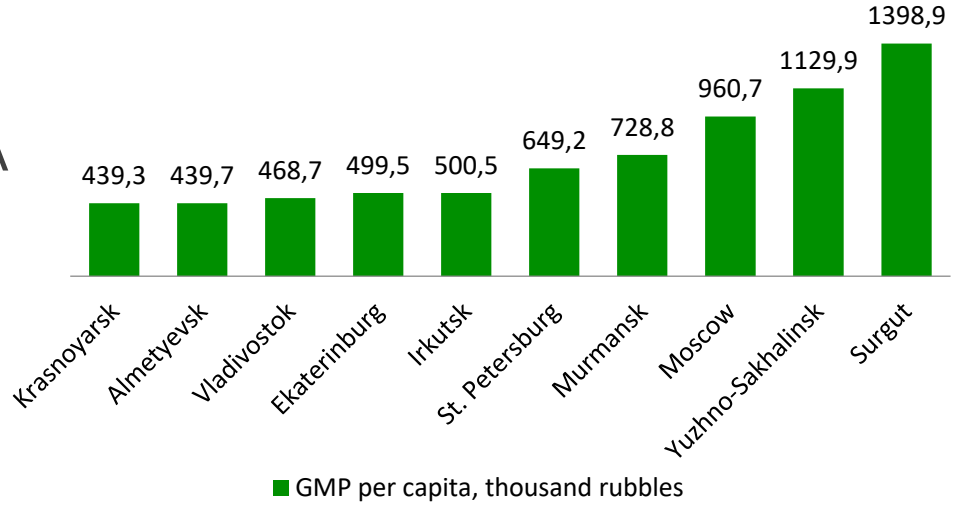


GMP PER CAPITA OF METROPOLITAN AREAS IN 2016



Except for Moscow and St. Petersburg, only several small metro areas with «resource economy» outpace country's economy in terms of GDP per capita

GMP per capita of MAs of group A significantly exceeds that of other groups and Russian GDP per capita while MAs of B and C groups are under the national average level



GMP PER CAPITA RANKING OF 45 METROPOLITAN AREAS (FIRST HALF)

Rank	Metropolitan area	GMP per capita (thousand rubbles)	Population (thousand people)	Position in total GMP ranking
1	Surgut	1398,9	642	6
2	Yuzhno-Sakhalinsk	1129,9	284	25
3	Moscow	960,7	17 045	1
4	Murmansk	728,8	438	26
5	St. Petersburg	649,2	6 259	2
6	Irkutsk	500,5	927	16
7	Ekaterinburg	499,5	2 201	3
8	Vladivostok	468,7	1 046	15
9	Almetyevsk	439,7	396	34
10	Krasnoyarsk	439,3	1 348	10
11	Nizhny Novgorod	433,5	2 087	5
12	Krasnodar	420,5	1 403	12
13	Ufa	407,6	1 449	11
14	Kazan	396,8	1 667	9
15	Naberezhnye Chelny	394,1	961	22
16	Tomsk	394,0	771	27
17	Nizhny Tagil	375,3	535	32
18	Novokuznetsk	371,4	1 152	19
19	Novosibirsk	367,9	2 229	7
20	Izhevsk	367,9	978	23

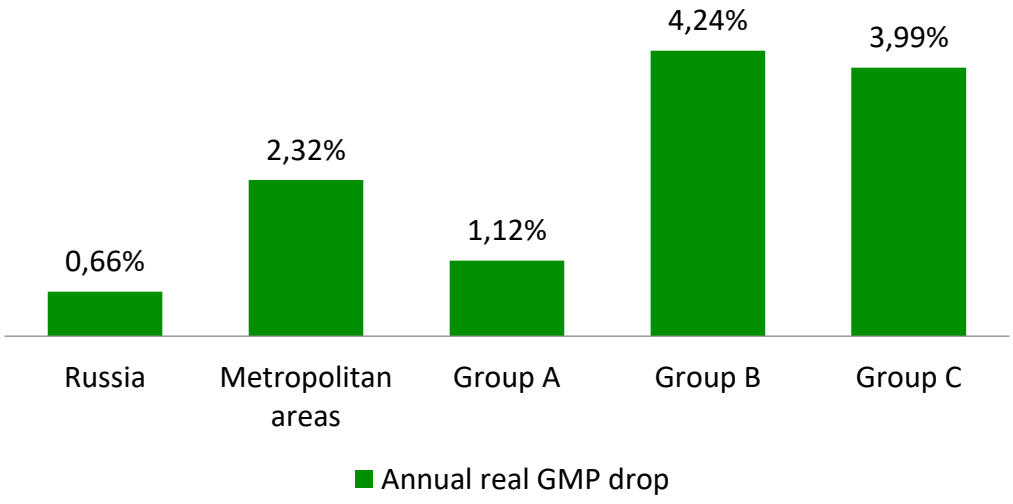
GMP PER CAPITA RANKING OF 45 METROPOLITAN AREAS (SECOND HALF)

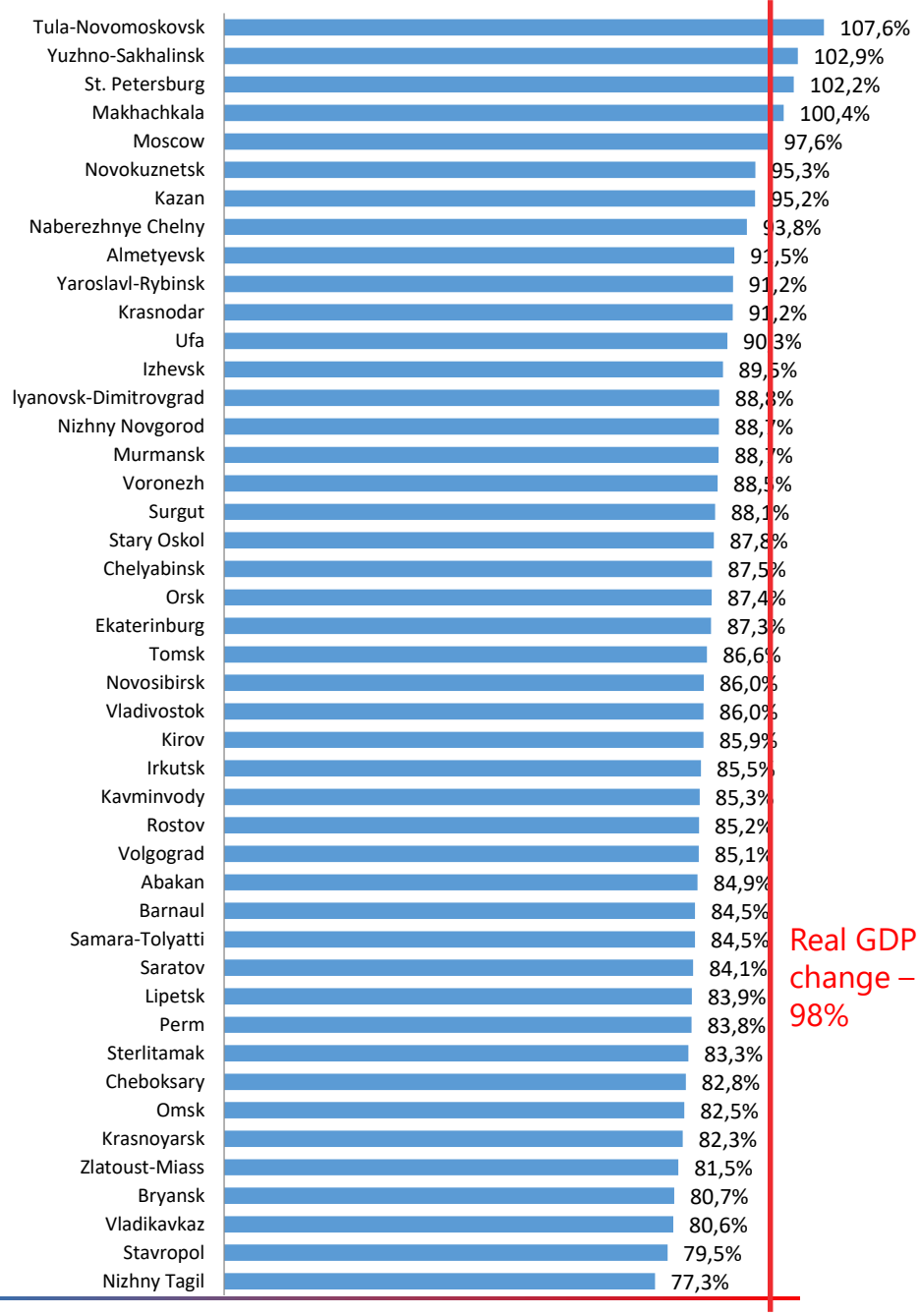
Rank	Metropolitan area	GMP per capita (thousand rubbles)	Population (thousand people)	Position in total GMP ranking
21	Lipetsk	365,9	589	31
22	Chelyabinsk	357,4	1 594	13
23	Stary Oskol	352,7	409	37
24	Tula-Novomoskovsk	347,9	1 017	24
25	Samara-Tolyatti	344,7	2 738	4
26	Voronezh	342,4	1 536	14
27	Rostov	324,1	2 084	8
28	Omsk	323,3	1 417	17
29	Kirov	322,9	684	30
30	Abakan	319,4	423	39
31	Volgograd	316,7	1 409	18
32	Saratov	309,4	1 231	21
33	Bryansk	299,1	574	35
34	Perm	289,5	1 341	20
35	Barnaul	270,5	839	29
36	Cheboksary	254,1	771	33
37	Zlatoust-Miass	246,8	500	40
38	Stavropol	243,2	933	28
39	Orsk	216,9	405	42
40	Kavminvody	202,9	776	36
41	Vladikavkaz	182,2	487	41
42	Sterlitamak	149,5	564	43
43	Makhachkala	129,5	1 076	38

DYNAMICS OF REAL GMP OF INVESTIGATED METROPOLITAN AREAS IN 2013-2016

In 2013-2016 real GMP of metropolitan areas decreased twice as fast as Russian GDP: 2.3% per year versus 1.1% per year

Only Tula-Novomoskovsk, Yuzhno-Sakhalinsk, St. Petersburg and Makhachkala areas showed growth of real GMP





METHODOLOGY FOR ASSESSING GMP STRUCTURE

- GMP structure evaluation is also based on income method. The share of the industry in GMP of metropolitan area is defined as the share of the aggregate wage fund of employees in the industry (excluding small business entities, as Russian statistical framework doesn't provide any data about their wage fund) in the total wage fund of this metro area across all the industries

- The gross value added produced in the industry is estimated at market prices (that is, including net taxes on products and import)

- Evaluation is carried out across all the industries except industry P (household activities)

THE RESULTS OF THE 45 METRO AREAS GMP STRUCTURE ASSESSMENT

GVA to GMP ratio by MAs groups for 2016 (weighted average values in orange are higher than similar national values, green ones are lower than similar national valus),%

Industry	∑GVA RUS/ ∑GDP RUS	∑GVA METRO/ ∑GMP	∑GVA group A/ ∑GMP group A	∑GVA group B/ ∑GMP group B	∑GVA group C/ ∑GMP group C
A Agriculture	4,02	0,66	0,35	1,23	0,89
B Fishing	0,25	0,14	0,07	0,32	-
C Mining	8,48	2,19	0,21	1,63	21,99
D Manufacturing	12,36	14,53	11,00	20,59	19,94
E Production and distribution of electricity, gas and water	2,81	3,75	2,96	4,98	5,56
F Construction	5,56	3,33	3,31	2,91	5,30
G Wholesale and retail trade	14,40	10,08	12,32	6,91	3,82
H Hotels and restaurants	0,75	0,87	1,04	0,57	0,71
I Transport and communication	7,05	9,41	9,14	10,10	8,93
J Finance	4,02	8,64	11,07	5,22	1,77
K Real estate and other services	15,47	16,07	20,63	9,03	5,77
L Governance and security	7,09	8,60	6,91	12,71	6,05
M Education	2,34	4,56	4,34	5,10	4,21
N Health care	3,39	4,09	3,84	4,63	3,90
O Other utilities	1,55	1,96	2,21	1,63	1,08
Sum	90,08	88,88	89,39	87,57	89,94

CLASSIFICATION OF INDUSTRIES IN TERMS OF LEVEL OF ECONOMIC DEVELOPMENT AND STRUCTURAL CHANGES POTENTIAL

The first-tier industries prevailing in economies of large MAs and associated with the greatest potential in terms of economic growth:

- Manufacturing **(D)**
- Finance **(J)**
- Real estate, rental and provision of services **(K)** *(these services include scientific research, IT and other intellectual services)*

→ ***private sector***

- Transport and communication **(I)**

→ ***mixed sector***

- Education **(M)**
- Health and social services **(N)**

→ ***public sector***

CLASSIFICATION OF INDUSTRIES IN TERMS OF LEVEL OF ECONOMIC DEVELOPMENT AND STRUCTURAL CHANGES POTENTIAL

Second-tier industries, sectors that either tend to be non-urban or lack opportunities for the economic growth

- Agriculture and hunting **(A)**
- Fishing **(B)**
- Mining **(C)**
- Construction **(F)**
- Wholesale and retail trade, repair of motor vehicles, motorcycles and personal items **(G)**
- Hotels and restaurants **(H)**

→ ***private sector***

- Production and distribution of electricity, gas and water **(E)**
- Other utilities, social and personal services **(O)**

→ ***mixed sector***

- Public services, security, social insurance **(L)**

→ ***public sector***

TYPOLOGY CRITERIA

Metro area type	Manufacturing (D)	Finance, R&D, science and intellectual services (J, K)	Education and Health (M, N)	Resources (A,B,C)	Consumer Services (G, F, H, O)	Public services and security (L)
1. Developed modern urban economy						
2. Resource economy and weak potential for structural changes						
3. Industrial economy and moderate potential for structural changes						
4. Depressed economy and ambiguous prospects for structural changes						

Share in GMP is above 45 MAs average

Share in GMP is on 45 MAs average level

Share in GMP is below 45 MAs average

METRO AREAS WITH DEVELOPED MODERN URBAN ECONOMY

The current economic structure

A high proportion of the financial sector, scientific research and intellectual services – more than 15% of GMP

A relatively low proportion of health and education sectors, public services and security – less than 15-20% of GMP

Significant structural overperformance of Moscow metropolitan area

The role in the country's economic growth

Sustainable urban economics foster the development of market relations and amplify agglomeration effects - the highest potential for innovative growth

Structural change potential

Natural structural changes that do not require specific public policy

Preservation of the current structure for Moscow metro area, gradual structural changes towards the Moscow economic structure underpinned by relevant infrastructure investments for other 10 metro areas

1. Moscow
2. St. Petersburg
3. Yekaterinburg
4. Novosibirsk
5. Rostov
6. Kazan
7. Ufa
8. Nizhny Novgorod
9. Voronezh
10. Krasnodar
11. Tomsk

METRO AREAS WITH RESOURCE ECONOMY AND WEAK POTENTIAL FOR STRUCTURAL CHANGES

The current economic structure

- Geographical specialization in resource-extracting industries
- A high proportion of public services and security in GMP
- Low diversification of the economy in first-tier market sectors

The role in the country's economic growth

Significant role in resource economic growth (export development model)

Structural change potential

- Vladivostok metro area is the center of the macro-region and especially needs economic restructuring, for example, through extension of the manufacturing industry and succeeding development of financial and intellectual services sectors. This restructuring requires special measures of direct state support.
- For other metro areas potential of structural changes is weak as resource economy is attributable to its geographical disposition and essential for existing macroeconomic model

1. Vladivostok
2. Stavropol
3. Murmansk
4. Krasnoyarsk
5. Yuzhno-Sakhalinsk
6. Surgut
7. Almetyevsk
8. Novokuznetsk

METRO AREAS WITH INDUSTRIAL ECONOMY AND MODERATE POTENTIAL FOR STRUCTURAL CHANGES

The current economic structure

- Specialization in the manufacturing industry (more than 30% of GMP)
- A high proportion of public services and security in GMP
- Low diversification of the economy in first-tier market sectors

The role in the country's economic growth

- Considering weak competitive positions of Russian manufacturing industry on global market, the role of these metro areas in GDP growth is low
- The key goal is diversification of manufacturing by means of technological shifts towards «new industries» with high competitive positions on global market

Structural change potential

- 15 metro areas of group B have moderate potential, but necessary redistribution of government spending from public services to first-tier industries requires state financial support
- 6 metro areas of group C have weak potential, social investments appear unwarranted , preservation of the structure of the economy is more plausible

1. Samara-Tolyatti
2. Chelyabinsk
3. Volgograd
4. Perm
5. Saratov
6. Omsk
7. Irkutsk
8. Tula-Novomoskovsk
9. Bryansk
10. Kirov
11. Cheboksary
12. Izhevsk
13. Lipetsk
14. Yaroslavl-Rybinsk
15 Ulyanovsk-Dimitrovgrad
16. Nizhny Tagil
17. Naberezhnye Chelny
18. Sterlitamak
19. Orsk
20. Zlatoust-Miass
21. Stary Oskol

METRO AREAS WITH DEPRESSED ECONOMY AND AMBIGUOUS PROSPECTS FOR STRUCTURAL CHANGES

The current economic structure

- Lack of dominant production or resource-extracting industries
- Health care, education and public services account for extremely high share of GMP (from 30% to 50%)
- Extremely low values of GMP per capita (4-5 times lower than the national average) may indicate high proportion of the «shadow economy»

1. Vladikavkaz
2. Abakan
3. Kavminvody
4. Barnaul
5. Makhachkala

The role in the country's economic growth

These metro areas do not play significant role in the economic growth of a country, their model of economy is focused on local consumption and does not have growth prospects

Structural change potential

- The potential for structural changes cannot be assessed, the priority goal is to reduce the share of the gray economy