

# Factors of Legal Diversity in Russian Regions: Lack of Loyalty or Lack of Competence?

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# Data (2011-2012)

- Total number of bills - 103346 and 117308
- Total number of wrong bills – 4426 and 4971

## “Regional” hypothesis:

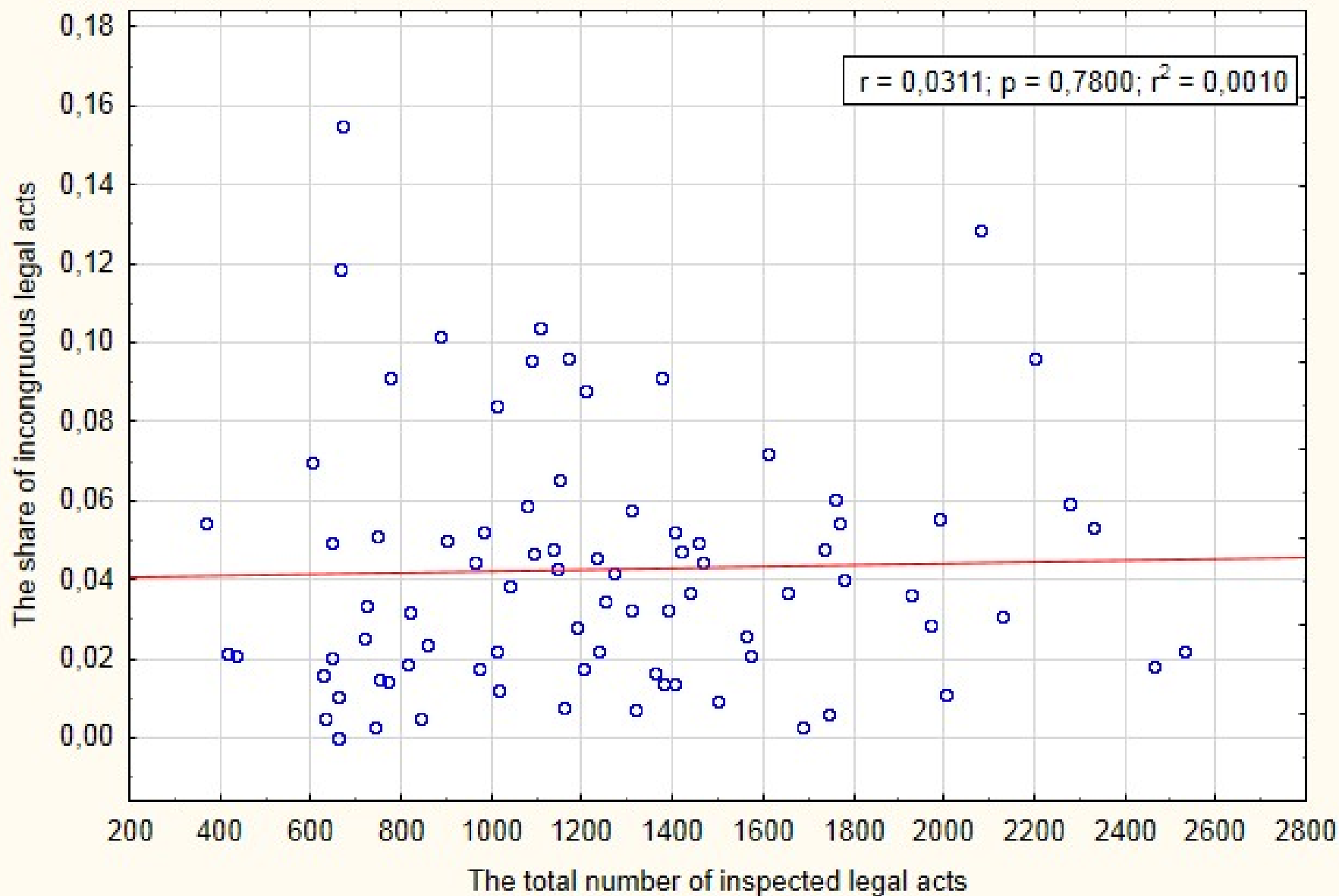
- GRP per capita (index price)
- Ethnic composition (rus and titular)
- Distance to Moscow
- Urban population
- Number of organizations
- Status
- “United Russia” votes share, V. Putin votes share
- Effective number of parties, effective number of candidates (both – Golosov index)
- Transfers share in regional revenues

# Data (2011-2012)

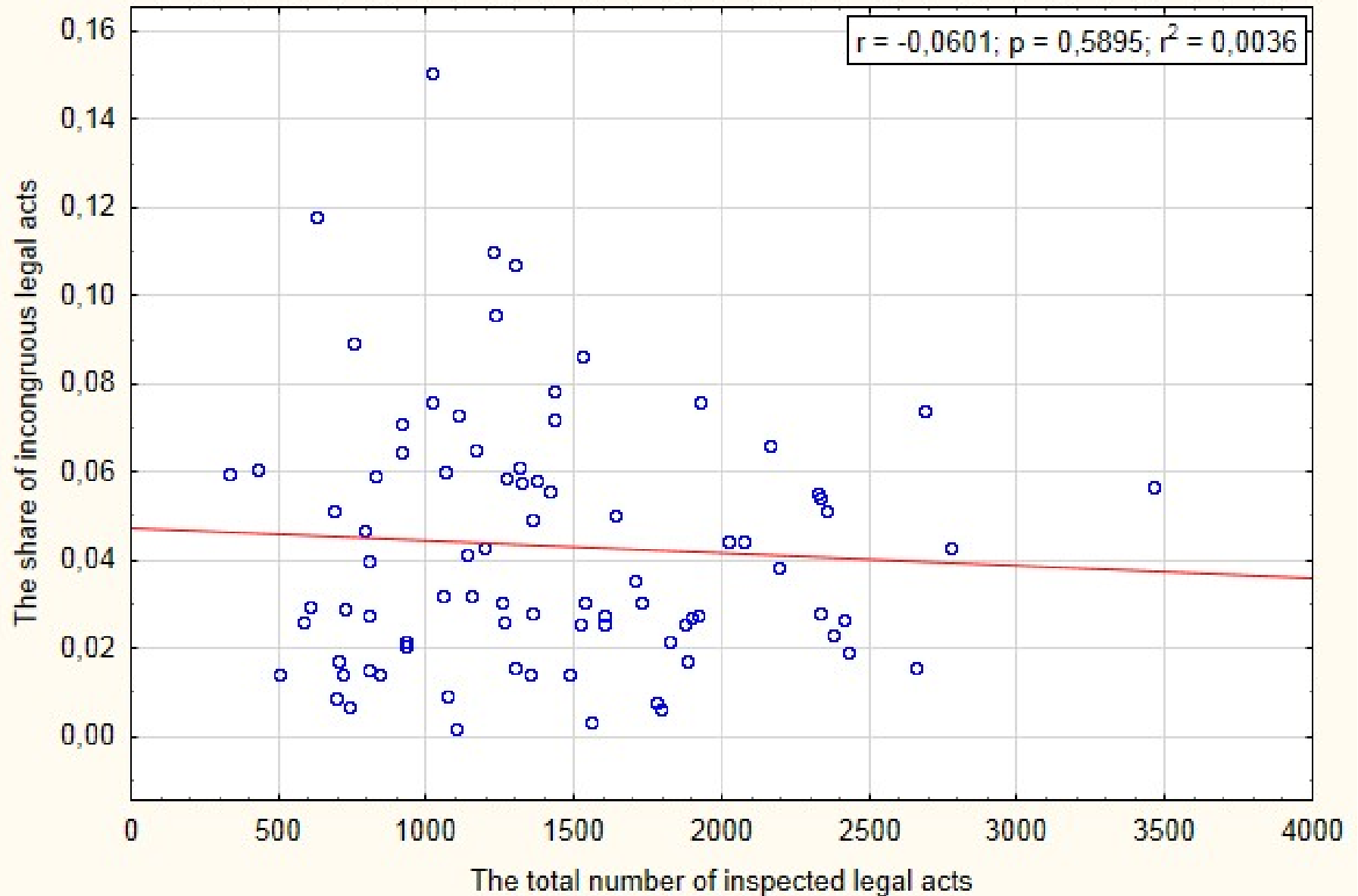
## “Parliamentary” hypothesis:

- Number of deputies
- Number of constant committees
- “United Russia” seats share
- Number of fractions
- Population

Scatterplot "The correlation between the regional legislative activity and the quality of legal acts (2011)"



Scatterplot "The correlation between regional legislative activity and the quality of legal acts (2012)"



# “Heterogeneity of law production space”

- 1) Intensity of legislative activity in regions
- 2) Quality of legislative activity in regions

# Total number of inspected bills. “Regional” hypothesis (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	6.069e+02	4.378e+02	1.386	0.170
Status	-1.284e+02	2.190e+02	-0.586	0.559
Regional ethnic composition (Russian)	5.201e+02	3.887e+02	1.338	0.185
GRP (price index)	-8.226e-05	7.179e-05	-1.146	0.255
Share of urban population	4.612e+00	5.390e+00	0.856	0.395
Number of organizations	2.935e-04	4.004e-04	-0.733	0.466

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Number of cases: 83

Multiple R-squared: 0.1964; Adjusted R-squared: 0.1442; p-value: 0.004211

# Total number of bills.

## “Regional” hypothesis (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	6.327e+02	5.519e+02	1.147	0.255
Status	-1.645e+02	2.746e+02	-0.599	0.551
Regional ethnic composition (Russian)	6.993e+02	4.851e+02	1.442	0.153
GRP (price index)	-4.884e-05	9.246e-05	-0.528	0.599
Share of urban population	4.758e+00	6.754e+00	0.705	0.483
Number of organizations	-4.354e-04	4.760e-04	-0.915	0.363

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Number of cases: 83

Multiple R-squared: 0.1958; Adjusted R-squared: 0.1436; p-value: 0.004315



# Total number of bills per deputy. “Regional” hypothesis (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	2.593e+01	1.284e+01	2.020	0.0469
Status	-1.617e+01	6.420e+00	-2.519	0.0138
Regional ethnic composition (Russian)	-4.061e+00	1.140e+01	-0.356	0.7225
GRP (price index)	5.912e-06	2.105e-06	2.809	0.0063
Share of urban population	1.495e-01	1.580e-01	0.946	0.3471
Number of organizations	-2.337e-05	1.174e-05	-1.990	0.0501

Number of cases: 83

Multiple R-squared: 0.3414; Adjusted R-squared: 0.2987; p-value: 4.199e-06

# Total number of bills per deputy. “Regional” hypothesis (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	2.628e+01	1.277e+01	2.058	0.0429
Status	-1.525e+01	6.353e+00	-2.400	0.0188
Regional ethnic composition (Russian)	2.885e+00	1.122e+01	0.257	0.7978
GRP (price index)	1.123e-05	2.139e-06	5.251	1.3e-06
Share of urban population	7.650e-02	1.563e-01	0.490	0.6258
Number of organizations	-2.492e-05	1.101e-05	-2.263	0.0265

Number of cases: 83

Multiple R-squared: 0.4831; Adjusted R-squared: 0.4495; p-value: 6.116e-10

# Total number of bills.

## “Parliamentary” hypothesis (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	1646.501	577.720	2.850	0.00559
Size of the parliament (number of deputies)	-1.473	3.291	-0.448	0.65571
Number of committees per deputy	-1536.886	679.853	-2.261	0.02657
Fractions' number	27.192	80.793	0.337	0.73735
United Russia's seats share	-230.359	427.445	-0.539	0.59148

Number of cases: 83

Multiple R-squared: 0.08442; Adjusted R-squared: 0.03746; p-value: 0.1377

# Total number of bills.

## “Parliamentary” hypothesis (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	2071.712	852.842	2.429	0.0174
Size of the parliament (number of deputies)	-1.179	4.091	-0.288	0.7740
Number of committees per deputy	-1955.767	856.953	-2.282	0.0252
Fractions' number	21.055	106.120	0.198	0.8432
United Russia seats' share	-479.431	670.108	-0.715	0.4765

Number of cases: 83

Multiple R-squared: 0.08925; Adjusted R-squared: 0.04255; p-value: 0.1169

# Total number of bills per deputy. “Parliamentary” hypothesis (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	56.72401	13.86665	4.091	0.000104
Size of the parliament (number of deputies)	-0.45433	0.07928	-5.731	1.8e-07
Number of committees	-1.14998	0.48279	-2.382	0.019658
Fractions' number	0.17972	2.07257	0.087	0.931123
United Russia's seats share	4.28118	11.14160	0.384	0.701838

Number of cases: 83

Multiple R-squared: 0.4093; Adjusted R-squared: 0.379; p-value: 2.059e-08

# Total number of bills per deputy. “Parliamentary” hypothesis (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	69.4762	18.6945	3.716	0.000378
Size of the parliament (number of deputies)	-0.4579	0.0913	-5.016	3.24e-06
Number of committees	-1.2589	0.5615	-2.242	0.027793
Fractions' number	-0.1252	2.4850	-0.050	0.959933
United Russia seats' share	-5.5220	16.0067	-0.345	0.731038

Number of cases: 83

Multiple R-squared: 0.3745; Adjusted R-squared: 0.3424; p-value: 1.767e-07

# Incongruous bills' share. “Regional” hypothesis (with voting for United Russia) (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	8.944e-02	3.848e-02	2.325	0.0227
Distance from the federal center	3.595e-06	1.864e-06	1.929	0.0574
Regional ethnic composition (Russian)	-4.112e-02	3.038e-02	-1.353	0.1799
United Russia's votes share	-2.452e-04	3.354e-04	-0.731	0.4670
Status	-2.147e-03	1.400e-02	-0.153	0.8785
Transfers share in regional revenues	-2.385e-02	2.081e-02	-1.146	0.2554

Number of cases: 83

Multiple R-squared: 0.08548; Adjusted R-squared: 0.0261; p-value: 0.2197

# Incongruous bills' share.

## “Regional” hypothesis

### (with the effective number of parties) (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	-4.163e-02	9.314e-02	-0.447	0.6561
Distance from the federal center	3.971e-06	1.847e-06	2.150	0.0347
Regional ethnic composition (Russian)	-3.676e-02	2.546e-02	-1.444	0.1529
Effective number of parties in 2011 elections	1.106e-01	9.042e-02	1.223	0.2252
Status	-1.010e-03	1.381e-02	-0.073	0.9419
Transfers share in regional revenues	-2.626e-02	2.017e-02	-1.302	0.1969

Number of cases: 83

Multiple R-squared: 0.09668; Adjusted R-squared: 0.03802; p-value: 0.1574



# Incongruous bills' share. “Regional” hypothesis (with voting for V. Putin) (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	6.133e-02	5.083e-02	1.207	0.231
Distance from the federal center	2.587e-06	1.714e-06	1.509	0.135
Regional ethnic composition (Russian)	-1.865e-02	2.874e-02	-0.649	0.518
Putin votes share	-1.213e-04	4.978e-04	-0.244	0.808
Status	2.980e-03	1.306e-02	0.228	0.820
Transfers share in regional revenues	-3.828e-03	1.897e-02	-0.202	0.841

Number of cases: 83

Multiple R-squared: 0.056; Adjusted R-squared: -0.005302; p-value: 0.4769

# Incongruous bills' share. “Regional” hypothesis (with the effective number of candidates) (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	-1.545e-01	8.681e-01	-0.178	0.859
Distance from the federal center	2.629e-06	1.709e-06	1.539	0.128
Regional ethnic composition (Russian)	-1.711e-02	2.554e-02	-0.670	0.505
Effective number of candidates in 2012 elections	2.047e-01	8.677e-01	0.236	0.814
Status	3.361e-03	1.286e-02	0.261	0.794
Transfers share in regional revenues	-4.322e-03	1.875e-02	-0.230	0.818

Number of cases: 83

Multiple R-squared: 0.05595; Adjusted R-squared: -0.005351; p-value: 0.4774

# Total number of incongruous bills per deputy.

## “Regional” hypothesis (with voting for United Russia) (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	4.522e+00	1.731e+00	2.612	0.01081
Distance from the federal center	2.259e-04	8.386e-05	2.694	0.00867
Regional ethnic composition (Russian)	-2.806e+00	1.367e+00	-2.052	0.04352
United Russia’s votes share	-1.457e-02	1.509e-02	-0.965	0.33751
Status	-1.518e+00	6.301e-01	-2.409	0.01840
Transfers share in regional revenues	-7.988e-01	9.364e-01	-0.853	0.39629

Number of cases: 83

Multiple R-squared: 0.1763; Adjusted R-squared: 0.1228; p-value: 0.00946

# Total number of incongruous bills per deputy.

## “Regional” hypothesis

### (with the effective number of parties) (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	1.151e+00	4.235e+00	0.272	0.78647
Distance from the federal center	2.396e-04	8.399e-05	2.853	0.00556
Regional ethnic composition (Russian)	-2.198e+00	1.158e+00	-1.899	0.06136
Effective number of parties in 2011 elections	2.119e+00	4.111e+00	0.515	0.60773
Status	-1.445e+00	6.279e-01	-2.301	0.02412
Transfers share in regional revenues	-9.821e-01	9.173e-01	-1.071	0.28768

Number of cases: 83

Multiple R-squared: 0.1692; Adjusted R-squared: 0.1153; p-value: 0.01248

# Total number of incongruous bills per deputy.

## “Regional” hypothesis (with voting for V. Putin) (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	8.2496506	2.9790508	2.769	0.00704
Distance from the federal center	0.0002328	0.0001004	2.318	0.02312
Regional ethnic composition (Russian)	-3.9929564	1.6841695	-2.371	0.02025
Putin votes share	-0.0493606	0.0291725	-1.692	0.09468
Status	-1.7302300	0.7651146	-2.261	0.02656
Transfers share in regional revenues	-1.1858571	1.1115769	-1.067	0.28938

Number of cases: 83

Multiple R-squared: 0.1652; Adjusted R-squared: 0.111; p-value: 0.01457

# Total number of incongruous bills per deputy.

## “Regional” hypothesis

### (with the effective number of candidates) (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	-5.470e+01	5.138e+01	-1.065	0.2904
Distance from the federal center	2.489e-04	1.011e-04	2.462	0.0161
Regional ethnic composition (Russian)	-3.033e+00	1.511e+00	-2.007	0.0483
Effective number of candidates in 2012 elections	5.845e+01	5.136e+01	1.138	0.2586
Status	-1.549e+00	7.610e-01	-2.036	0.0452
Transfers share in regional revenues	-1.417e+00	1.110e+00	-1.276	0.2057

Number of cases: 83

Multiple R-squared: 0.1485; Adjusted R-squared: 0.09321; p-value: 0.02728

# Incongruous bills' share.

## “Parliamentary” hypothesis (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	2.017e-02	2.804e-02	0.719	0.47406
Size of the parliament (number of deputies)	4.567e-04	2.402e-04	1.901	0.06100
Committee number per deputy	1.377e-01	4.343e-02	3.170	0.00219
Fractions' number	-8.275e-03	4.410e-03	-1.876	0.06441
Citizens' number per deputy	-1.922e-07	8.830e-08	-2.176	0.03259
Inspected bills' number per deputy	4.748e-04	2.500e-04	1.899	0.06129

Number of cases: 83

Multiple R-squared: 0.1952; Adjusted R-squared: 0.1429; p-value: 0.004432

# Incongruous bills' share.

## “Parliamentary” hypothesis (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	2.465e-02	2.474e-02	0.996	0.32222
Size of the parliament (number of deputies)	2.008e-04	2.104e-04	0.954	0.34298
Number of committees per deputy	1.330e-01	4.028e-02	3.303	0.00145
Fractions' number	-4.187e-03	3.862e-03	-1.084	0.28166
Citizens' number per deputy	-1.705e-07	7.958e-08	-2.142	0.03532
Inspected bills' number per deputy	2.111e-04	2.015e-04	1.047	0.29815

Number of cases: 83

Multiple R-squared: 0.1769; Adjusted R-squared: 0.1234; p-value: 0.009265



# Total number of incongruous bills per deputy. “Parliamentary” hypothesis (2011)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	-1.402e+00	9.864e-01	-1.421	0.15924
Size of the parliament (number of deputies)	1.500e-02	8.450e-03	1.775	0.07986
Committee number per deputy	7.826e+00	1.528e+00	5.123	2.17e-06
Fractions' number	-1.808e-01	1.551e-01	-1.166	0.24741
Citizens' number per deputy	-1.015e-05	3.106e-06	-3.267	0.00162
Inspected bills' number per deputy	5.709e-02	8.795e-03	6.492	7.50e-09

Number of cases: 83

Multiple R-squared: 0.557; Adjusted R-squared: 0.5282; p-value: 1.97e-12

# Total number of incongruous bills per deputy. “Parliamentary” hypothesis (2012)

Variables	Estimate	Std. Error	t value	Pr (> t )
(Intercept)	-2.239e+00	1.066e+00	-2.100	0.03898
Size of the parliament (number of deputies)	1.477e-02	9.008e-03	1.639	0.10525
Number of committees per deputy	1.000e+01	1.694e+00	5.905	9.00e-08
Fractions' number	-7.015e-02	1.680e-01	-0.417	0.67748
Citizens' number per deputy	-1.173e-05	3.459e-06	-3.390	0.00111
Inspected bills' number per deputy	5.885e-02	8.761e-03	6.717	2.84e-09

Number of cases: 83

Multiple R-squared: 0.5992; Adjusted R-squared: 0.5731; p-value: 4.643e-14

# Correlation between total number of bills per deputy and total number of wrong bills per deputy

<b>2011</b>		
	Total number of bills per deputy	p-value
Total number of incongruous bills per deputy	0.615	6.185e-10
<b>2012</b>		
	Total number of bills per deputy	p-value
Total number of incongruous bills per deputy	0.633	1.368e-10