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Russian Presidential Academy of National Economy and Public Administration

Centre for Entrepreneurship Research

INSTITUTIONS, PUBLIC SUPPORT AND ENTREPRENEURSHIP IN THE RUSSIAN REGIONS

Speaker:
Stepan Zemtsov,
PhD, leading researcher

Authors:
S. Zemtsov, V. Barinova, Yu. Tsareva

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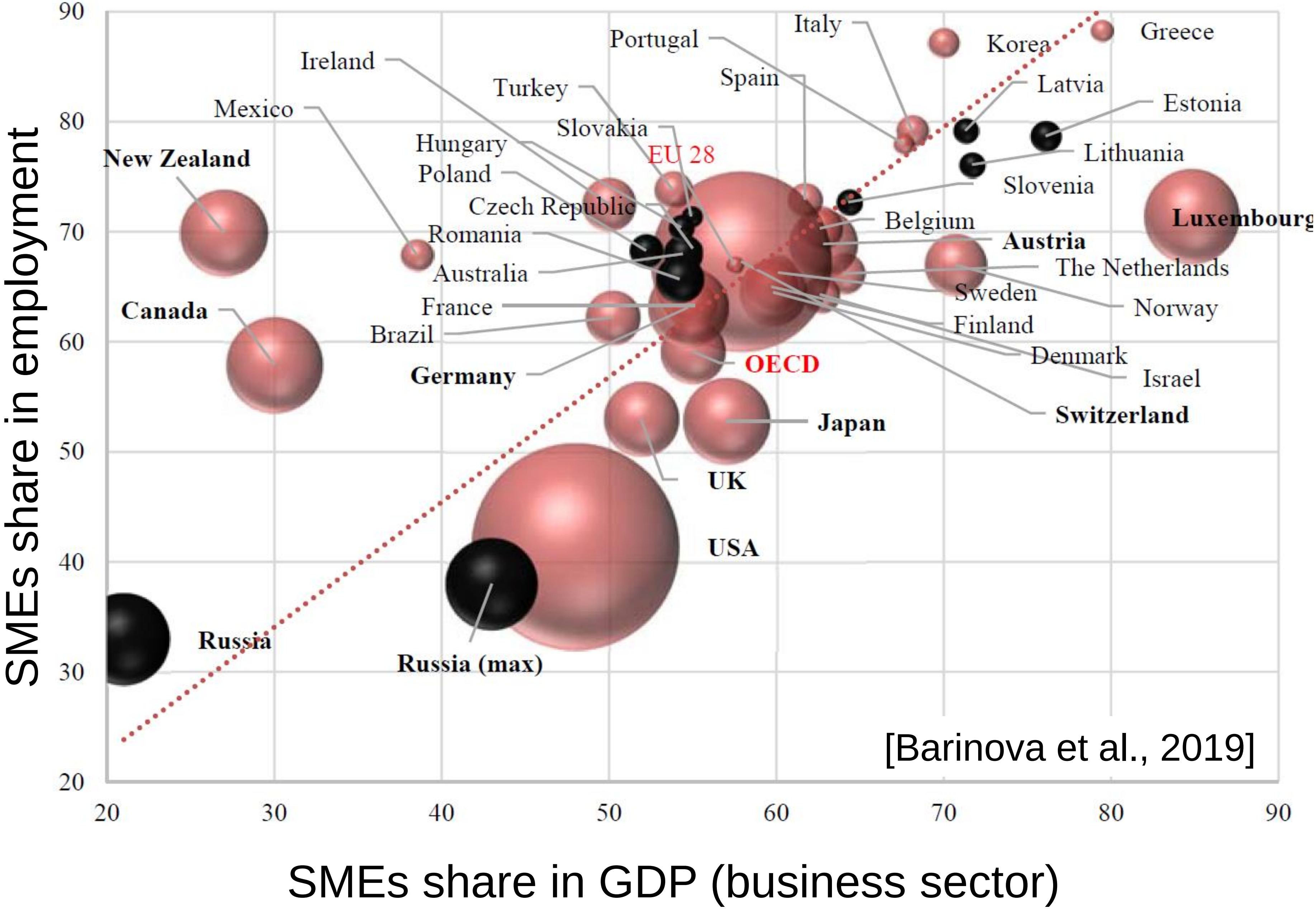
The relevance of the research:

- SME public support >200 billion rubles since 2008: new SMEs infrastructure, special taxation, public procurement, etc.
- Federal SME development strategy till 2030
- SMEs national project >480 billion rubles in 2019-2024
- SMEs are public priority (?), nevertheless, SMEs' share in GDP in Russia is ≈22% (in EU – 50-60%) and no increase since 2008
- What is wrong? Institutions? Geography (too cold?)

The purpose of the research:

- To identify institutional and other factors of small enterprises development in the Russian regions in 2008-2015

SME role in Russian economy is modest



[Barinova et al., 2019]

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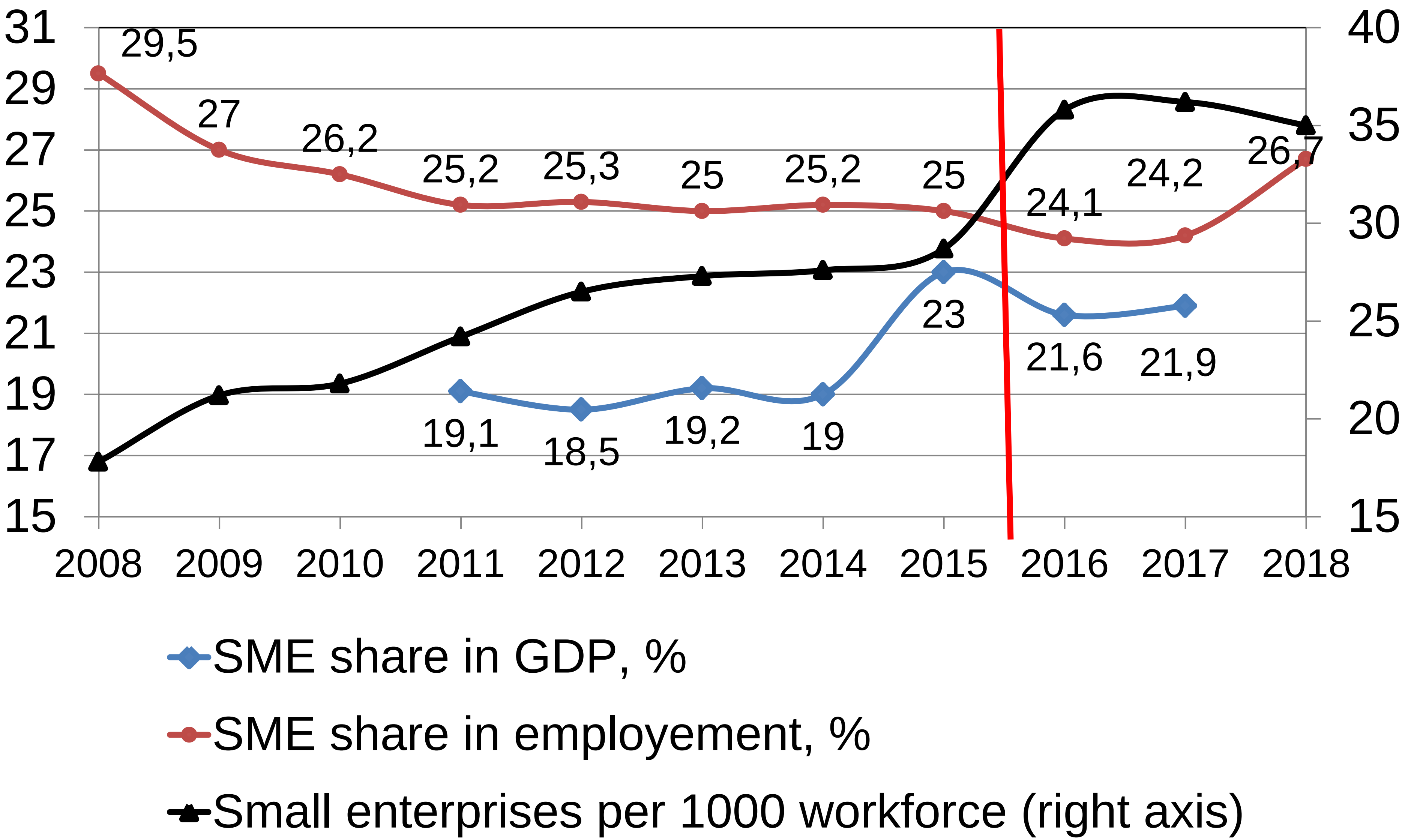
SMEs role is modest and no progress?



Modest role but positive dynamics of the SMEs density (?)

Small firms density as a variable

Entrepreneurial density – number of small firms per workforce – as an indicator of small business development between regions

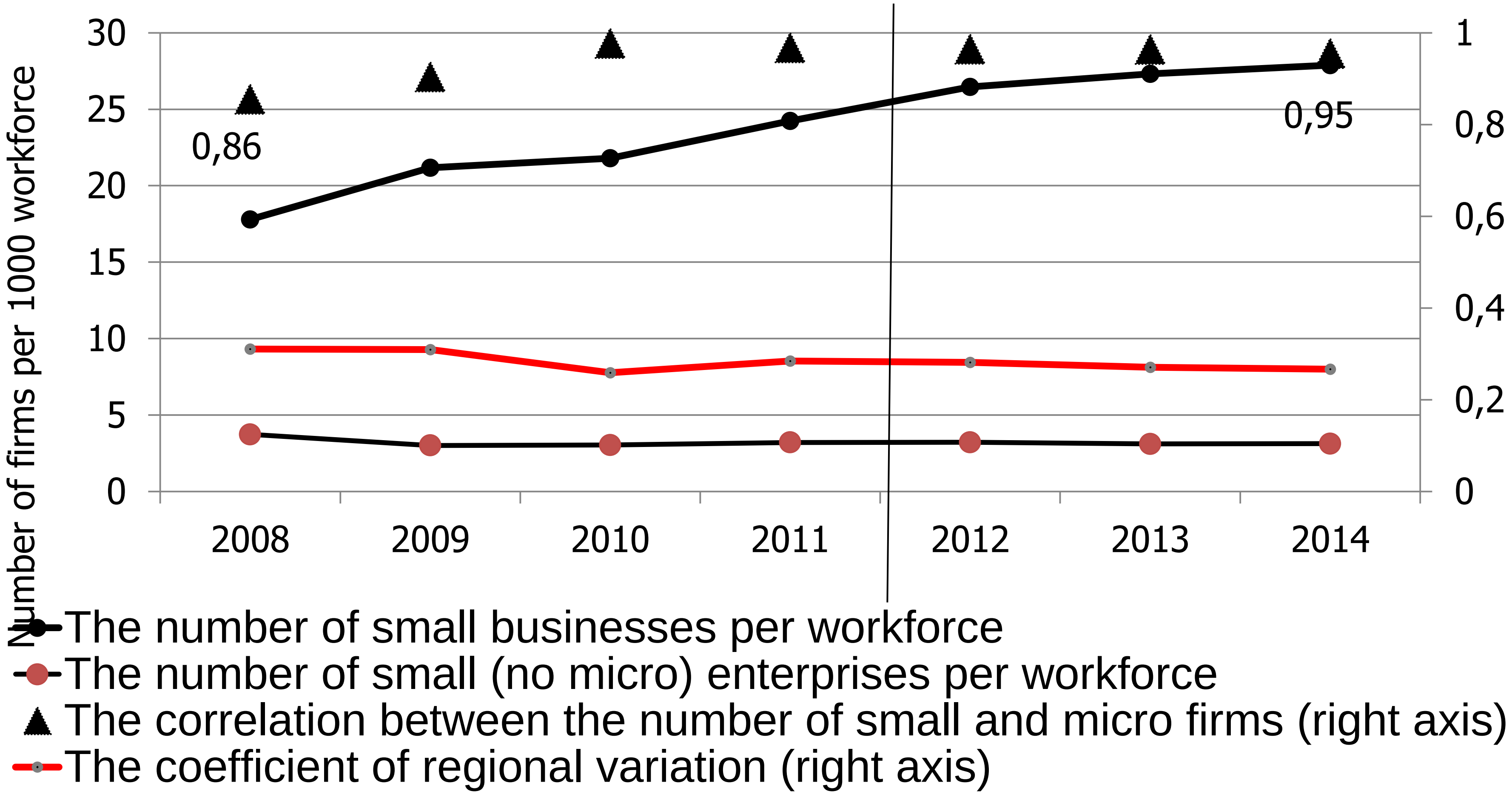
Small firms criteria (average value):

- ✓ <100 employees (≈4.4 in average for our sample)
- ✓ <800 mln rubles, or <10 mln euro (≈9.7 mln rubles in average, or 0,12 mln euro in average)

Limitations:

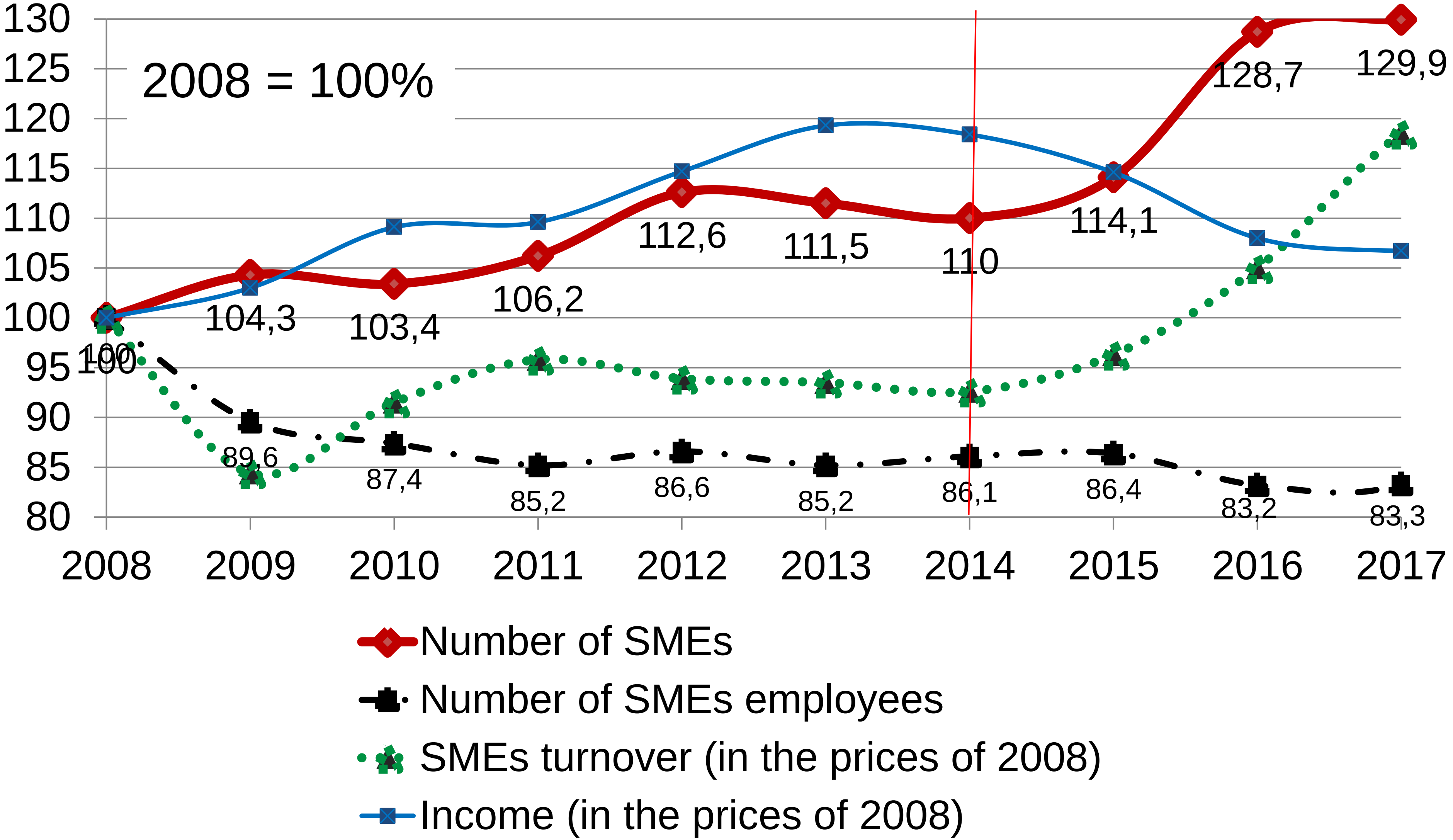
- Change of criteria in 2016
- Firms fragmentation for taxes optimization
- Mostly trade firms (unproductive entrepreneurship?)

Entrepreneurial density



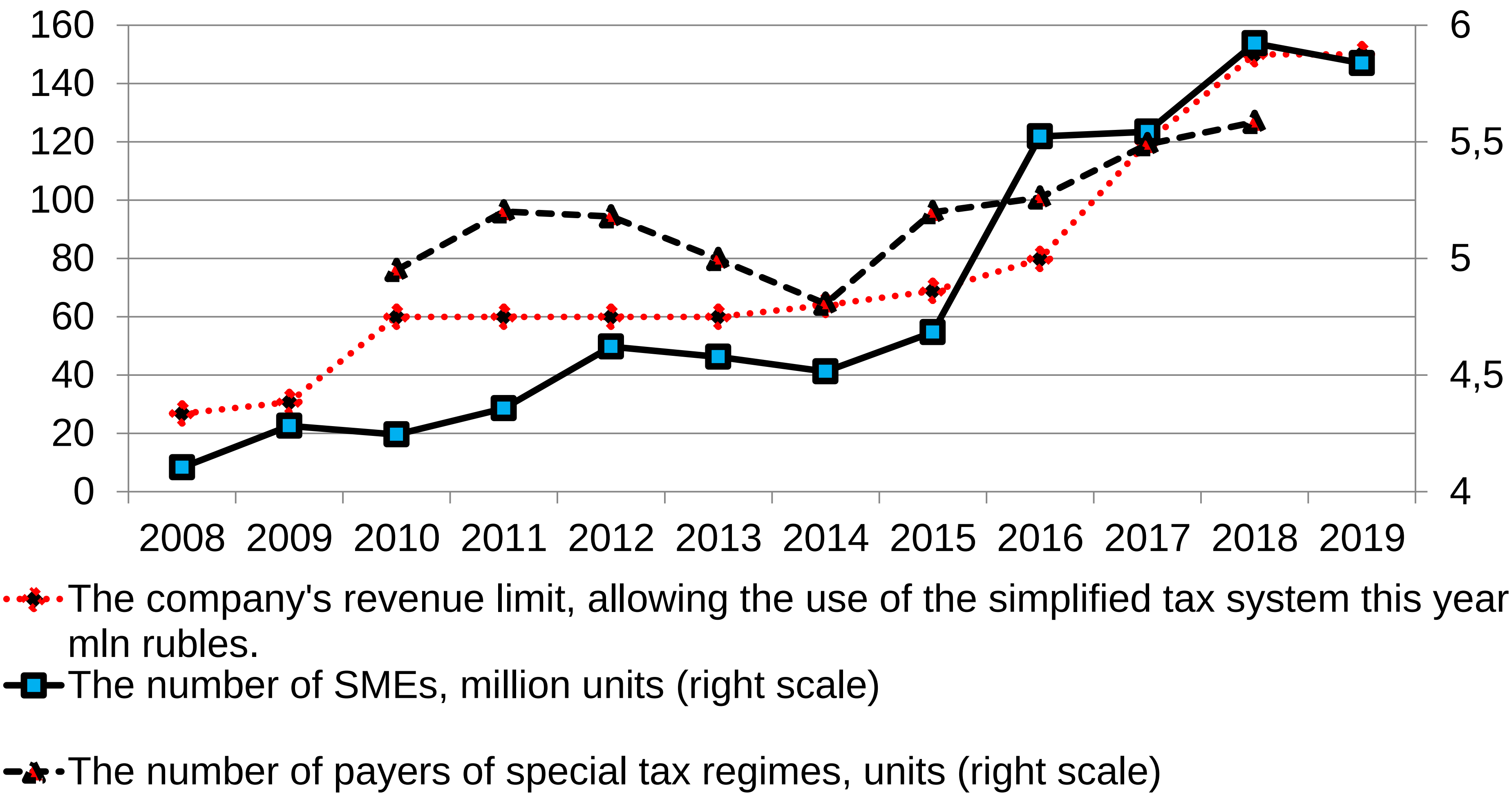
- **Micro and small enterprises** are highly correlated – we supposed there are the same regional factors (?)
- No increase in small firms number (no business scaling?)
- Regional convergence – more equal conditions for SMEs (?)

SME dynamics in Russia and income



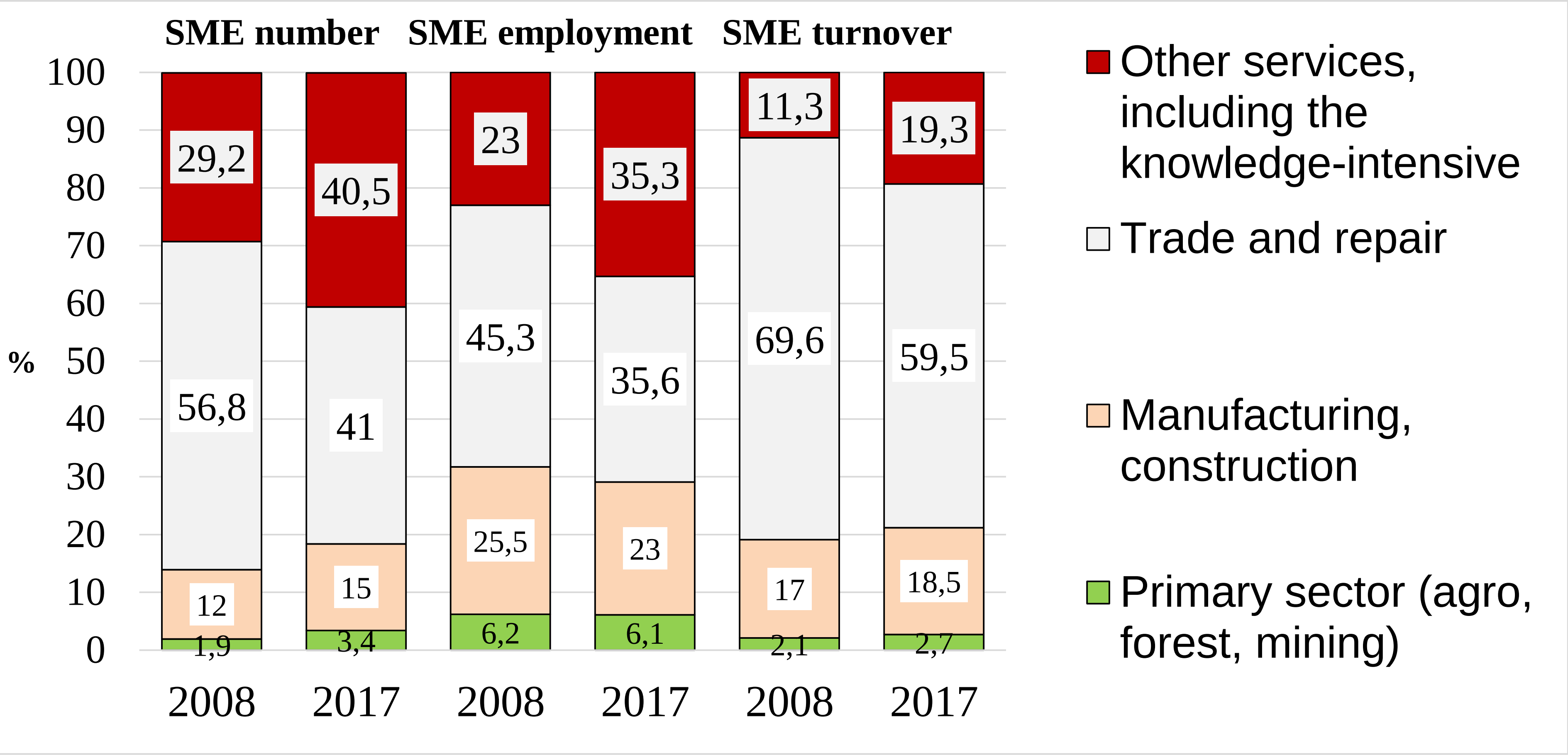
SMEs number increase after 2016 is not related to the increasing role of the sector or income growth

SME dynamics and tax incentives in Russia



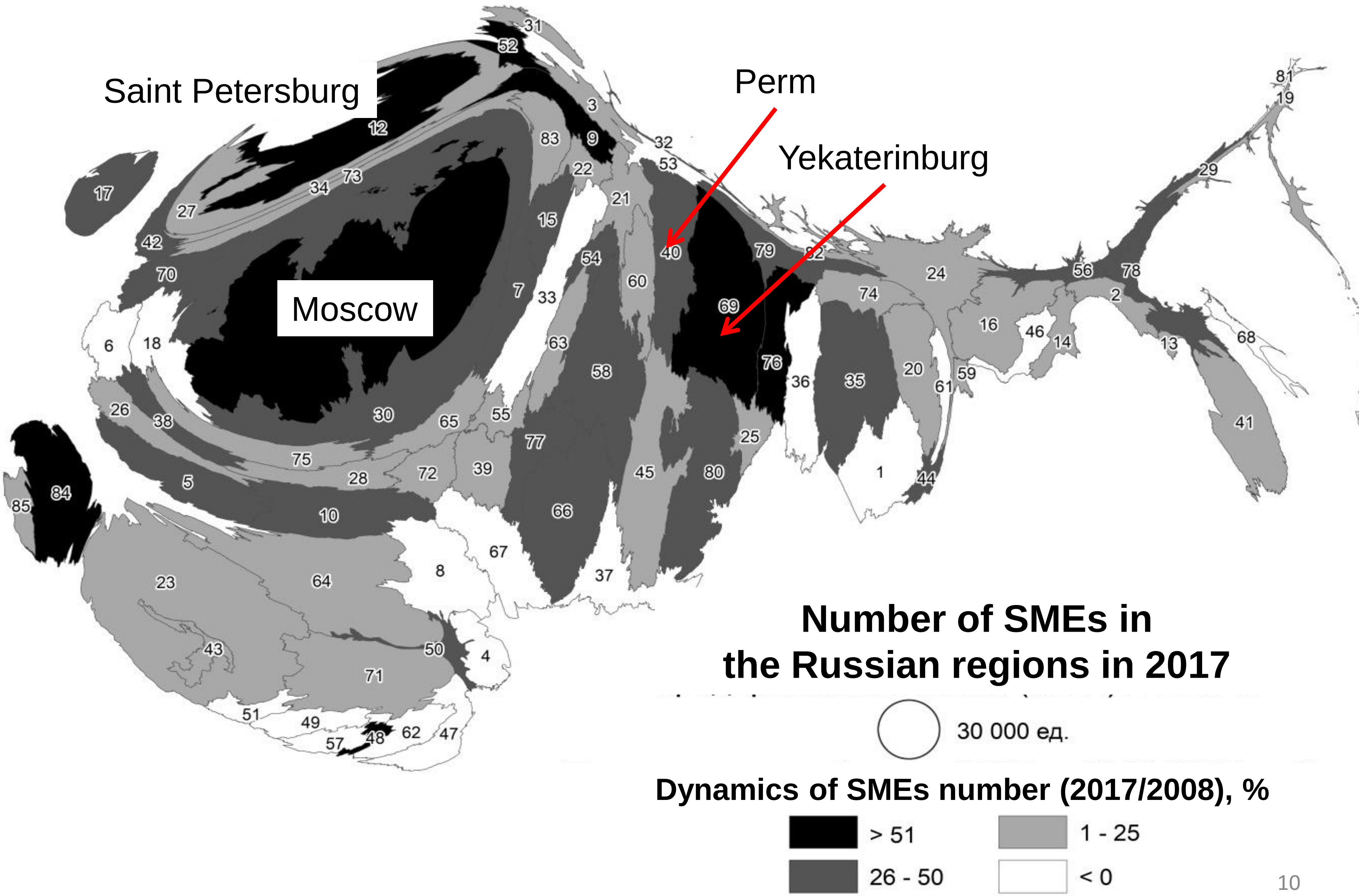
SMEs number increase after 2016 is the result of changes in statistics methods (change of criteria), as well as fragmentation of larger enterprises for taxation optimization (see *revenue limit change*!)

SME structure in Russia



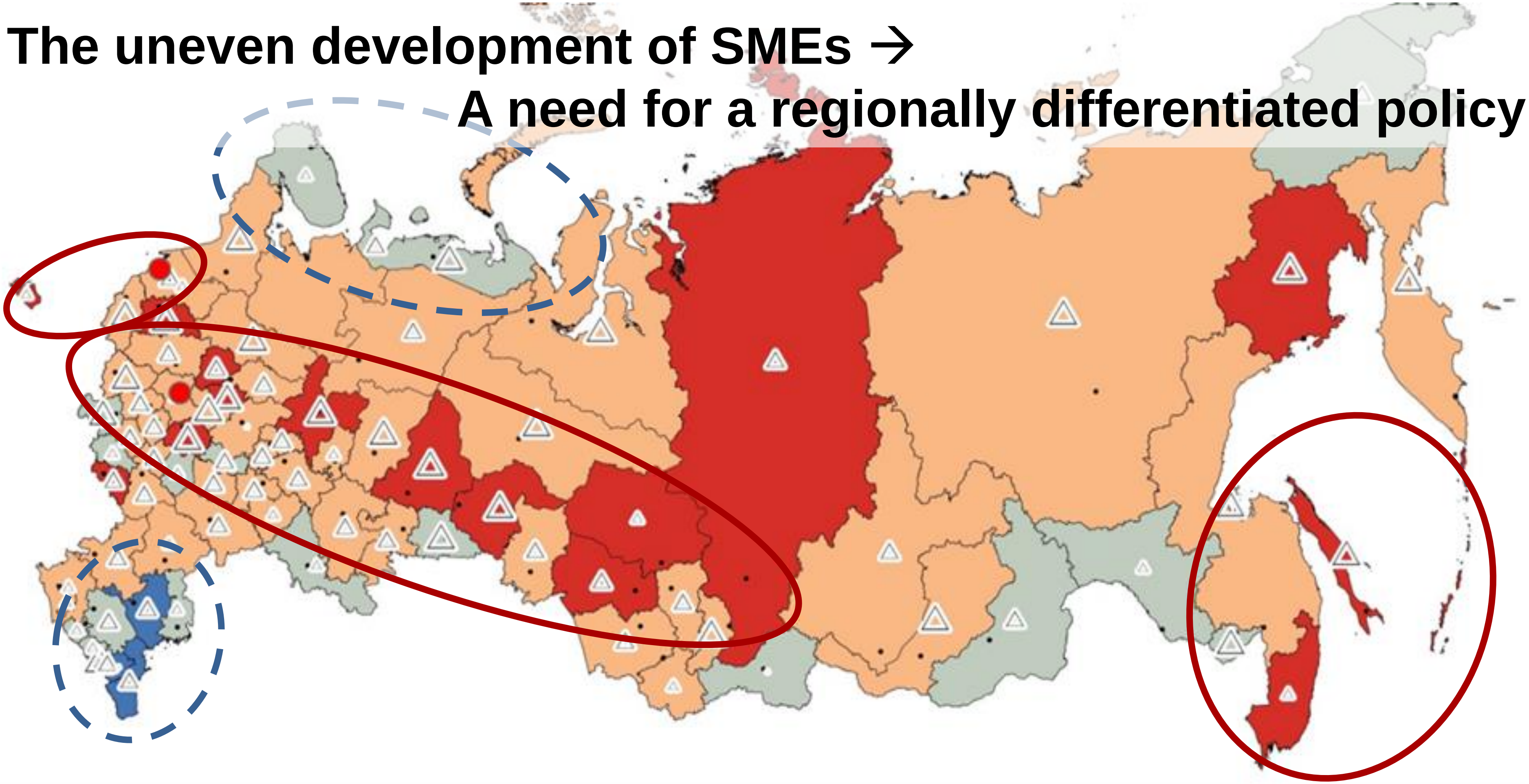
- ✓ SME structure improved
- ✓ Trade still prevails, but only 41% (in our sample it is lower)
- ✓ The share of other services is increasing, including e-commerce, digital services, ICT, etc.

Small business concentration in Russia



SMALL BUSINESS DENSITY IN RUSSIA

The uneven development of SMEs → A need for a regionally differentiated policy



Entrepreneurial (small business) density in the Russian regions

Number of small enterprises (including micro) per 1000 workforce in 2015

5 - 9 | 10 - 19 | 20 - 29 | 30 - 75

Dynamics of entrepreneurial activity (2015/2008), %

78 - 100 | 101 - 150 | 151 - 200 | 201 - 350

THEORY: Factors of SME's creation

Individual level

- Age, gender
- Psychological features
- Family environment
- Education
- Experience and Competence

Internal condition

Perception of opportunity

+

Entrepreneurial aptitude

↓

Making the decision to become an entrepreneur

↓

Number of firms in region

↑

External environment

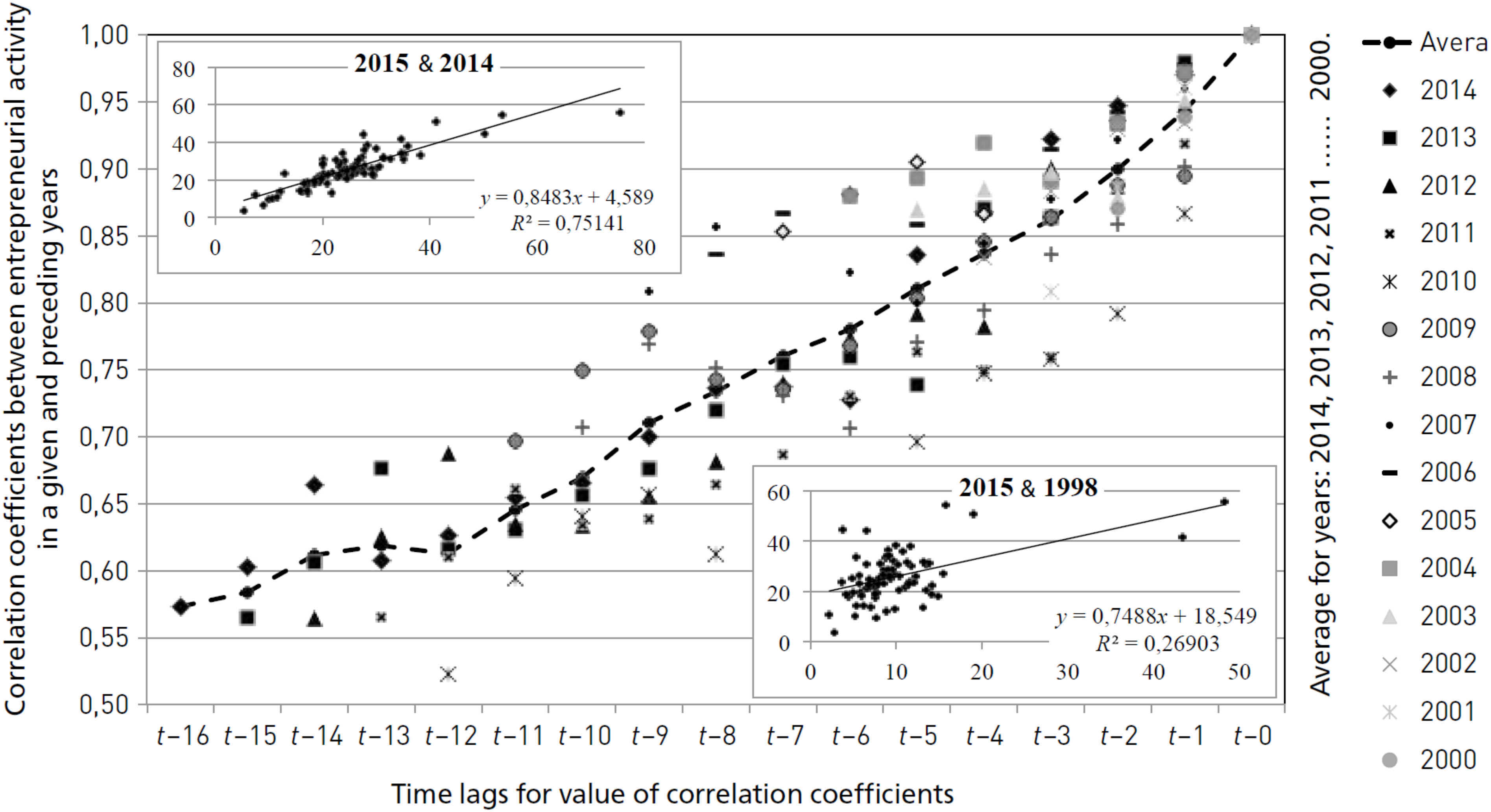
Regional level

- Economic development
- Human capital
- Agglomeration effects and market accessibility
- Institutional environment and culture
- Public policy

[Storey, 1991; Reynolds et al., 1994; **Verheul et al., 2002**; Fritsch, Falck, 2007; Nielsen, 2014; Stuetzer et al., 2014; Aparicio et al. 2016 *and others*]

ENTREPRENEURIAL PERSISTENCE

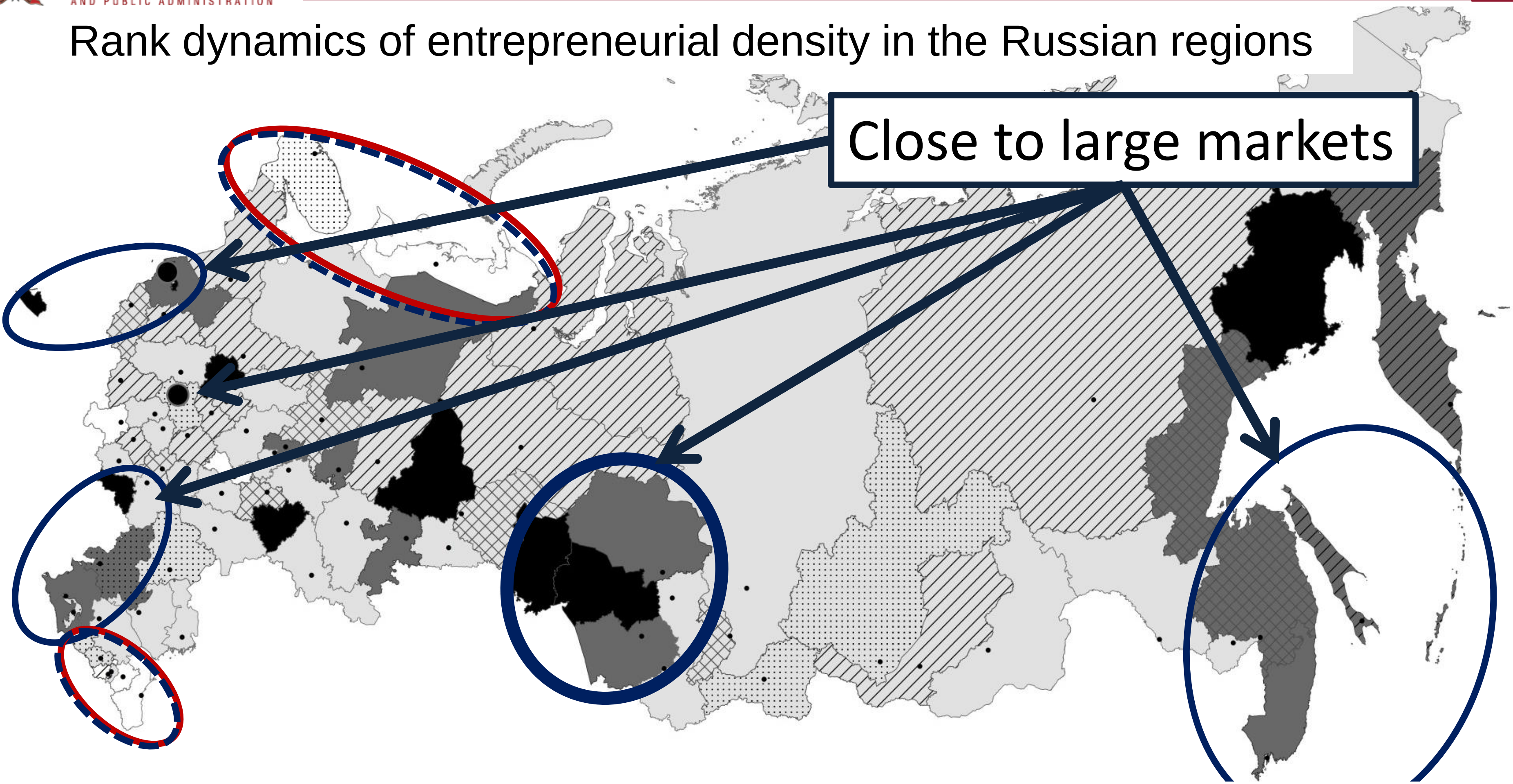
The correlation coefficient between the entrepreneurial density in the target year (2000-2014) and previous years (t0 - this year, t1 - the previous year, etc.)



Entrepreneurial density depends on density in previous periods (*cultural norms?*), but it does not completely determine this process

GEOGRAPHY OR INSTITUTIONS ?

Rank dynamics of entrepreneurial density in the Russian regions



Regions – leaders in all periods	Growing regions in all periods
Regions – outsiders in all periods	Decreasing regions in all periods

Literature review: institutional factors

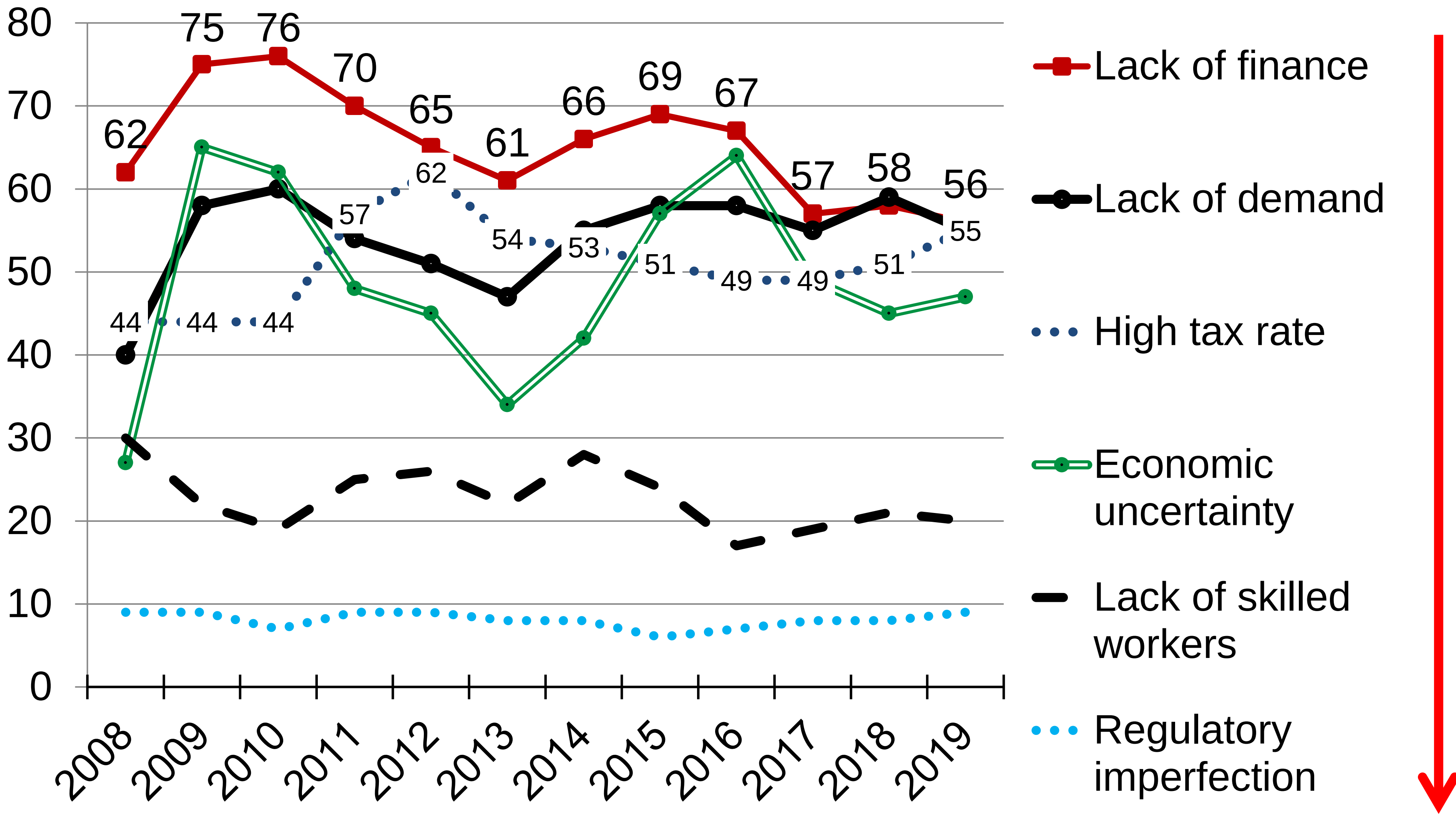
INSTITUTIONS = RULES OF THE GAME IN SOCIETY

(North, 1990; 2005)

- **Access to finance, e.g. bank credits** *(Kuzilwa, 2005; Nielsen, 2014)*
- **Legal environment:** protection of private property, level of corruption… *(Anokhin, Schulze, 2008; Xheneti, Bartlett, 2012; Yakovlev, Zhuravskaya, 2013)*
- **Regulatory policy:** taxes, administrative inspections *(Bruce, Mohsin, 2006; Van Stel et al., 2007; Djankov et al., 2010)*
- **SME's support policy** *(Reynolds et al., 1994; Storey, 2003; Chepurenko, 2012, 2017)*
- **Human capital: educational institutions** *(Verheul et al., 2002; Lee et al., 2004; Stuetzer et al., 2013)*
- **Informal institutions & culture:** control of corruption, self-assertance, confidence in one's skills… *(Aidis et al., 2008; Méon, Weill, 2010; Aparicio et al., 2016)*

lack of empirical data on Russian regions ☹

Small firms survey: barriers to development



HYPOTHESIS: ED and INSTITUTIONS

Entrepreneurial density is lower in regions with

- higher investment risks
- unfavorable legal environment
- higher administrative burden on business

Entrepreneurial density is higher in the regions with

- more developed banking system
- higher level of human capital

The effect of **SME support policy** on entrepreneurial density, estimated on a <u>general sample</u> of regions including both leaders and outsiders, may be insignificant.

Due to the selection effect (the government supports weak regions) ?

Econometric model

$$ED_{it} = const + \alpha_1 * unempl_{it} + \alpha_2 * POPdensity_{it} + \alpha_3 * citizens_{it} + \alpha_4 * marketPOT_{it} + \alpha_5 * extractIND_{it} + \alpha_6 * GRP_{it} + \alpha_7 * inst_{it} + \varepsilon_{it},$$

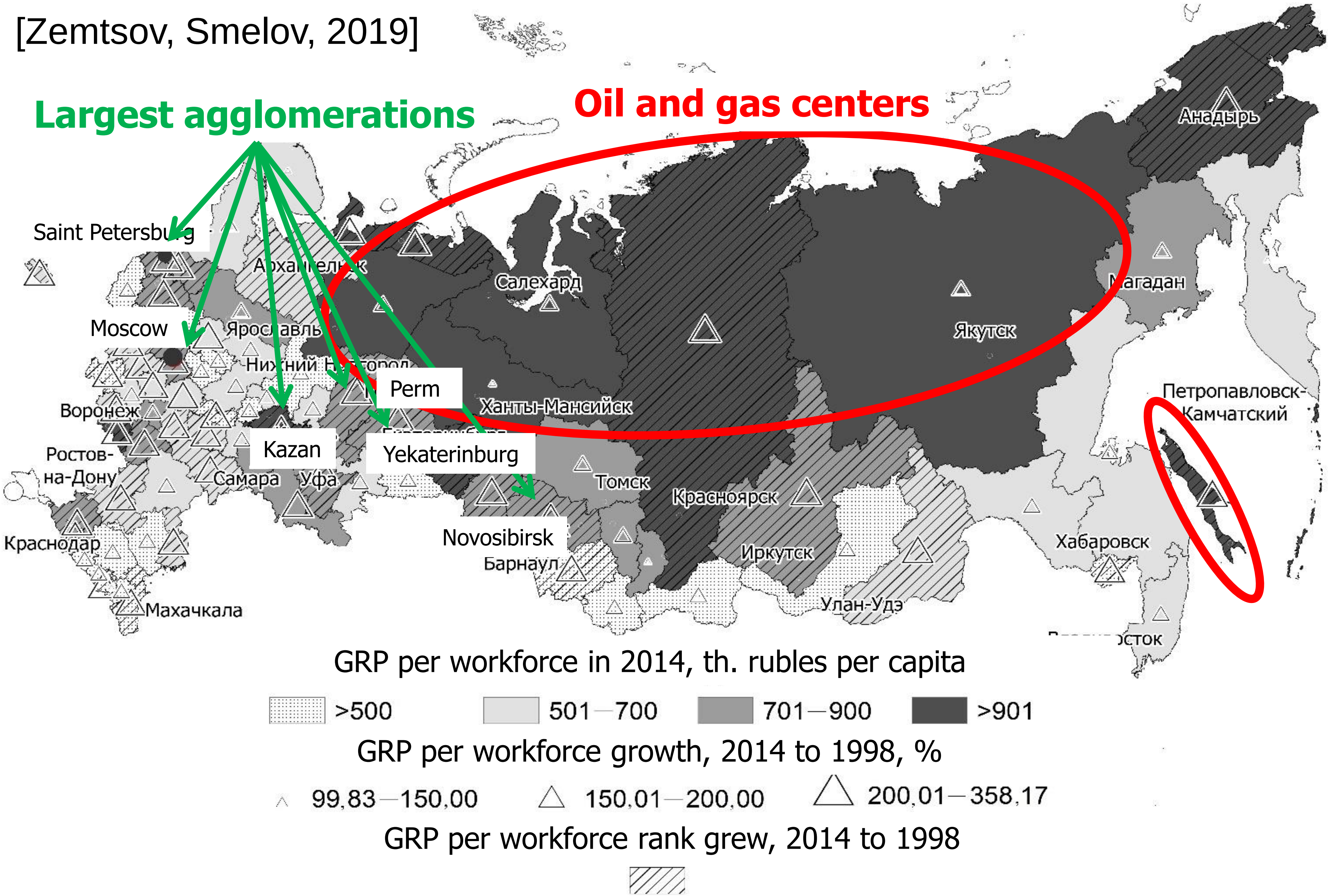
i – region of Russia (from 1 to 83; except Crimea and Sevastopol); ***t*** – year (2008-2015);

***ED* – entrepreneurial density**
unempl – unemployment rate; ***GRP*** – GRP per capita;
marketPOT – market potential; ***POPdensity*** – density of population;
citizens – level of urbanization; ***extractIND*** – the share of extractive industries;
***inst* – institutional factors**.

Variable	Description
Entrepreneurial density	**The number of small (including micro) firms per workforce in the region**
Institutional factors:	
Investment environment	RAEX Investment Risk **Index**
Legal environment	Number of persons who committed **crimes in economic sphere** per 100,000 inhabitants
Access to finance	Aggregate **index** of regional banking services availability
Administrative burden	**Tax inspections** per organization
Human capital	The average **number of years of education**

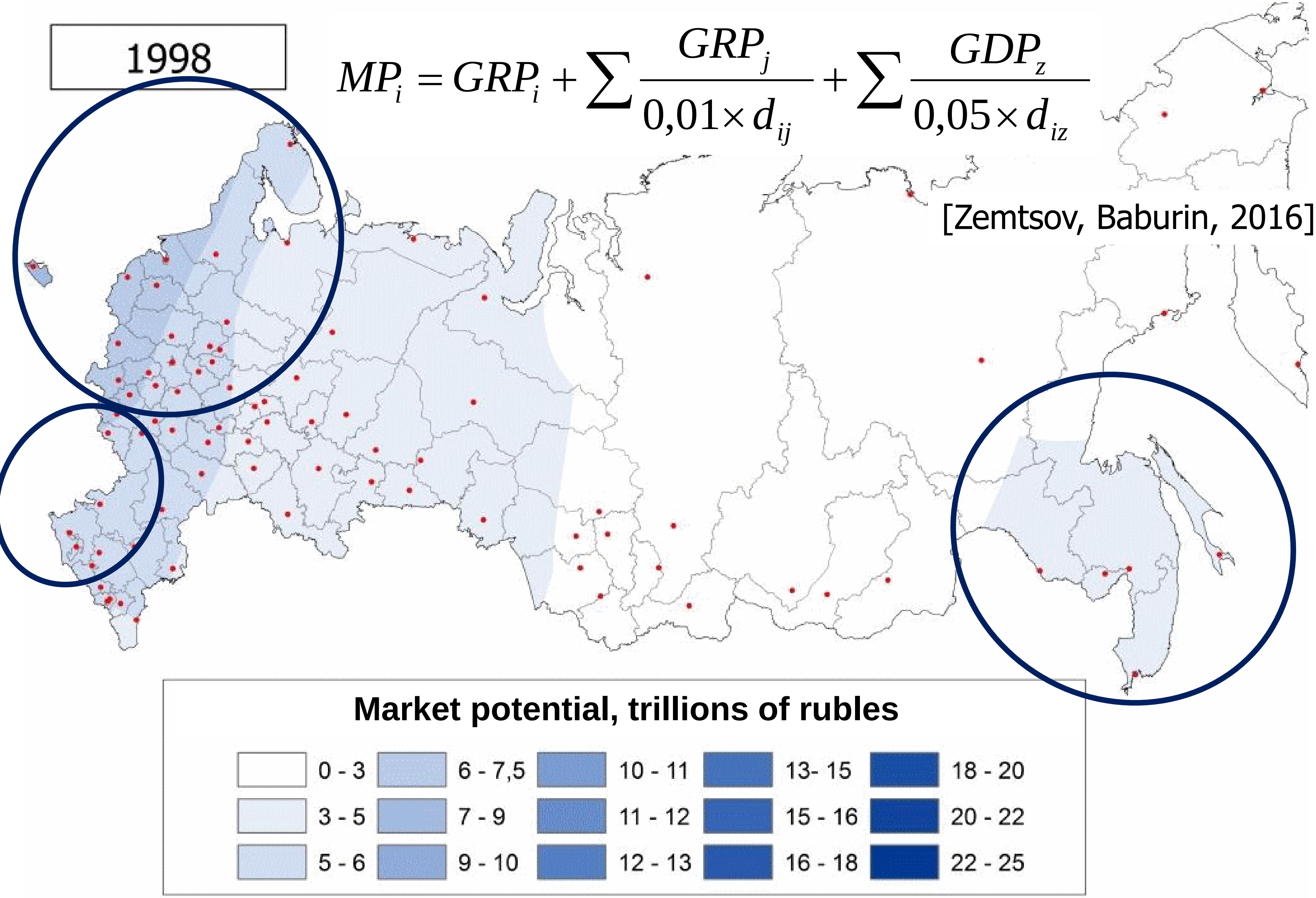
REGIONAL DEVELOPMENT IN RUSSIA

[Zemtsov, Smelov, 2019]



MARKET ACCESS as proxy for demand

$$MP_i = GRP_i + \sum \frac{GRP_j}{0{,}01 \times d_{ij}} + \sum \frac{GDP_z}{0{,}05 \times d_{iz}}$$



[Zemtsov, Baburin, 2016]

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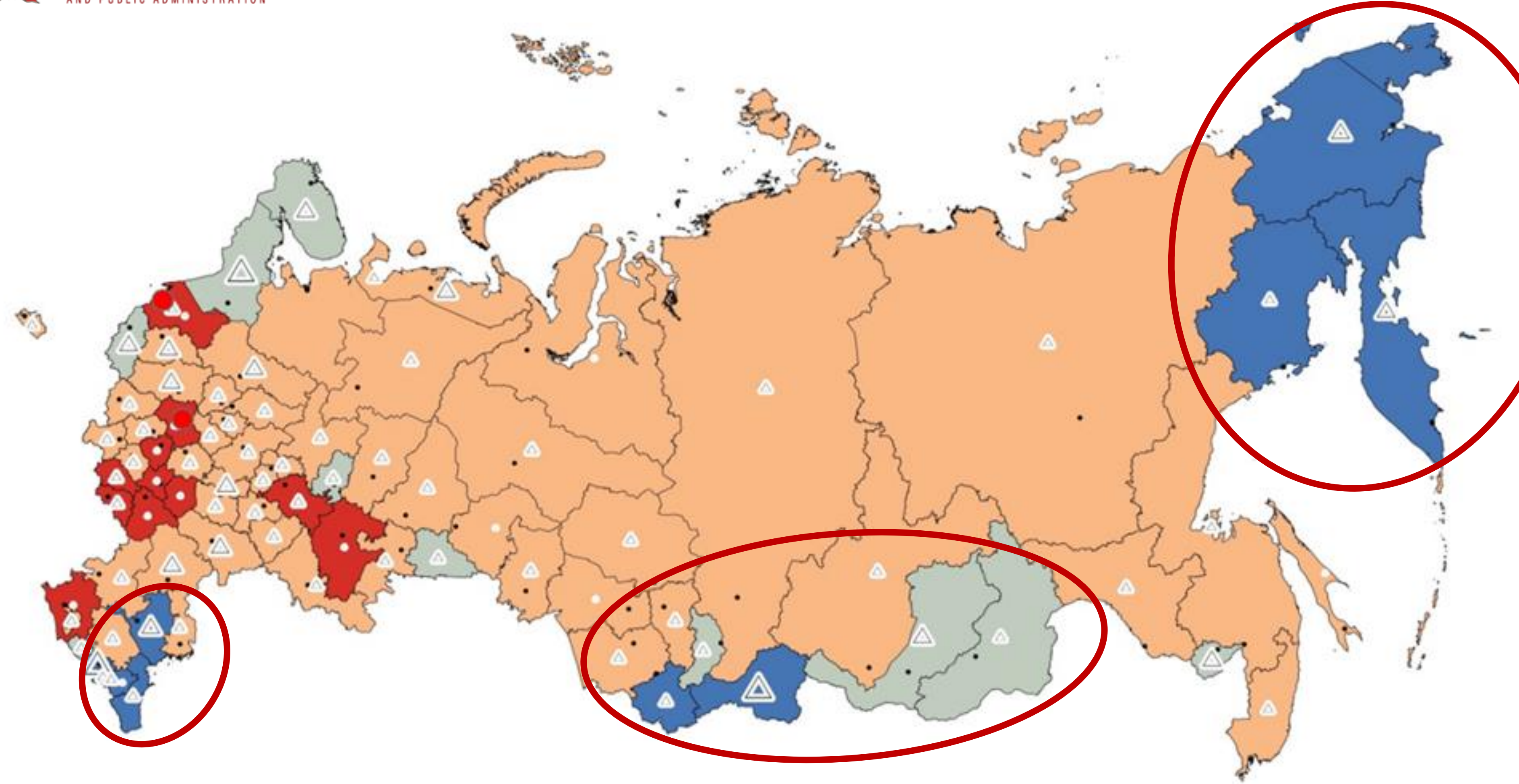
INVESTMENT RISKS



Investment risk

Investment risk index of Russian Regions (RAEX («Expert RA»)) in 2014. Score (out of 100).

>40 30-39 20-29 <20

Investment risk dynamics (2014/1998), %

<20 20-29 30-39 >40

Institutions vs Geography

Dependent variable: small firms per workforce (ED). GMM. Asymptotic standard errors				
Models	1	2	3	4
First time (t–1) lag for dependent variable	0,65*** (0,01)	0,55*** (0,016)	0,55*** (0,017)	0,53*** (0,016)
Second time (t–2) lag for dependent variable	0,04*** (0,008)			0,04** (0,014)
Spatial lag: dependent variable value for the radius from 0 to 150 km	0,02* (0,01)	0,05*** (0,011)	0,01 (0,014)	0,01 (0,014)
Spatial lag: dependent variable value for the radius from 150 to 300 km			0,05*** (0,008)	0,06*** (0,008)
GRP per capita		0,01*** (0,001)	0,01*** (0,001)	0,01*** (0,001)
Index of region access to bank services		0,79*** (0,203)	0,80*** (0,225)	0,53* (0,290)
Share of extractive industry in GRP	0,39*** (0,01)	–0,00 (0,016)	0,00 (0,017)	0,00 (0,020)
Constant		0,68*** (0,035)	0,59*** (0,035)	0,56*** (0,049)
Criteria of the model quality				
Test for AR(1)-errors		–3,83 (0,0001)	–3,76 (0,0002)	–3,74 (0,0002)
Test for AR(2)-errors		1,35 (0,177)	1,33 (0,184)	0,75 (0,454)

[Zemtsov, Tsareva, 2018]

Factors of entrepreneurial density

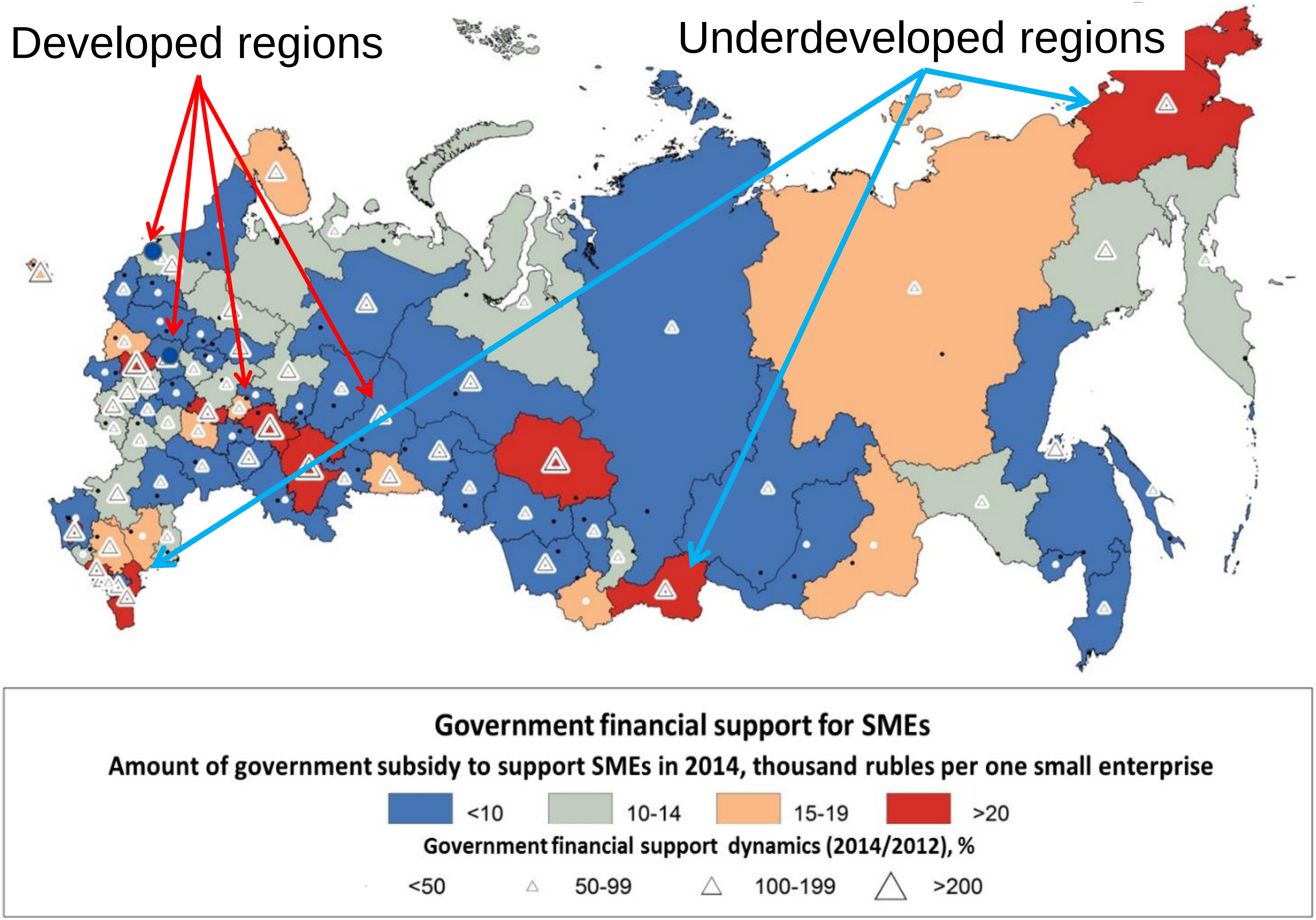
Dependent variable: small firms per labor force Fixed Effects: 83 Russian regions; 2008-2015; 656 observations	
Investment risk index (RAEX)	-4,25 *** (0,86)
Index of bank services availability (Bank of Russia)	9,25 *** (3,48)
The number of years of education	0,79 * (0,46)
Field tax inspection by FTS	-0,10 (0,34)
Unemployment	0,09 (0,14)
GRP per capita	$0{,}01 \times 10^3$ * (0,0)
Market potential	0,13 *** (0,03)
The proportion of citizens	-0,05 (0,03)
Population density	0,01 (0,01)
Share of extractive industry in GRP	0,05 (0,08)
Constant	-0,91 (7,57)

LSDV R^2 = 0,867; **Within R^2 = 0,476** [Barinova et al., 2018]

Null hypothesis: all regressors are not significant – rejected

Null hypothesis: pool is better than FE – rejected

GOVERNMENT SUPPORT



Does SME support policy matter?

Variable	Description
Dependent variable: **Entrepreneurial density**	**The number of small (including micro) firms per workforce in the region**
Explanatory variables. **SME support policy:**	
Subsidies for SMEs support per one SME	The amount of federal SMEs subsidies per one SME, rubles **2012-2015; 83 regions (328 observations)**
Tax benefits per one organization	The total amount of tax benefits (for income tax, property tax, transport tax and land tax) per one organization, rubles **2008-2015; 83 regions (656 observations)**

$$EA_{it} = const + \alpha_1 * CONTROL\_VARIABLES + \alpha_7 * SMEsupport_{it} + \varepsilon_{it},$$

The effect of SMEs' state support on entrepreneurial activity has not been found. **WHY?**

- Weak regions receive more support in the form of subsidies than medium and strong regions *(Storey, 2003)*
- Tax benefits on average are provided in Russian regions equally and mainly to medium-sized and large firms

Does SME support policy matter?

In 2018, only 2.8 of SMEs participated in public support programs (SME Corporation)

SMEs did not know about state support and did not use it, there is no trust

Did you use state support programs?	Σ
No	**91%**
Labour centre subsidies	2%
Startup grants	3%
Federal programs	1%
Regional programs	1%
Compensation of percent on credits	2%

Did you tried to use state support programs?	Σ
Yes	4%
No, no information	**92%**
No, no trust	45%
No, bureaucracy	34%
No, small fond	51%
No, competition	11%

Poor development of social control (free media, NGO, etc.) → direct financial support can be INEFFICIENT: there is a substitution effect, inefficient selection, corruption

CONCLUSION

- Russian **regions differ substantially** in entrepreneurial density. → SME policy should take into account regional diversity
- **Geography** matters: market access, transport, energy costs, etc.
- There are relatively stable group of leaders and outsiders
  - ✓ **The most developed entrepreneurial ecosystems** with high SMEs density and diversity are formed in regions with access to large consumer markets and capital with low risks for investors: Moscow, St. Petersburg, Novosibirsk, Belgorod, Kaliningrad, Samara regions, Tatarstan, etc.
  - ✓ **The least developed entrepreneurial ecosystems** are in areas with high costs of doing business: the North Caucasus, the Far East and the Arctic zone
- **Socio-economic limitations** in the development of SMEs cannot always be overcome by improving institutional conditions or public support

CONCLUSION

- **Institutions** influence the entrepreneurial development
  - **High investment risks** and **large number of crimes** *(both associated with negative social, financial, environmental situation in the regions)* are **constraining factors** for the entrepreneurial density.
  - The **availability of banking services** and **high quality of human capital** on the contrary have **a positive effect** on the entrepreneurial density.
- No link between direct **public support of SMEs** and the business density
- Small and medium-sized enterprises are more vulnerable to external shocks. They are strongly influenced by the uncertainty of the **economic situation and the decline in household incomes**.

THANK YOU FOR YOUR ATTENTION

Centre for Entrepreneurship Research, RANEPA
Innovation Economics Department, Gaidar Institute
Lomonosov Moscow State University

Stepan Zemtsov

E-mail: zemtsov@ranepa.ru

https://www.researchgate.net/profile/Stepan_Zemtsov

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- *Zemtsov S., Smelov Yu.* (2019) Factors of Regional Development in Russia: Geography, Human Capital and Regional Policies // Journal of the New Economic Association, 4, 84-108 (in rus.)
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SME CRITERIA IN RUSSIA

Federal Law No. 209-FZ on Developing Small and Medium Scale Entrepreneurship in the Russian Federation (2007)

	Employment, number of workers	Turnover, million RUB
MICRO	1-15	0-120
SMALL	15-100	120-800
MEDIUM	101-250	800-2000

Participation interest of Russia in the company's share capital < 25%;
… of foreign legal entities… < 49; of not-SME-companies < 49%.