

# ECONOMIC EFFECTS OF PANDEMIC-RELATED RESTRICTIONS IN RUSSIA AND THEIR SPATIAL HETEROGENEITY

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EVGENIYA KOLOMAK

INSTITUTE OF ECONOMICS AND INDUSTRIAL ENGINEERING SB RAS, NOVOSIBIRSK

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DEVELOPMENT OF COUNTRIES AND REGIONS»

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# THEORETICAL FRAMEWORK

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- The unforeseen, global, and strong influence of the COVID-19 allows us to consider the events and their consequences as an external shock with serious macroeconomic and structural consequences, which can lead to changes in the spatial equilibrium (Krugman, 1991; Combes et al, 2008; Davis, Weinstein, , 2002, 2008; Brakman et al., 2004; Miguel, Roland, 2001; Bosker et al., 2006; Redding et al., 2011).
- Restrictions introduced to counteract the COVID-19 led to an increase in transaction costs, to the compression of foreign markets, and to an increase in the costs of interregional cooperation. All these results can affect the spatial proportions of Russian economy.

**DATA:** INFORMATION FOR CONDUCTING MONITORING OF THE SOCIO-ECONOMIC SITUATION IN THE REGIONS OF THE RF IN JANUARY-MAY 2020. INDICES OF ECONOMIC ACTIVITY

	January	February	March	April	May
Industry	101,1	103,3	100,3	93,4	90,4
Mining	99,6	102,3	98,3	96,8	86,5
Manufacturing	103,9	105,0	102,6	90,0	92,8
Electric energy ...	95,3	99,8	97,8	98,1	95,9
Water supply.....	101,0	98,6	96,9	88,6	89,1
Construction	101,0	102,3	100,1	97,7	96,9
Retail trade	102,7	104,7	105,7	76,8	80,8
Services	102,1	101,1	94,6	60,1	60,5

# THE LEVEL OF ECONOMIC ACTIVITY IN RUSSIAN REGIONS IN APRIL-MAY 2020

	<b>Ratio April-May to February-March</b>	<b>Regions with the highest index values</b>	<b>Regions with the lowest index values</b>
Minimum	44.2	Nenets AD – 103.8	Sevastopol – 44.2
Maximum	103.8	Republic Khakassia – 101.4	Chechen Republic – 46.0
Median	77.7	Novosibirsk region – 93.6	Republic Dagestan - 47.7
Average	76.3	Republic Adygea – 93.4	Khabarovsk Krai - 51.2
Standard deviation	11.7	Khanty-Mansi AD – 92.3	Primorsky Krai - 52.0
Variation	0.15	Komi Republic – 92.3	Krasnodarsky Krai - 57.0



# TESTED HYPOTHESES

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- Significant restrictions were imposed primarily on services and leisure activities concentrated in cities, and urban economy and large cities suffer more.
- SMEs are better represented in trade and service spheres, where more restrictions were adopted, territories where SMEs are more represented suffer more.
- Past crises have shown that more dynamic and successful regions, relying more on market mechanisms and less dependent on government support, respond more strongly to macroeconomic shocks.
- The decrease in the demand for raw materials and energy in world markets negatively affected the regions specializing in mineral extraction.

# REGRESSION

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$$\ln Y_i = \alpha + \beta_1 \ln U_i + \beta_2 \ln VA_i + \beta_3 \ln SB_i + \ln R_i + \varepsilon_i$$

$Y_i$  - the economic activity index of region  $i$  in April-May in relation to February-March;

$U_i$  - the share of urban population in region  $i$ ;

$VA_i$  - the share of region  $i$  in total gross value added (sum of GRP) in 2017;

$SB_i$  - the number of SMEs per 10,000 people in region  $i$ ;

$R_i$  - the share of region  $i$  in total production of the extracting industry in 2017

# RESULTS

Variable	Coefficient
Constant	-1,991***
Share of urban population	0,306***
Share in total value added	-0,065***
Number of SMEs	0,070*
Share in production of extracting industry	0,108***
Number of observations - 83	$R^2_{adj}=0,35$

# CONVERGENCE OR DIVERGENCE?

## Coefficient of variation for the indicator of economic activity in Russian regions in 2020

	January	February	March	April	May
Variation	1,87	1,95	1,87	1,99	1,98



# CONCLUSIONS

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- the economic activity in the first two months after the lockdown decreased by an average of a quarter; the restrictions affected Russian regions differently;
- the urban economy proved to be more resilient to restrictive measures compared to the average;
- SMEs, despite serious concerns, provided support for regional economies;
- mineral resources has proven to be a positive structural element (at least in the short-run).
- larger and better developed regions suffered from the pandemic more, however, the impact was compensated for by other factors acting in favor of regional economies;
- a decline in regional discrepancies was not observed.

# THANK YOU!

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