

# **How (Not) to Measure Russian Regional Institutions**

**Alexey Baranov, Egor Malkov, Leonid Polishchuk,  
Michael Rochlitz, Georgiy Syunyaev**

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# Interregional Institutional Variety

- Russian regions exhibit profound variations of business environment, quality of governance, regulatory quality and other institutions
- To better grasp such variations and identify their causes and consequences, one needs reliable measures of institutional quality and performance

# Advantages of Going Regional

- Subnational comparative analyses have a number of advantages over cross-country ones, including better opportunities to identify causal effects and avoid the omitted variables bias
- Russia is uniquely suited for such analysis given the profound variation of subnational institutional regimes across the country

# Issues and Research Objectives

1. Take stock of the available regional institutional indexes
2. Are regional institutions uni- or multidimensional?
3. Make use of new sources of data for regional institutional measurement (BEEPS project)
4. Produce a typology of regional institutional regimes
5. Explore regional institutional trends
6. Explore new opportunities for regional institutional analyses

# How (not) to Measure Institutions

Main techniques of institutional measurement:

- Formal approach
- Expert opinions
- Users' assessments
- Direct measurement (standard situations)
- Observable institutional outcomes

# Aggregation of Institutional Indexes

Aggregation of partial measures into institutional clusters should reduce measurement noise

Governance Matters' (Kaufman et al., 2014) clusters:

- Voice and accountability
- Political stability and non-violence
- Regulatory quality
- Government effectiveness
- Rule of law
- Corruption prevention

# Reasons to Be Cautious

- What do we measure – real things or imaginary ‘constructs’ (Thomas, 2010)
- What corruption? (Treisman, 2007)
- Suspiciously high correlation – ‘measure the same broad concept’ (Langbein, Knack, 2010)
- Halo effect and circularity (Bardhan, 2002)
- Complementarity and second best (Aoki, 2007)
- Success of non-conventional institutions (Qian, 2003)

# Lessons Learned

- Institutions are essentially multidimensional
- They affect economic outcomes through various channels and mechanisms
- To avoid measurement biases, one should use multiple sources of data and transparent techniques
- Institutional structure should not be imposed prior to measurement; rather, it should be deduced from data



# Russian Regional Institutions: Roots of Diversity

- History (Dower, Markevich, 2014)
- Geography and natural resources
- Economy and access to global markets
- Legacy of 1990s (“take as much power as you can digest”)
- No ‘market-preserving federalism’ – a lack of unifying constraints and incentives (Blanchard, Shleifer, 2001; Polishchuk, 2001)

# Regional Institutions and Vertical Power

- Institutional diversity has survived (and in fact deepened) under “vertical power”
- Harmonization de jure but not de facto; uneven enforcement of federal laws (Yakovlev, Zhuravskaya, 2013)
- Limited capacity for central oversight
- Incentives and discretion of regional administrations
- Measuring the unmeasurable

# Sources of Data

- Rating agencies (Expert RA)
- Business associations (OPORA)
- Government agencies (MinRegion, ЕМИСС)
- Think tanks (Carnegie, INDEM, НИСИПП)
- International organizations (EBRD-BEEPS)

Name	Type of institution	Number of regions	Year	Data source
Investment rating by RA Expert rating agency	Investment climate and risks	83-89	2000-2012	RA Expert website <a href="http://www.raexpert.ru/ratings/regions/">http://www.raexpert.ru/ratings/regions/</a>
Opora Rossii	Entrepreneurial climate, corruption, red tape, crime control	40-80	2005, 2006, 2008, 2011, 2012	Opora Rossii website <a href="http://new.opora.ru/projects/index">http://new.opora.ru/projects/index</a>
Public opinion about regional executives	Functioning and transparency of regional executive authority	83	2007-2011	UniSIS
Performance of regional executives	Working efficiency of regional administrations	83	2007-2010	The Ministry of Regional Development of the Russian Federation
Size of the shadow economy	General assessment of institutional quality	89	2001, 2004, 2006-2013	Rosstat
Corruption rankings by the Carnegie Moscow Center	Level of corruption	88	2004, 2010	Petrov, Titkov, 2013; <a href="http://atlas.socpol.ru/indexes/index_democr.shtml">http://atlas.socpol.ru/indexes/index_democr.shtml</a>
Democracy rating by the Carnegie Moscow Center	Political competition, openness and transparency in the political life of the regions	88	2001, 2003-2010	Petrov, Titkov, 2013
Monitoring of anti-corruption legislation	Anti-corruption legislation	83	2008-2010	NISSE <a href="http://www.nisse.ru/work/projects/monitorings/anti-corruption/">http://www.nisse.ru/work/projects/monitorings/anti-corruption/</a>
Regional crime statistics from the police on property related crimes	Business protection from criminal attacks, violent pressure on business	89	2000-2010	UniSIS
Victims in commerce-motivated violence	Business security	74	1991-2010	Belokurova, 2012
Corporate raiding cases cited in the Russian press; complaints concerning raider attacks	Property rights protection	89	1999-2010	Rochlitz, 2014; Business Against Corruption website <a href="http://www.nocorruption.biz/?cat=6">http://www.nocorruption.biz/?cat=6</a>
Indices from the BEEPS	Red tape, the rule of law, business security, access to infrastructure, the level of corruption	37	2012	BEEPS project <a href="http://www.ebrd-beeps.com">www.ebrd-beeps.com</a>

# Pair-wise Correlations: Summary Statistics

Pairwise correlations of regional institutional measures significantly differ from zero in 40% of the cases

Of those 40%, only 2/3 have the expected positive sign





# Correlations Expected and Unexpected

- Government-produced institutional measures agree with each other and with RA Expert rankings
- Effectiveness of regional administrations is *positively* correlated with economic crime; correlation between economic crime and government transparency is negative
- Corruption is *negatively* correlated with the size of informal sector
- There is no correlation between corruption and corruption prevention legislation



# So What?

- Institutional indexes for Russian regions exhibit much less unanimity than national institutional measures
- Opacity of derivation methods and procedures makes it hard to interpret such disagreements and ascribe it either to actual multi-dimensionality of regional institutions, or to the inconsistency of measurement techniques

# BEEPS Dataset

EBRD administers the Business Environment and Enterprise Performance Survey (BEEPS)

5<sup>th</sup> wave in Russia (2012): 4220 firms from 37 regions

Thematic scope:

- Government regulation
- Access to markets, infrastructure, and production inputs
- Competition
- Dispute resolution
- Corruption
- Rule of law
- Business (in)security

# Aggregation and Factor Analysis

Institutions-rules: patterns of corruption and red tape, and the rule of law

Institutions-services: access to infrastructure; business security; access to finance

Both types are essential ingredients of business environment and as such could be considered as institutions

# Institutions-rules

Institutional pattern 1 – *administrative chaos*

frequent bribery by various government agencies (tax, customs, courts etc.); burdensome tax administration and red tape

Institutional pattern 2 – *administrative order*

large one-off bribes and kickbacks (one stop shop)

Rule of law

fairness, timeliness, and efficiency of the court system

# Factor Loadings

	Institutional type 1	Institutional type 2	Rule of law	Access to infrastructure	Security
Frequency of bribing officials	0,776				
Frequency of bribery at customs	0,81				
Frequency of bribery related to courts	0,818				
Frequency of bribery related to tax administration	0,811				
Taxation as a barrier to business	0,404				
Licensing and permits as a barrier to business	0,251				
Average size “cuts” for state contracts		0,536			
Average size of bribes to government officials		0,536			
Fairness of court system			0,673		
Efficiency of court system			0,697		
Enforcement of court decisions			0,633		
Difficulties with access to electricity				0,664	
Difficulties with access to telecommunications				0,664	
Absence of security costs					0,432
Absence of losses from crimes					0,54
Crimes and disorder as a barrier to business					0,542



# Lesser of Two Evils

- Centralized corruption is less burdensome for the private sector than decentralized one (Shleifer, Vishny, 1993), as it prevents a ‘tragedy of the commons’ where multiple bureaucrats treat the economy as an open –access turf
- It appears that it also facilitates the provision of institutions-services (perhaps because it strengthens the incentives to provide public production inputs due to the ‘encompassing interests’ of consolidated regional bureaucracy)

# Correlations of BEEPS Indexes

	Institutional type 1	Institutional type 2	Rule of law	Access to infrastructure	Security
Institutional type 2	+***				
Rule of law					
Access to infrastructure		+***			
Security		+***		+***	
Access to finance	+***	+***		+***	+***



# Grand Theft and Bloodsucking

Institutions-services are correlated with each other and with institutional pattern 2

With the exception of access to finance, no such correlation is observed for pattern 1

Rule of law is orthogonal (literally and metaphorically) to other institutions

Central government prefers pattern 2, which is positively correlated with Minregion's ratings of regional administrations

# Regional Institutional Trends

- Cross-country institutional measures reflect deterioration of Russia's national institutions
- How do regional institutions fare against such negative national trends?
- How (un)stable are leadership positions?
- Do regional institutions exhibit convergence or divergence?





# Violent Pressure on Business

Fraud Cases		Raider attacks against firms		Attacks against businessmen	
1998-2003	2004-2010	1998-2003	2004-2010	1998-2003	2004-2010
Magadan oblast	Novosibirsk oblast	Chuvashia	Ulyanovsk oblast	Sakhalin oblast	Adygeya
Komi Republic	Oryol oblast	Sverdlovsk oblast	Perm krai	Moscow (city)	Primorie
Khanty-Mansijsk	Magadan oblast	Tatarstan	Voronezh oblast	Astrakhan oblast	Astrakhan oblast
Kamchatka krai	Stavropol krai	Marij El	Primorie	Primorie	Moscow (city)
Kabardino-Balkaria	Smolensk oblast	Tiumen oblast	Sverdlovsk oblast	Novgorod oblast	Kaliningrad oblast
Chukotka	Vologda oblast	Kemerovo oblast	Tver oblast	Samara oblast	Orenburg oblast
Yamalo-Nenets	Tatarstan	Penza oblast	Volgograd oblast	Khabarovsk krai	Moscow oblast
Volgograd oblast	Bashkortostan	Volgograd oblast	Saint-Petersburg	Saint-Petersburg	Zabaikal krai
Kursk oblast	Tomsk oblast	Tver oblast	Saratov oblast	Smolensk oblast	Kamchatka krai
Tiumen oblast	Tuva	Chelyabinsk oblast	Chelyabinsk oblast	Moscow oblast	Khabarovsk krai
Vologda oblast	Perm krai	Arkhangelsk oblast	North Ossetia-Alania	Kemerovo oblast	Samara oblast
Kaluga oblast	Astrakhan oblast	Vladimir oblast	Murmansk	Mordovia	Novgorod oblast

# **Fluidity of Regional Institutions**

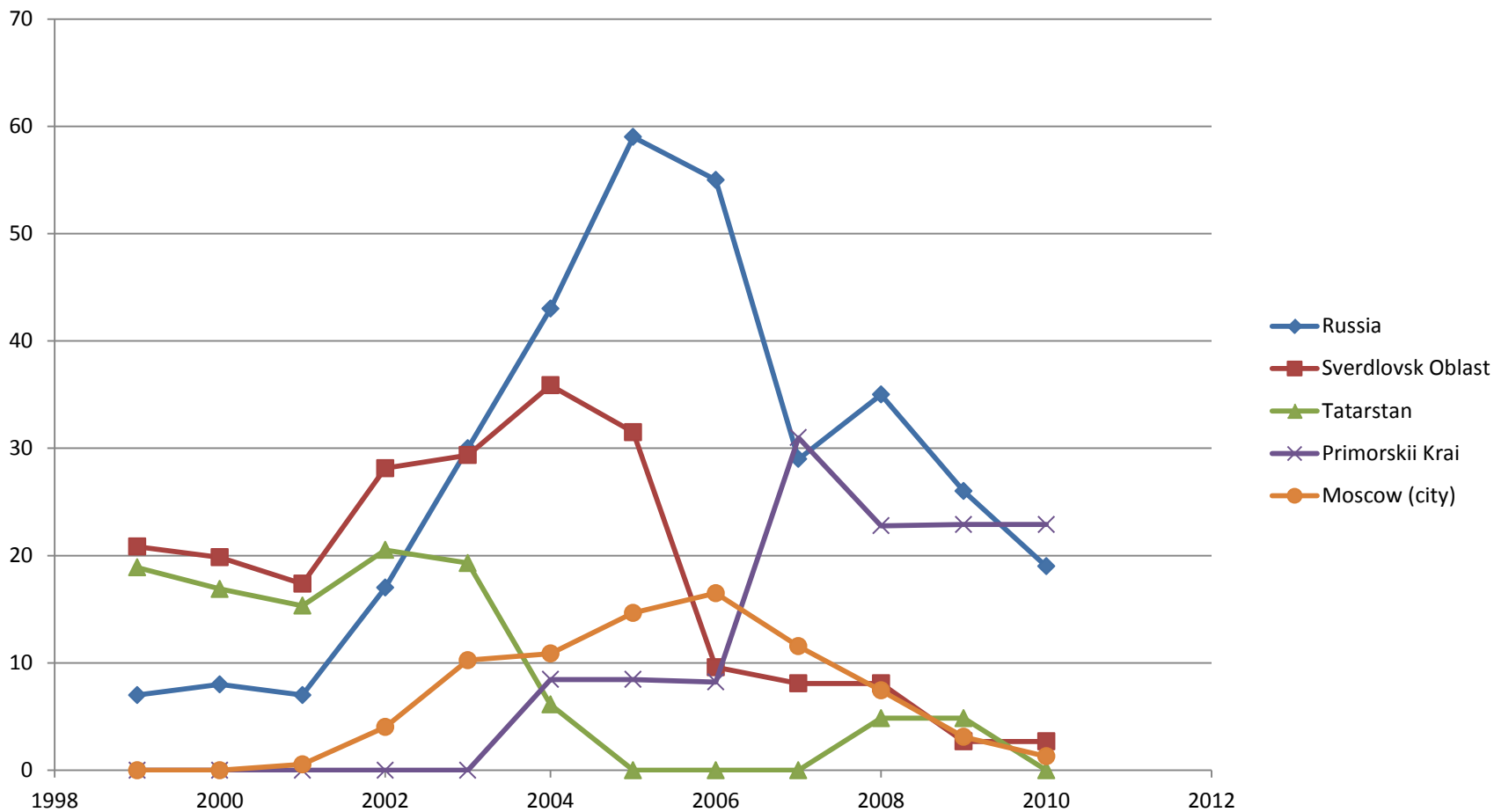
Regions can improve their institutional environment

...

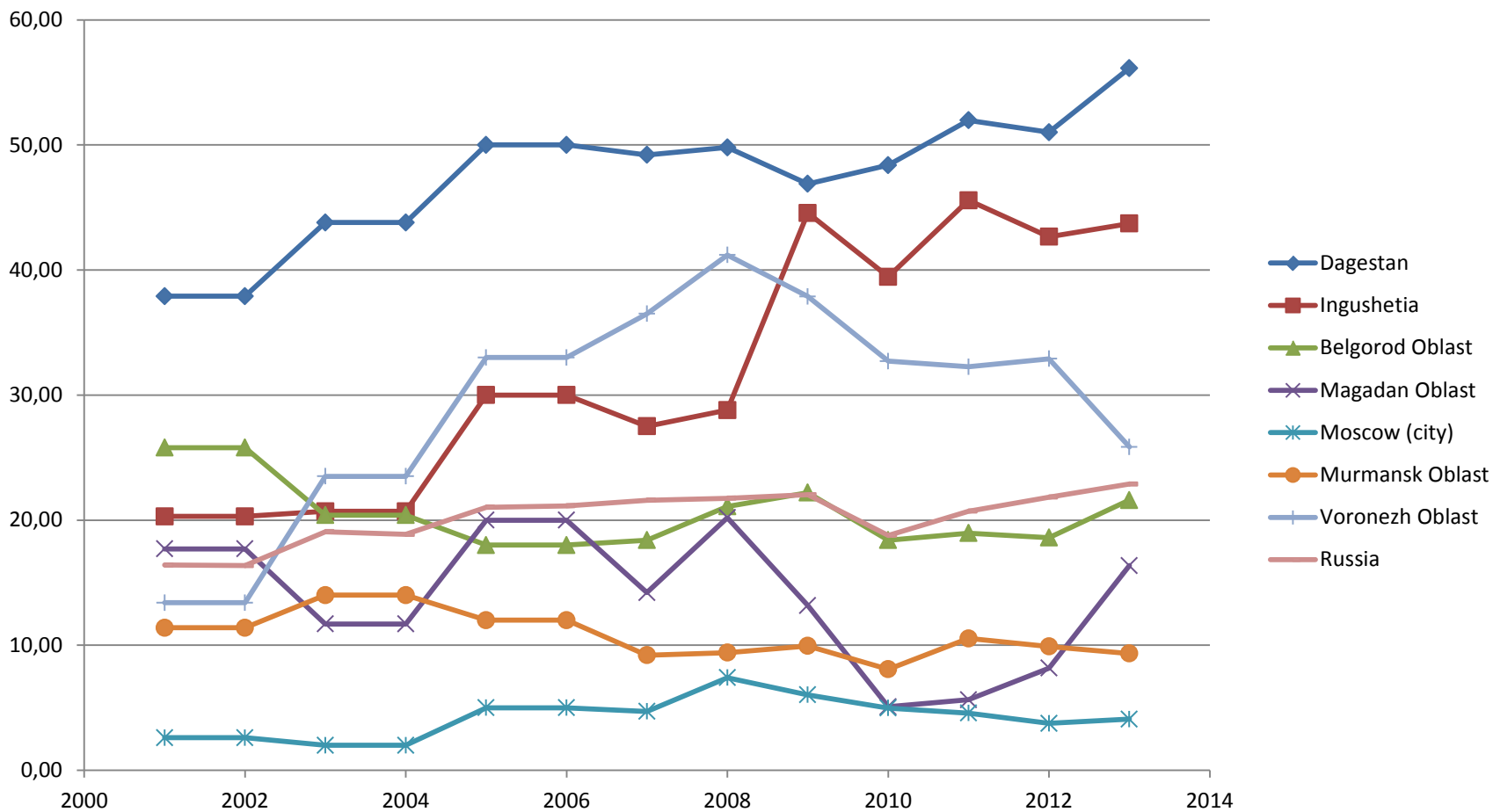
... but such improvements are not sustainable over longer term

Institutional instability adversely affects investment attractiveness of the regions

# Do Regional Institutions Follow National Trends? Raider Attacks



# Do Regional Institutions Follow National Trends? Informal Employment





# Convergence or Divergence?

Means and variance of the informal employment

	2001	2004	2006	2007	2008	2009	2010	2011	2012	2013
Mean	16,40	18,86	21,14	21,59	21,75	22,03	18,78	20,72	21,84	22,89
Variance	4,86	5,79	7,29	7,27	6,48	7,17	6,63	6,73	7,02	7,33

# No Market-Preserving Federalism

- One should expect institutional conversion driven by market-preserving federalism when regions improve their institutions to attract investments
- Weakness of the rule of law nationwide and blurred incentives of regional administrations do not meet the conditions of such model
- Divergence of regional institutions is thus a predictable outcome of increased institutional weakness nation-wide

# **Annex: Costs and Benefits of Land Ownership (Dower, Malkov, Polishchuk, Pyle)**

Property rights in Russia are insecure and vulnerable to public and private predation. Land ownership could steeply increase the value of an otherwise lackluster firm, make it a more appealing target for takeover. This creates additional risks and costs for the firm, which could diminish the benefits conjectured by de Soto and confirmed by Karas et al. (2014).

# Land Ownership and Access to Finance

	Access to finance as an obstacle (0–4 scale)					
Share of land owned by the firm	-0.000851* (0.000455)	-0.000876* (0.000480)	-0.000897* (0.000486)	-0.000946* (0.000493)	-0.000661 (0.000501)	-0.000688 (0.000508)
(Log) number of employees		0.001882 (0.015931)	0.000065 (0.016916)	-0.017459 (0.017744)	0.002260 (0.017317)	-0.016909 (0.018151)
(Log) years since establishment			0.012150 (0.026992)	0.017620 (0.027463)	0.009704 (0.027728)	0.012801 (0.028181)
Sector fixed effects	No	No	No	Yes	No	Yes
Regional fixed effects	No	No	No	No	Yes	Yes
N	3384	3378	3344	3344	3344	3344
Pseudo R <sup>2</sup>	0.0004	0.0004	0.0004	0.0067	0.0284	0.0350

# Land Ownership and Security

	Payment for security (1 – yes, 0 – no)					
Share of land owned by the firm	0.006509*** (0.000592)	0.004231*** (2.561)	0.004097*** (0.000635)	0.003640** (0.000647)	0.004436*** (0.000665)	0.003947*** (0.000676)
(Log) number of employees		0.311492*** (0.021997)	0.293221*** (0.022973)	0.325677*** (0.024408)	0.306428*** (0.023892)	0.335947*** (0.025370)
(Log) years since establishment			0.096396*** (0.033474)	0.089387*** (0.034347)	0.126688*** (0.034893)	0.120463*** (0.035745)
Sector fixed effects	No	No	No	Yes	No	Yes
Regional fixed effects	No	No	No	No	Yes	Yes
N	3473	3465	3430	3419	3430	3419
Pseudo R <sup>2</sup>	0.0298	0.0809	0.0828	0.1068	0.1287	0.1492

# Interaction with Corruption

		Profit				
Share of land owned by the firm	5394518*** (1241199)	5407004*** (1240942)	5194789*** (1245187)	1341201 (1292630)	1338478 (1310034)	1189325 (1331973)
Corruption		$-7.70 \cdot 10^7$ ( $5.55 \cdot 10^7$ )	$-1.23 \cdot 10^7$ ( $6.52 \cdot 10^7$ )	$-0.78 \cdot 10^7$ ( $6.39 \cdot 10^7$ )	$-0.63 \cdot 10^7$ ( $6.44 \cdot 10^7$ )	$0.35 \cdot 10^7$ ( $6.49 \cdot 10^7$ )
Corruption * Share of land owned by the firm			$-2481522^*$ (1310576)	$-2491196^*$ (1284561)	$-2459980^*$ (1296871)	$-2849548^{**}$ (1313289)
(Log) number of employees				$3.81 \cdot 10^8$ *** ( $4.21 \cdot 10^7$ )	$3.81 \cdot 10^8$ *** ( $4.53 \cdot 10^7$ )	$3.83 \cdot 10^8$ *** ( $4.76 \cdot 10^7$ )
(Log) years since establishment					5720782 ( $7.37 \cdot 10^7$ )	$1.55 \cdot 10^7$ ( $7.49 \cdot 10^7$ )
Sector fixed effects	No	No	No	No	No	Yes
N	1981	1981	1981	1981	1972	1972
Adj. R <sup>2</sup>	0.0090	0.0094	0.0107	0.0496	0.0488	0.0503

# Interaction with Red Tape

		Profit				
Share of land owned by the firm	5394518*** (1241199)	5373466*** (1240942)	5500778*** (1245187)	1649588 (1292630)	1663526 (1303501)	1542443 (1326531)
Red tape		-1.19•10 <sup>8</sup> *** (5.34•10 <sup>7</sup> )	-1.87•10 <sup>7</sup> (6.31•10 <sup>7</sup> )	-2.52•10 <sup>7</sup> (6.19•10 <sup>7</sup> )	-2.57•10 <sup>7</sup> (6.21•10 <sup>7</sup> )	-2.59•10 <sup>7</sup> (6.24•10 <sup>7</sup> )
Red tape * Share of land owned by the firm			-3618917*** (1310576)	-3477350*** (1201195)	-3433421*** (1211998)	-3649143*** (1224094)
(Log) number of employees				3.81•10 <sup>8</sup> *** (4.21•10 <sup>7</sup> )	3.83•10 <sup>8</sup> *** (4.52•10 <sup>7</sup> )	3.84•10 <sup>8</sup> *** (4.75•10 <sup>7</sup> )
(Log) years since establishment					978775 (7.36•10 <sup>7</sup> )	1.37•10 <sup>7</sup> (7.48•10 <sup>7</sup> )
Sector fixed effects	No	No	No	No	No	Yes
N	1981	1981	1981	1981	1972	1972
Adj. R <sup>2</sup>	0.0090	0.0109	0.0148	0.0535	0.0526	0.0543

# Interaction with Informal Economy

		Profit				
Share of land owned by the firm	5394518*** (1241199)	5585320*** (1240942)	1.69•10 <sup>7</sup> *** (3702507)	1.22•10 <sup>7</sup> *** (3671907)	1.23•10 <sup>7</sup> *** (3687032)	1.24•10 <sup>7</sup> *** (3707570)
× Informal employment		-1.53•10 <sup>7</sup> ** (6986845)	-3289009 (7887644)	1191298 (7755609)	1121725 (7788341)	1260138 (7838247)
Informal employment Share of land owned by the firm			-579953*** (178518)	-534609*** (175228)	-537424*** (175763)	-553002*** (176357)
(Log) number of employees				3.73•10 <sup>8</sup> *** (4.23•10 <sup>7</sup> )	3.74•10 <sup>8</sup> *** (4.53•10 <sup>7</sup> )	3.75•10 <sup>8</sup> *** (4.76•10 <sup>7</sup> )
(Log) years since establishment					1615218 (7.37•10 <sup>7</sup> )	1.17•10 <sup>7</sup> (7.49•10 <sup>7</sup> )
Sector fixed effects	No	No	No	No	No	Yes
N	1981	1981	1981	1981	1972	1972
Adj. R <sup>2</sup>	0.0090	0.0108	0.0156	0.0524	0.0518	0.0531



# Conclusions

- Privately owned land is both an asset and a liability of Russian industrial firms. The asset part is better access to finance (earlier demonstrated by Karas et al., 2014), and the liability part is due to insecurity of property rights and other institutional pathologies
- Institutional quality is thus a “sorting factor” which affects the cost-benefit balance of land ownership in the Russian industrial sector.
- Poor institutions eat into the gains of land ownership expected due to the “de Soto effect”, and in extreme cases could leave land-owning firms worse-off than those with other forms of land use, which agrees with the “second-best” dictum