METHODOLOGICAL ASSESSMENT OF TERRITORIAL COMPETITIVE POSITIONS: CONSUMER GOODS AND SERVICES INDUSTRIES AND MARKETS INFRASTRUCTURE IN KEMEROVO REGION CASE STUDY

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Abstract: The priority tasks of the modern times include challenges in assessment of the industrial competitiveness. Today the problem of assessing the competitiveness of regions is the main and the first. When competition for investments, innovations and new technologies between regions increases, the role of their key competitive positions start to go up too. A development of methodological approaches to assessment of territorial competitive positions of a region is a primary focus of the article. Consumer goods and services industries and markets infrastructure of Kemerovo region were selected to be an object of the current study. The results of our earlier works presented three groups of competitive positions to assess competitiveness of a given region: territorial competitive positions of a region (TCP), industrial competitive positions of a region (ICP), territorial and industrial competitive positions of a region (TICP). The object of more detailed research is some positions of the first group. The TCP has been divided into two subgroups: basic TCP (based on geographical location and general resource potential) and controllable TCP (built up by a region proactively in a targeted manner). Today the region market infrastructure becomes one of the most important controllable TCP. It is academic and practical interest to work out assessment methods to evaluate a rate of its development and contribution into economic performance of a region. Market infrastructure was classified by three characteristics: functional and industrial, services markets, hierarchical. To evaluate development rate of consumer goods and services markets infrastructure in Kemerovo region we defined its components and suggested three groups of indicators: absolute and relative, flow data, overall. Sets of additional indicators further determine each of the above groups. Through the detailed analysis, the overall indicators were used to assess Kemerovo region economic structure and how industries and consumer goods and services markets infrastructure contribute to its GRP. We analyzed changes that occurred in economic structure of the region during the last years and presented macroeconomic, aggregated, enlarged model of Kemerovo region. The study generally concludes that there is a need to further strengthening of territorial competitive position in service sector.

Keywords: competitiveness of a region, market infrastructure, regional economic model, consumer goods production sector, service sector

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INTRODUCTION

The priority tasks of the modern times include challenges in assessment of the industrial competitiveness. Today the problem of assessing the competitiveness of regions is the main and the first [1]. In times of crisis and sanctions imposed by European Union competition grew inside the sector of consumer goods and services. Companies compete not only for markets to sell their products but also for investments, innovations, technologies.

The interest revealed by the prominent international researchers Peter Ferdinand Drucker [2], Michael Mescon [3], Michael Porter [4] and Russian scientists A.P. Pankrukhin [5], R.A. Fatkhutdinov [6] to the issue proves it to be one of the today's urgent topics.

OBJECTS AND METHODS OF STUDY

In the most general sense, competitiveness of any subject or object refers to a set of properties and values providing advantage in competition.

Competitive advantages of a given company can be attributed to by competitive possibilities and potential of a country, area, region, municipality and territories of market agents' location and functioning.

However, competitiveness of a territory can be assessed as based on the cooperation between territories along with assessment based on their competition.

Different types of competitive positions ensure competitiveness of a territory. We divided them into three major groups [7, 8, 9]:

– common territorial or given territorial competitive positions (TCP);

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– industrial competitive positions (ICP);
– territorial and industrial competitive position (TICP).

We'll study the first group. Taking into account two aspects of territory definition the TCP can be further divided into two subgroups [10]: basic and controllable. There exist other groups: in-depth and shallow; basic and developed; tangible and intangible; economic determinant and strategic determinant.

Basic TCP will include:

– T_1CP – geographical location (distance from administrative-territorial borders, size and shape, neighboring territories);
– T_2CP – neighboring territories cooperation potential;
– T_3CP – territory accessibility;
– T_4CP – mineral resources (proven, exploited);
– T_5CP – climate conditions;
– T_6CP – environment pollution rate;
– T_7CP – rational distribution of production forces.

Controllable TCP will include:

– T_8CP– administrative potential;
– T_9CP – business climate favorability;
– T_{10}CP – education and qualification level of human resources;
– T_{11}CP – intellectual, scientific and technological potential;
– T_{12}CP – level of implementing technical progress achievements and innovative decisions;
– T_{13}CP – agglomerations, clusters, business territories, incubators, industrial parks businesses, special economic zones potentials;
– T_{14}CP – industrial potential;
– T_{15}CP – financial potential;
– T_{16}CP – tax potential;
– T_{17}CP – foreign economic potential;
– T_{18}CP – rate of infrastructure development (energy, transport, logistics, information and communication, market, social);
– T_{19}CP – economic structure;
– T_{20}CP – status potential (administrative center, distribution center, international business representation, innovative activity center, information (communication) network hub, international cultural center, tourism center);
– T_{21}CP – intangible assets (attractive image and brand, official territorial symbols, positive reputation, historical and cultural heritage).

Basic and controllable territorial competitive positions can interact in creating synergy effects.

In the above case competitive positions dependent on geographical location give a way to competitive positions that territories create themselves continuously in the process of their development. For example, gain in competitive advantages can be achieved by building up the capacity of market infrastructure.

Building up the modern market infrastructure is an important way to ensure efficient production, investment and social activities. For a given region to increase its competitiveness, the market infrastructure should include an extensive network of different structures serving demands of market economy participants, in particular, intermediary, trade and sales companies, finance and credit institutions, companies providing information and legal support. Efficiency in business highly depends on reliable market infrastructure, on the understanding that dynamic and quite complex market relations put every investor and entrepreneur in the position when their success is impossible without coherent relations within operating cycle and its financial, credit and marketing support.

Before evaluating market infrastructure development rate it appears reasonable to classify it by the following features:

– function within the sector;
– service markets;
– hierarchical (ranking).

Function within the sector feature differentiates between the following functions of infrastructure [11] (Table 1):

Table 1. Regional infrastructures by function

Infrastructure function	Composition
Trade infrastructure	Wholesale, wholesale intermediaries, commodity exchange, trading houses, retail companies, wholesale and retail fairs, exhibitions, retail booths
Procurement/purchasing infrastructure	Procurement intermediaries, purchasing enterprises, agricultural products purchasing companies
Finance and credit and insurance infrastructure	Commercial banks, non-banking credit and finance institutions, currency and stock exchange, insurance firms, factoring firms
Information technology infrastructure	Data processing center, telecommunication networks, information technologies service firms
Real estate sales infrastructure	Real estate agencies, real estate purchase and exchange centers, intermediary firms selling real estate abroad
General commercial activity infrastructure	Marketing firms, consulting firms, advertising agencies, business centers, chambers of industry and commerce
General economic legal infrastructure	Arbitration courts, consulting legal firms, notaries and lawyers offices

We assessed the market infrastructure of Kemerovo region by the feature above and determined the following entities to be representative of the regional infrastructure:

(1) Trade infrastructure of the region comprises wholesale enterprises, wholesale intermediaries, wholesale and retail enterprises, retail enterprises, foreign trade organizations, distribution centers, trade houses, wholesale fairs, exhibitions and booths, commercial centers, specialized distribution centers and warehouses;

(2) Purchasing infrastructure mainly includes purchasing intermediaries, purchasing enterprises, wild plants procurement enterprises;

(3) Finance and credit (investment) and insurance infrastructure is represented by commercial banks, non-banking credit financial institutions (not licensed by the Russian Federation Central Bank), insurance firms, factoring companies;

(4) Information technology infrastructure of the region comprises data processing service firms and telecommunication networks;

(5) Real estate infrastructure includes: real estate sales and exchange centers, real estate sales and rental agencies;

(6) The infrastructure of general commercial activity comprises consulting firms, advertising agencies, business centers, incubators, science and technology park, chamber of industry and commerce;

(7) Economy related legal infrastructure is represented in the region by arbitrary courts, consulting legal firms, lawyers and notaries offices.

Regional infrastructure classification by types of infrastructures in terms of service markets and hierarchy (ranking) is shown on Fig. 1.

By services, markets infrastructures of the region can be presented by the following types:

– consumer goods and services markets infrastructure,
– industrial and technological products markets infrastructure,
– financial markets infrastructure including securities market,
– labor markets infrastructure,
– real estate markets infrastructure,
– information markets infrastructure, etc.

From hierarchical perspective of subordination and management (ranking) a region can display the following formats of infrastructures: international, national, interregional, regional, municipal (city, district), local.

To evaluate development rate of consumer goods and services markets infrastructure we suggested a set of indicators that includes three groups (Table 2):

(1) Absolute and relative indicators;
(2) Flow data;
(3) Overall.

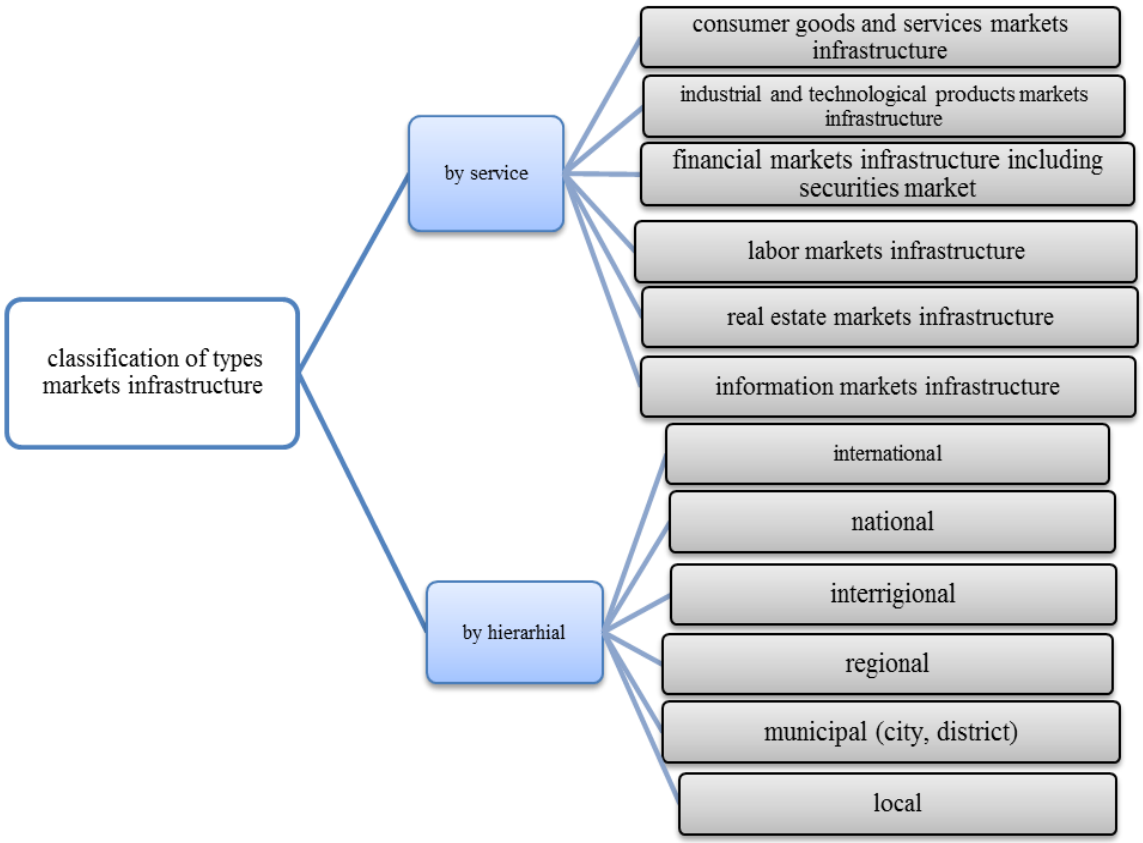


Fig. 1. Regional infrastructure classification by type.

Table 2. Market infrastructure development assessment indicators

Groups of indicators	Evaluation criteria
Absolute and relative	– by capital funds, – by number and size of businesses, – by output, – by density, – by number of personnel, – by economic efficiency;
Flow data	– dynamic indicators, – compared reporting and basis periods indicators;
Overall	– regional share in GRP, – regional share in GVA, – share in total capital investment cost, – share in total number of employed.

Let's apply the above set of indicators to evaluate the development rate of goods and services consumer markets infrastructure.

First and foremost, it must be noted that consumer goods and services market infrastructure plays a major role in formation and functioning of the whole market infrastructure of a region. Consumer goods and services market consists of the following aggregated segments: food market, durable goods market (household appliances, consumer electronics), consumer services market, real estate market.

The group of absolute and relative indicators of consumer market infrastructure development rate should include:

– costs of capital funds and capital investing into their development in total, by formats, by segments and their share in total volume;

– total number of enterprises, their distribution by segments, formats;

– trade enterprises size in terms of floor space, number of seatings including stores, shopping malls, booths, kiosks, warehouses, public catering and service enterprises;

– trade enterprises customers capacity that is average number of buyers per a selected unit of time, turnover or revenue per a given enterprise, turnover or sales per square meter, average number of employees per a given enterprise;

– density coefficients of trade enterprises: a number of enterprises per square unit of a region, average floor space per 10.000 residents;

– number of employees: total, on average per one enterprise, on average per square meter of a floor space, revenue per employee, etc.;

– economic performance: of infrastructure as a whole, by aggregated segments, formats and enterprises.

This study offers to expand the group of indicators by adding the flow data. The latter includes time series of absolute and relative indicators, and compares given indicators in reporting period with the same indicators in base (reference) period using various mathematical statistic calculations.

Finally, the group of overall indicators can be applied to describe general quantitative and qualitative characteristics [12, 13] of the role consumer market infrastructure and its aggregated segments play in regional economics. They represent contribution, share of the infrastructure in GRP, total capital investments and total number of employed in regional economics. Thus, a proportion of the consumer market infrastructure gross value added in regional GVA demonstrates the role of this infrastructure in the formation of present indicator. Ratio of a number of employed growth trend reveals that consumer market infrastructure attracts labor force that becomes available from manufacturing and other industries in the process of regional economic restructuring.

The state of the regional economic structure and its planned restructuring is a core competitive position, which predetermines actual opportunities for industries and market infrastructures to occupy its niche in regional, interregional and international commercial and economic relations. Regional economic structure predetermines segments and local market capacity, main directions of consumer goods and services by import and export.

RESULTS AND DISCUSSION

Industries contributions into gross regional products (GRP) define regional economic structure.

The study analyzed regional economic structure by the example of Kemerovo region. In 2012 GRP of the region was 717.7 billion roubles. It included 15 industries, 6 of which participate in production of goods and 9 render services (Table 3).

Table 3. Kemerovo region economic structure in 2012 [14]

Industries	2006 year		2008 year		2012 year	
	Current price, billion rubles	GRP breakdown, %	Current prices, billion rubles	GRP breakdown, %	Current prices, billion rubles	GRP breakdown, %
Mining	73 550.0	21.8	260 130.4	34.6	192 405.3	26.8
Manufacturing	66 334.5	19.6	103 163.6	13.7	113 529.1	15.8
Wholesale and retail sale, repair of motor vehicles, bikes, household and personal goods	47 455.6	14.0	89 154.3	11.9	78 128.0	10.9
Transportation and communication	31 172.2	9.2	56 949.3	7.6	58 780.5	8.2
Real estate operations, rental and services	21 884.3	6.5	50 899.8	6.8	67 438.2	9.4
Power generation and distribution of energy, gas, water	20 694.3	6.1	32 304.2	4.3	29 729.4	4.1
Construction	18 508.2	5.5	38 150.3	5.1	40 050.2	5.6
Public health and social services	14 351.9	4.2	30 053.3	4.0	34 766.0	4.8
Agriculture, hunting and forestry	12 633.6	3.7	23 922.5	3.2	20 680.7	2.9
Education	11 392.5	3.4	21 198.1	2.8	23 843.9	3.3
Public administration and defense, compulsory social security	10 494.3	3.1	30 941.5	4.1	40 108.3	5.6
Hotels and restaurants	4 580.2	1.4	4 788.0	0.6	7 232.9	1.0
Other social, personal services and utilities	4 242.3	1.3	6 425.5	0.9	7 976.8	1.1
Financial activity	793.1	0.2	3 020.3	0.4	2 937.4	0.4
Fishing, fisheries	51.7	0.0	97.3	0.01	93.2	0.01
GROSS REGIONAL PRODUCT	338 138.7	100.0	751 198.4	100.0	717 700.0	100.0
Goods production	191 772.3	56.7	457 768.2	60.9	396 487.9	55.2
Service rendering	146 366.4	43.3	293 430.1	39.1	321 212.1	44.8

The largest contributors into GRP from good producing participants are the following:
– mining – 26.8%;
– manufacturing (including consumer goods) – 15.8%;
– construction (including housing) – 5.6%.

Total contribution of the above group into GRP – 55.2%.

The largest contributors into GRP from service rendering participants are as follows:
– wholesale and retail sale – 10.9%;
– real estate operations – 9.4%;
– transport and communication (including public transportation and communication) – 8.2%.

Total contribution of this group into GRP – 44.8%. Thus, industries and infrastructure of consumer goods and services significantly contribute to GRP.

During the last 10 years the major changes occurred in the economic structure of Kemerovo region. The share increased:
– mining by 7% (from 21.8% in 2006 to 26.8% in 2012);
– real estate operations by 2.9% (from 6.5% in 2006 to 9.4% in 2012).

During the same period the share decreased:
– manufacturing by 3.8% (from 19.6% in 2006 to 15.8% in 2012);
– wholesale and retail by 3.1% (from 14.0% in 2006 to 10.9% in 2012);
– power generation and energy, gas, water distribution by 2.0% (from 6.1% in 2006 to 4.1% to 2012);
– transportation and communication by 1.0% (from 9.2% in 2006 to 8.2% in 2012).

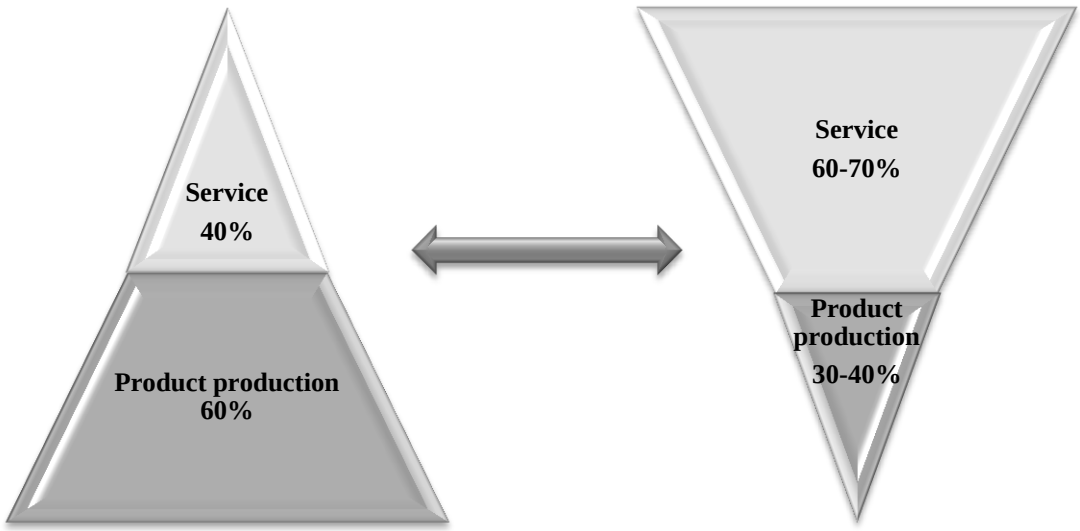
During the period the share of goods production in the regional economic structure fluctuated within a range of 55–60%, and share of services fluctuated within a range of 40–45%.

The given regional economic structure does not coincide with the structure of the developed economies. The latter "pyramid" is reversed: production of goods accounts for 30–40%, and rendering of services amounts to 60–70% (Fig. 2).

Further research provides insight into structural forming elements of regional economy. Aggregated macroeconomic enlarged model of the Kemerovo region economy can be presented as a "black box" pyramid (Fig. 3).

The model's point of entry shows raw materials and supplies totaling 1 247.1 billion rubles in 2012. At the exit the model shows total product for an overall amount of 1 964.8 billion rubles, current price. Gross regional product is formed inside the "pyramid" in the amount of 717.7 billion rubles. Total product output distribution: raw materials and supplies – 63.5%, GRP – 36.5%.

The ratio of resources used to produce output, value added and revenue by main types of activity is shown in Table 4.



Enlarged structure of economy of Kemerovo area

Enlarged structure of economy of developed countries

Fig. 2. Economic structures large-scale models comparison.

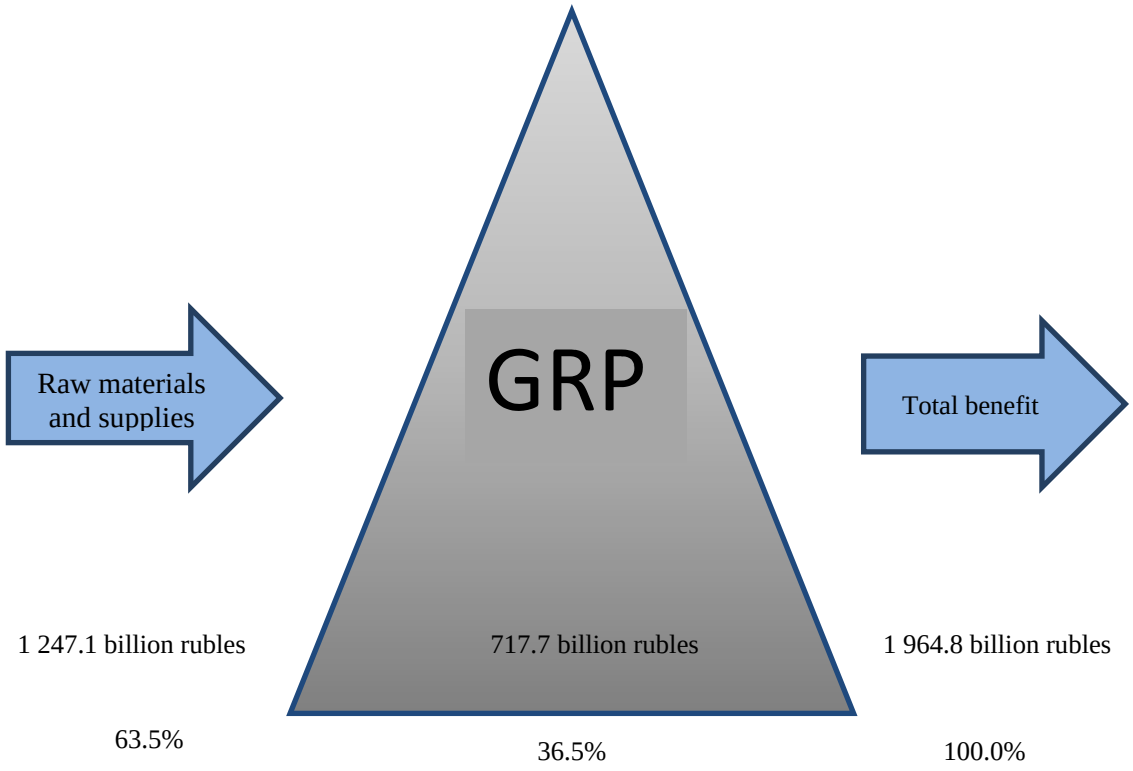


Fig. 3. Enlarged economic model of Kemerovo region.

Table 4. Ratio of resources used to produce output, value added and revenue by main types of activity [14]

Economic activity	Resources	Value added	Revenue	Share of value added in revenue, %	Share in GRP, %
Mining	319 908.7	192 405.3	512 314.0	37.5	26.8
Manufacturing	297 689.9	113 529.1	411 219.0	27.6	15.9
Construction	42 985.8	40 050.2	83 036.0	48.2	5.6
Power generation and distribution of electrical energy, gas and water	102 454.6	29 729.4	132 184.0	22.4	4.1
Wholesale and retail sales	516 737.0	78 128.0	594 865.0	13.1	10.9
Real estate operations, rental	1 927.8	67 438.2	69 366.0	97.2	9.4
Transport and communication	57 010.5	58 780.5	115 791.0	50.7	8.2
Utilities, social services	644.2	7 976.8	8 621.0	92.5	1.1
Hotels and restaurants	1 576.1	7 232.9	8 809.0	82.1	1.0
Total	1 247 118.0	717 700.0	1 964 818.0	36.5	100.0

The largest share of value added in revenue occurs in real estate – 97.2%, utilities and social services – 92.5%, hotels and catering enterprises – 82.1%. Wholesale and retail sale, power generation and distribution of electrical energy, gas and water have the least share – 13.1% and 22.4% respectively.

Reasoning from the value added share in gross regional product it appears possible to open "black box" model and reveal the leading industries of Kemerovo region economics both in production sector and service sector (Fig. 4).

CONCLUSION

Overall, Kuzbass industrial based economy strengthened during the last years. To ensure further development in the streamline of market economy, competitive positions in superstructure need to be strengthened too.

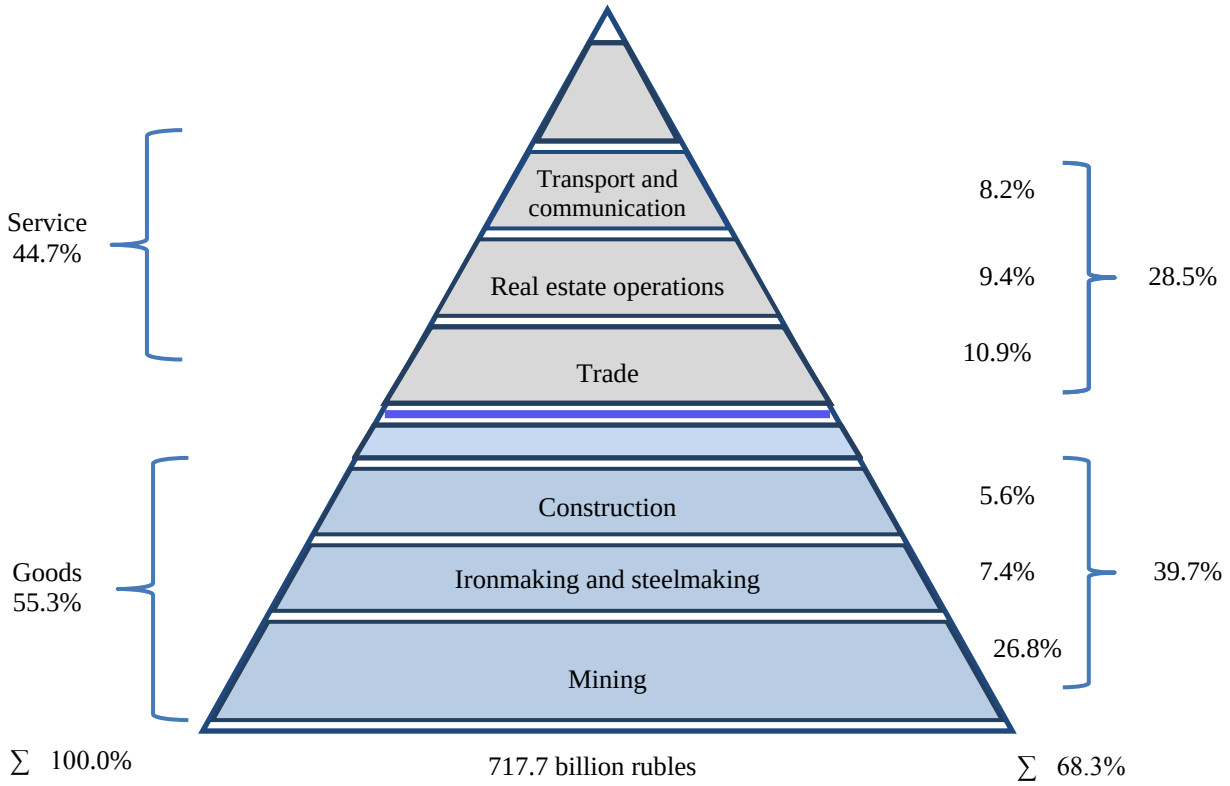


Fig. 4. Enlarged economic model of Kemerovo region.

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