
The Process of Recovery across Russian Regions

Maria Giulia Silvagni
PhD Economics – Univ of Bologna



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Outline

- Research Questions
- Literature
- Stylized Facts
- Empirical Strategies
- Results and Discussion



Research Questions

- Which factors are affecting recovery across Russian regions after transition?
- Is there a geographical pattern in recovery?
- What is the role of institutions and reforms?



Literature

- Berkowitz and DeJong (2003; 2005)
- Ledyaeva and Linden (2007) fdi
- Ahrend (2008)
- Desai (2003; 2005)
- Freinkman (2009) fiscal federalism



Stylized facts

- According to the Constitution of 1993, the constituents units of Russia are the *Subjects of the Federation*: 89 at the time, today they are 83.
- Our dataset uses 77 units. Each of them is a region, a Republic or a federal city. We consider autonomous provinces as part of the main regions.
- Chechnya, Ingushetia and Kaliningrad are excluded.
- Period: 1995 – 2007 (working on 2008-2009)



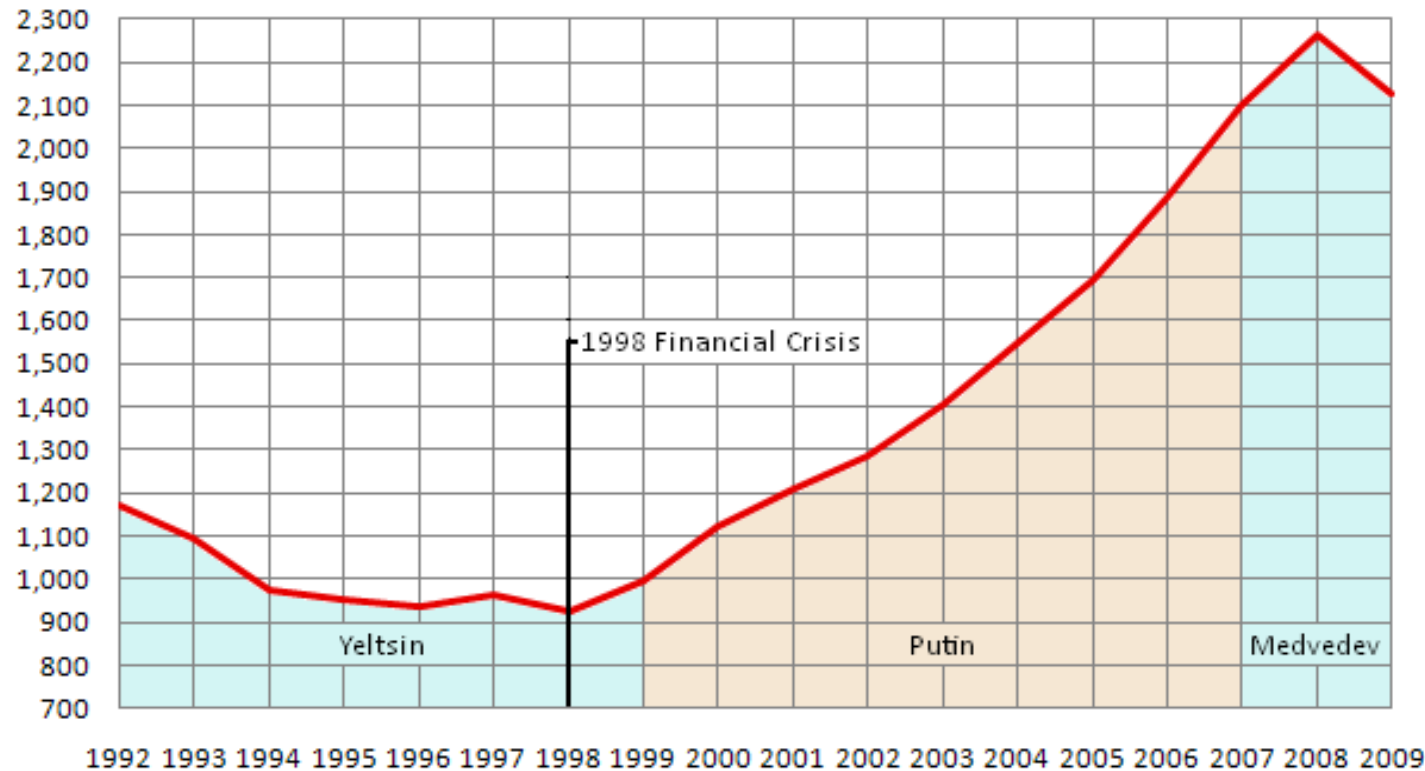
Subjects of the Russian Federation



Russian GDP

Russian GDP (PPP) Since Fall of Soviet Union

Billions of International Dollars (2008)

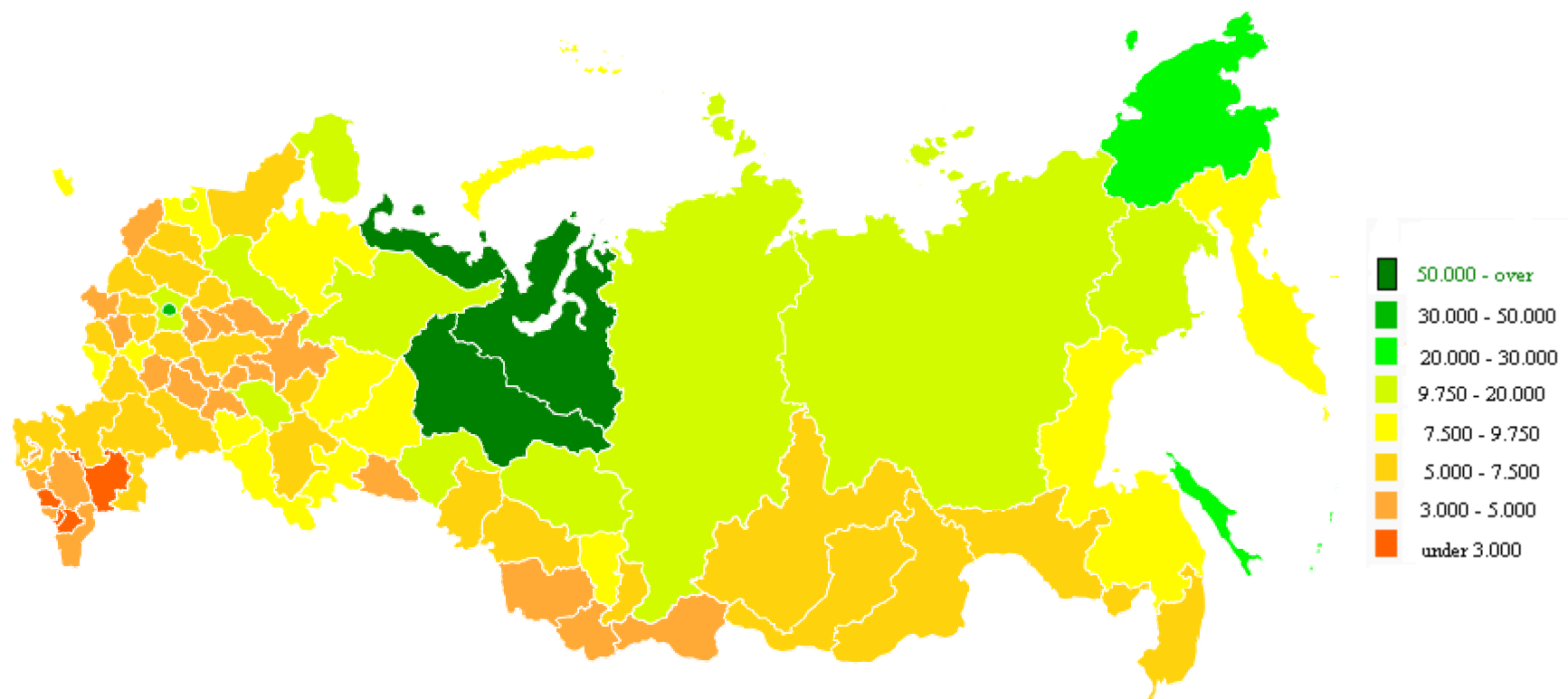


Source: International Monetary Fund (<http://www.imf.org>)



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GRP p.c. 2008 thous. US \$



Empirical strategies

- Spatial analysis
- Static panel
- Dynamic panel

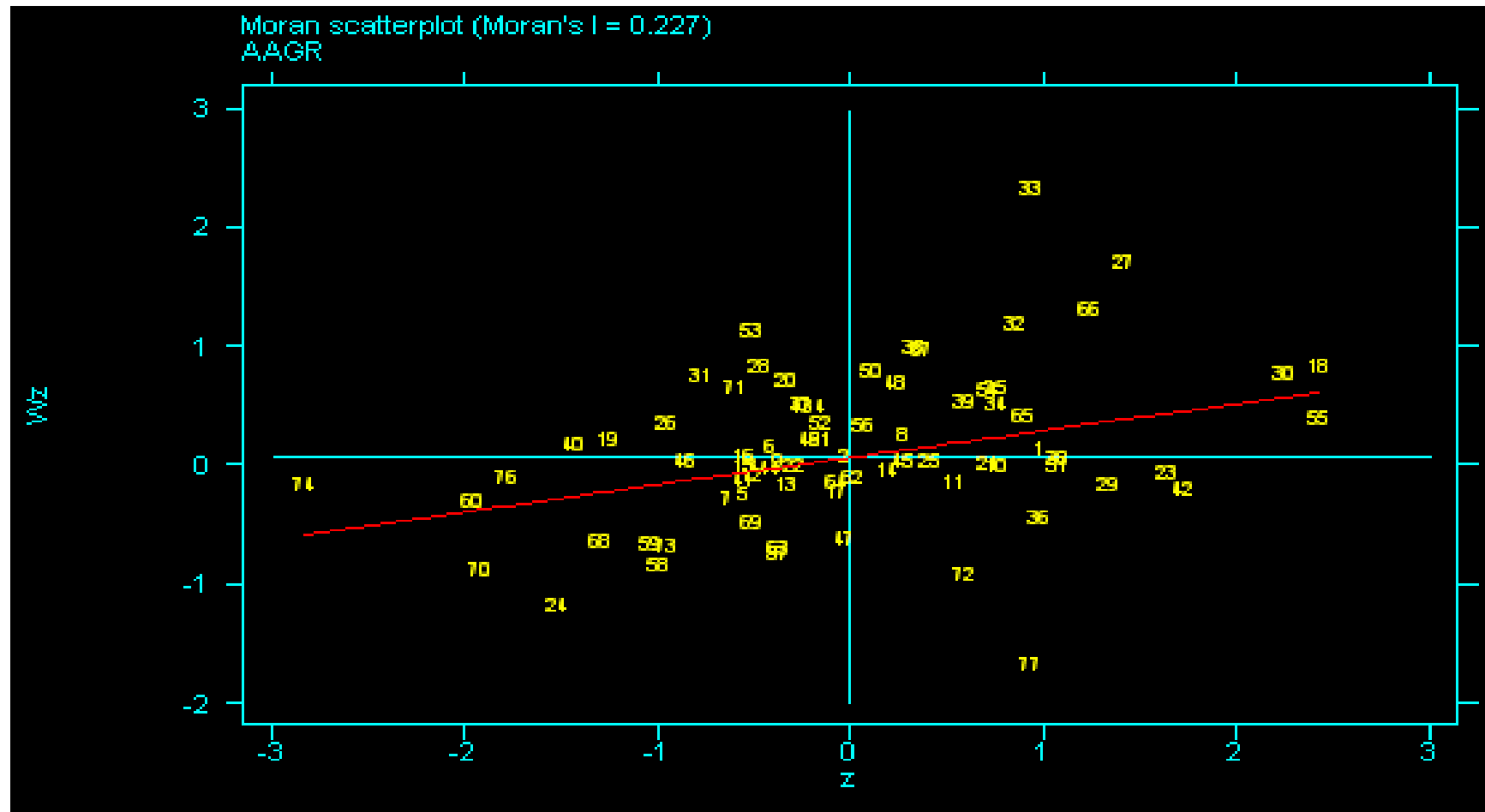


σ convergence

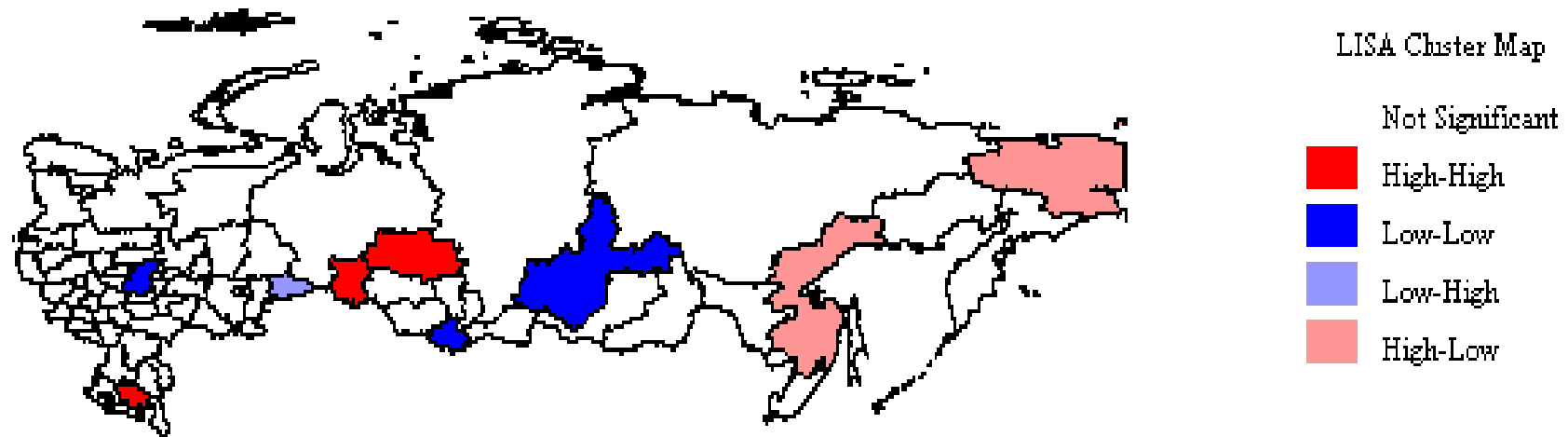
Year	Coeff. of variation	Gini index
1994	0.46	0.23
1995	0.52	0.25
1996	0.63	0.27
1997	0.64	0.28
1998	0.65	0.28
1999	0.63	0.27
2000	0.63	0.26
2001	0.65	0.27
2002	0.66	0.27
2003	0.68	0.28
2004	0.68	0.28
2005	0.70	0.28
2006	0.70	0.28



Moran's I scatterplot



Cluster map



Static linear panel

Dep. var: average annual growth rate of p.c. grp 1995-2007									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
G.r.p. capita	.194 (.047) ***	.18 (.047) ***	.027 (.009) ***	.02 (.012) **	.024 (.009) ***	.024 (.009) ***	.021 (.009) **	.022 (.009) ***	.028 (.010) ***
Inv		.016 (.010) **		.007 (.007)					
Rep			.218 (.094) **	.224 (.094) **	.227 (.097) **	.219 (.097) **	.208 (.096) **	.253 (.082) **	.244 (.080) ***
R.gdp			-.027 (.011) **	-.028 (.011) **	-.029 (.012) **	-.028 (.012) **	-.026 (.012) **	-.032 (.010) ***	-.030 (.01) ***
Oil					.014 (.004) ***	.015 (.004) ***	.016 (.004) ***	.014 (.004) ***	.014 (.004) ***
Priv						-.00001 (6.92e-06)**	-.00001 (6.80e-06)*	-.00001 (6.63e-06)*	-.00001 (6.60e-06) *
Rd							.00007 (.00002) ***	.00004 (.00002)* **	.00002 (.00003) *
Pamd								-.0001 (.00007)*	-.00002 (.00007)
MigRates									-.0001 (.00005) **
FE	✓	✓							
TE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Obs.	1001	1001	1001	1001	1001	1001	1001	1001	1001



Dynamics of the dummies for oil and republics

Dep. variable: av. annual growth rate of grp p.c.	
Oi195	.067 (.023) ***
Oi196	.048 (.024) **
Oi197	.007 (.012)
Oi198	-.004 (.010)
Oi199	.009 (.013)
Oi100	.024 (.023)
Oi101	.008 (.013)
Oi102	-.007 (.012)
Oi103	-.010 (.012)
Oi104	.036 (.012) ***
Oi105	.010 (.008)
Oi106	-.002 (.008)
Oi107	.004 (.011)

Dep. variable: av. annual growth rate of grp p.c.	
Rep95	-.041 (.026) *
Rep96	-.013 (.029)
Rep97	.003 (.011)
Rep98	.021 (.011)**
Rep99	-.018 (.013)
Rep00	.040 (.036)
Rep01	.027 (.016)*
Rep02	-.009 (.014)
Rep03	-.006 (.017)
Rep04	-.002 (.011)
Rep05	.012 (.007)*
Rep06	.015 (.010)*
Rep07	-.005 (.012)



Dynamic panel

	①	②	③	④	⑤	⑥
Grp	.119 (.123) ***	.609 (.28) **	.625 (.162) ***	.703 (.227) ***	.542 (.218) ***	.489 (.201) ***
Inv		-.241 (.132) *	-.258 (.078) ***	-.273 (.098) ***	-.195 (.093) **	-.174 (.090) **
Padm			.002 (.001) **	.002 (.001) *	.002 (.001) *	.002 (.001) **
MigRates				-.0006 (.0004) *	-.0006 (.0003) *	-.0008 (.0004) **
Priv					-.00003 (.00002) *	-.00004 (.00002) **
PopDens						-.003 (.001) *
Obs.	924	924	924	924	924	924
AR(1) (p.val)	-3.98 (.000)	-3.26 (.001)	-2.54 (.011)	-2.94 (.003)	-3.15 (.002)	-1.29 (.195)
AR(2) (p.val)	-.99 (.321)	-.69 (.493)	-1.09 (.276)	-1.12 (.262)	-1.12 (.265)	.26 (.792)
Sargan (p.val)	7.74 (.102)	9.13 (.331)	3.97 (.984)	6.90 (.975)	8.36 (.989)	7.61 (.999)



Conclusions

- Spatial analysis: the regions responsible for the spatial correlation are few and, in particular, there are no effects by Moscow, Saint Petersburg and European Russia
- Panel data: no evidence of convergence + negative effect of privatizations + positive effect of republics
- The same results are found for the two sub-periods 1995-1998 and 1999-2007

