

Firm Performance, Political Influence and External Shocks

Vladimir Sokolov (ICEF, HSE, Moscow) and Laura Solanko (Bank of Finland, Helsinki)

5th Moscow Finance Conference, November 2015



BOFIT

THE BANK OF FINLAND
INSTITUTE FOR ECONOMIES
IN TRANSITION

Motivation

- Political influence can have significant impact on firm performance and financing decisions
 - Even in a low-corruption environment local political connections boost returns of firms (Amore and Bennedsen, JFE 2013; Do et al. 2013)
- Difference in the regional institutional development creates different environments for politicians and firms to gain benefits from the established political connections
- Event study: How does the break up of the political connections affects firm performance in the long run

Literature review

- **Cross-country studies.** Faccio (AER, 2006); Faccio (FM, 2010); Boubakri et al. (JCF, 2012)
- **China studies.** Fan et al. (JFE, 2007); Li et al. (JDE, 2008); Chen et al. (JCF, 2011); Megginson et al. (JBF, 2014); Cull et al. (JCF, 2015)
- **Country studies.** Charumiling et al. (JofB, 2006); Claessens et al. (JFE, 2008); Bunkwanwanicha and Wiwattanakantang (RFS, 2009); Amore and Bennedsen (JFE, 2013); Do et al. 2013; Goldman et al. (RofF, 2013)

What we do

- Using the survey data of Russian *manufacturing* firms we identify the direct proxy of firm's regional political influence at the regional level
- Using the administrative reform that took place after the survey we identify the break-ups of the previously established political connections
- Focusing on mid-sized *manufacturing* firms instead of large listed firms allows us to exploit the wide cross-regional institutional variation of the surveyed firms locations
- We study how previously established political connections are related to firms' liquidations following the 2008 financial crisis

HSE-BOFIT Survey data

- Based on a firm survey among large and medium sized Russian manufacturing enterprises conducted in spring 2003 (See Haaparanta et al. 2003)
- Face-to-face interviews with the top management
- The sample frame was industrial enterprises employing over 400 employees in 2000 in 63 Russian regions
- A random sample of 39 regions, within every region sampling by size
- Mean size 1650 employees, med 800
- Industrial distribution close to the whole population

Political influence variable

- How to measure a firm's political influence?
 - Usually proxied by state ownership or by board members with political links
 - We are able to use a unique direct question from the survey:

"To what degree does your company influence the process of creating and approval of the regional-level laws and decrees?" (no influence, some influence, major influence)

Survey evidence on firms' political *influence* at the regional level

Firms' survey responses	N. of firms
Company has absolutely no influence	246
Company has minor influence	108
Company has major influence	31
No response	19

Distribution of *influential* firms across industries

	Industry codes at 2-digit (ISIC Rev. 3)	Industries description	Number of influential firms	Total number of firms	% of influential firms
1	2, 5, 10, 11, 14	Forestry, fishing, mining, quarrying	6	21	0.285714
2	15, 16	Manufacture of food and tobacco	17	54	0.314815
3	17, 18, 19	Manufacture of textiles, apparel, leather	10	37	0.27027
4	20, 21, 22	Manufacture of wood, paper, publishing	6	22	0.272727
5	23, 23, 25	Manufacture of coke, petroleum, chemicals, rubber plastics	14	30	0.466667
6	26	Manufacture of non-metallic mineral products	12	36	0.333333
7	27, 28	Manufacture of basic and fabricated metals	14	33	0.424242
8	29	Manufacture of machinery and equipment	19	47	0.404255
9	30, 31, 32, 33	Manufacture of machinery: office, electrical, radio, medical	17	37	0.459459
10	34, 35	Manufacture of moto-vehicles and other transport	10	26	0.384615
11	36, 37	Other manufacturing	6	13	0.461538
12	40 – 91	Electricity, construction, transportation, hotels	6	27	0.222222
Tot.			137	383	0.357702

Regional governor's replacements

- In 2004 Russia underwent a sudden change in federal law, which suspended direct elections of regional governors and gave the president the authority to appoint all governors in the country
- We traced all new governor's appointments by the federal center in 2004-2008 period
- We combine the survey firm-level data with data on the respective regions where firms are located and construct two new variables that measure firms political influence:

$$Influence_{it} = Survey\ influence_i \times Governor\ original_{it}$$

$$Influence\ lost_{it} = Survey\ influence_i \times Governor\ replaced_{it}$$

Regional institutional data

- Carnegie Endowment for International Peace constructs the democracy index for the Russian regions. It has been used by Bruno et al. (RofES, 2013)
- The Carnegie democracy index uses experts' opinions for each Russian region on a number of indicators such as openness, political pluralism, media independence, freedom of elections, market freedom and others.
- We use the composite index and one of its components:
 - Composite democracy index
 - Market freedom sub-index

Descriptive statistics (region level)

Panel A: Descriptive statistics

	N	Mean	Sd. Dev.	Min	p50	Max
% Influential firms per region	39	0.367	0.224	0	0.333	0.875
Carnegie regional democracy index	39	31.256	5.977	20	30	46
Carnegie regional market freedom sub-index	39	3.308	0.694	2	3	5
New government appointed in 2003-2007	39	0.308	0.468	0	0	1

Panel B. Correlation coefficients

	% Influent. firms	Carnegie democracy	Carnegie market freedom
Carnegie regional democracy index	-0.214		
Carnegie regional market freedom sub-index	-0.277	0.773	
New government appointed in 2003-2007	-0.009	0.244	0.349

Registry data

- We are able to merge the survey responses with firm registry data from Ruslana/Spark database for 2003-2008 period
- We use standard financial variables such as:
 - Return on assets (ROA)
 - Cash-to-assets=Cash/Total net assets
 - Leverage=Total debt /Total net assets
- We also identify firms that we liquidated before and after the 2008 crisis

Descriptive statistics (firm level)

The sample comprises 1888 firm-year observations from 39 regions over the period 2003-2008.

	N	Mean	St. Dev.	Min	p25	p50	p75	Max
Influence	1888	0.325	0.468	0	0	0	1	1
Influence lost	1888	0.043	0.203	0	0	0	0	1
State owned	1888	0.073	0.260	0	0	0	0	1
No credit needed	1888	0.09	0.286	0	0	0	0	1
Credit for investment	1888	0.299	0.458	0	0	0	1	1
ROA	1886	10.351	21.53	-44.64	.01	9.47	21.06	69.11
Cash-to-assets	1888	0.028	0.054	0.000	0.002	0.008	0.028	0.329
Debt-to-assets	1888	0.237	0.279	0	0.15	0.147	0.366	1
Net asset (mln. RUB)	1888	1269.1	3806.9	15.89	124.3	286.4	749.6	29074.8
NWC	1876	-0.032	0.6	-3.14	-0.11	0.10	0.26	0.70
Revenue growth	1858	0.042	0.635	-11.07	-0.026	0.117	0.249	8.203

Univariate tests by political influence

	Means		Diff. test t-test	Medians		Diff. test Wilcoxon z-test
	Influential (137 firms)	Non-influent. (246 firms)		Influential (137 firms)	Non-influent. (246 firms)	
ROA	13.27	8.43	-4.712***	11.2	8.1	-4.077***
Cash-to-assets	0.029	0.027	-0.745	0.01	0.01	-0.753
Leverage	0.222	0.245	1.753*	0.15	0.15	0.483
Liquidated 2009-10 (0/1)	0.102	0.057	-1.633*	0	0	0
Net assets	1973	859	-6.197***	382	229	-9.338***
NWC	0.030	-0.06	-3.466***	0.12	0.09	-2.053**
Revenue growth	0.043	0.041	-0.057	0.12	0.11	-0.7
State (0/1)	0.117	0.098	-1.444	0	0	0
No credit needed (0/1)	0.073	0.089	1.365	0	0	0
Credit for invest. (0/1)	0.107	0.107	0.111	0	0	0

Political influence at the regional level and firm performance

Dependent variable:	ROA	Cash	Leverage
Influence	7.586*** (3.904)	0.007 (1.373)	-0.002 (-0.081)
Influence lost	4.289 (0.932)	0.016** (2.180)	-0.020 (-0.316)
Year effect	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes
Region effect	Yes	Yes	Yes
Adj. R2	0.26	0.16	0.19
N	1886	1887	1896

Political influence at the regional level and firm performance

Dependent variable:	ROA	Cash	Leverage	ROA	Cash	Leverage
Influence	7.586*** (3.904)	0.007 (1.373)	-0.002 (-0.081)	4.958*** (2.854)	0.009* (1.964)	-0.003 (-0.127)
Influence lost	4.289 (0.932)	0.016** (2.180)	-0.020 (-0.316)	2.127 (0.566)	0.015** (2.224)	-0.032 (-0.636)
State owned				-3.718 (-1.227)	0.018* (1.893)	-0.098** (-2.458)
Log net assets				2.566*** (3.600)	-0.007*** (-3.490)	0.063*** (6.151)
Leverage				-10.75*** (-3.758)	-0.025*** (-3.292)	
ROA						-0.002*** (-4.661)
Net working capital				13.23*** (6.647)	0.001 (0.174)	-0.198*** (-5.055)
Revenue growth				3.471** (2.501)	0.007*** (3.218)	0.011 (0.800)
No credit needed				3.344 (1.068)	0.030** (2.570)	-0.073** (-2.295)
Credit for investment				2.610 (1.542)	-0.008** (-2.300)	0.062*** (2.888)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
Region effect	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.26	0.16	0.19	0.40	0.25	0.38
N	1886	1887	1896	1847	1849	1849

Political influence at the regional level and firm performance

Dependent variable:	ROA	Cash	Leverage	ROA	Cash	Leverage
Influence	7.586*** (3.904)	0.007 (1.373)	-0.002 (-0.081)	4.958*** (2.854)	0.009* (1.964)	-0.003 (-0.127)
Influence lost	4.289 (0.932)	0.016** (2.180)	-0.020 (-0.316)	2.127 (0.566)	0.015** (2.224)	-0.032 (-0.636)
State owned				-3.718 (-1.227)	0.018* (1.893)	-0.098** (-2.458)
Log net assets				2.566*** (3.600)	-0.007*** (-3.490)	0.063*** (6.151)
Leverage				-10.75*** (-3.758)	-0.025*** (-3.292)	
ROA						-0.002*** (-4.661)
Net working capital				13.23*** (6.647)	0.001 (0.174)	-0.198*** (-5.055)
Revenue growth				3.471** (2.501)	0.007*** (3.218)	0.011 (0.800)
No credit needed				3.344 (1.068)	0.030** (2.570)	-0.073** (-2.295)
Credit for investment				2.610 (1.542)	-0.008** (-2.300)	0.062*** (2.888)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
Region effect	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.26	0.16	0.19	0.40	0.25	0.38
N	1886	1887	1896	1847	1849	1849

Political influence, quality of regional institutions and firms' performance

Dependent variable:	ROA	Cash	Leverage
	Regional democratic development		
Influence	12.18*** (3.981)	0.027*** (2.806)	0.003 (0.070)
Influence*Regional institutions	-11.21*** (-3.048)	-0.027** (-2.483)	-0.009 (-0.193)
Influence lost	0.393 (0.088)	0.027** (2.247)	-0.057 (-1.215)
Influence lost*Regional institutions	2.681 (0.415)	-0.016 (-1.080)	0.035 (0.456)
State owned	-4.288 (-1.433)	0.017* (1.805)	-0.099** (-2.455)
Firm level controls	Yes	Yes	Yes
Year effect	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes
Region effect	Yes	Yes	Yes
Adj. R2	0.40	0.26	0.38
N	1847	1849	1849

Political influence, quality of regional institutions and firms' performance

Dependent variable:	ROA	Cash	Leverage
	Regional democratic development		
Influence	12.18*** (3.981)	0.027*** (2.806)	0.003 (0.070)
Influence*Regional institutions	-11.21*** (-3.048)	-0.027** (-2.483)	-0.009 (-0.193)
Influence lost	0.393 (0.088)	0.027** (2.247)	-0.057 (-1.215)
Influence lost*Regional institutions	2.681 (0.415)	-0.016 (-1.080)	0.035 (0.456)
State owned	-4.288 (-1.433)	0.017* (1.805)	-0.099** (-2.455)
Firm level controls	Yes	Yes	Yes
Year effect	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes
Region effect	Yes	Yes	Yes
Adj. R2	0.40	0.26	0.38
N	1847	1849	1849

Political influence, quality of regional institutions and firms' performance

Dependent variable:	ROA	Cash	Leverage
	Regional democratic development		
Influence	12.18*** (3.981)	0.027*** (2.806)	0.003 (0.070)
Influence*Regional institutions	-11.21*** (-3.048)	-0.027** (-2.483)	-0.009 (-0.193)
Influence lost	0.393 (0.088)	0.027** (2.247)	-0.057 (-1.215)
Influence lost*Regional institutions	2.681 (0.415)	-0.016 (-1.080)	0.035 (0.456)
State owned	-4.288 (-1.433)	0.017* (1.805)	-0.099** (-2.455)
Firm level controls	Yes	Yes	Yes
Year effect	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes
Region effect	Yes	Yes	Yes
Adj. R2	0.40	0.26	0.38
N	1847	1849	1849

Political influence, quality of regional institutions and firms' performance

Dependent variable:	ROA	Cash	Leverage	ROA	Cash	Leverage
	Regional democratic development			Regional market freedom		
Influence	12.18*** (3.981)	0.027*** (2.806)	0.003 (0.070)	9.577*** (3.821)	0.020*** (2.753)	0.018 (0.585)
Influence*Regional institutions	-11.21*** (-3.048)	-0.027** (-2.483)	-0.009 (-0.193)	-9.131*** (-2.652)	-0.020** (-2.129)	-0.040 (-0.886)
Influence lost	0.393 (0.088)	0.027** (2.247)	-0.057 (-1.215)	2.928 (0.656)	0.027*** (2.713)	-0.002 (-0.032)
Influence lost*Regional institutions	2.681 (0.415)	-0.016 (-1.080)	0.035 (0.456)	-1.556 (-0.216)	-0.023 (-1.627)	-0.057 (-0.638)
State owned	-4.288 (-1.433)	0.017* (1.805)	-0.099** (-2.455)	-4.193 (-1.447)	0.017* (1.820)	-0.100** (-2.518)
Firm level controls	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
Region effect	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.40	0.26	0.38	0.40	0.26	0.38
N	1847	1849	1849	1847	1849	1849

Political influence, quality of regional institutions and firms' performance

Dependent variable:	ROA	Cash	Leverage	ROA	Cash	Leverage
	Regional democratic development			Regional market freedom		
Influence	12.18*** (3.981)	0.027*** (2.806)	0.003 (0.070)	9.577*** (3.821)	0.020*** (2.753)	0.018 (0.585)
Influence*Regional institutions	-11.21*** (-3.048)	-0.027** (-2.483)	-0.009 (-0.193)	-9.131*** (-2.652)	-0.020** (-2.129)	-0.040 (-0.886)
Influence lost	0.393 (0.088)	0.027** (2.247)	-0.057 (-1.215)	2.928 (0.656)	0.027*** (2.713)	-0.002 (-0.032)
Influence lost*Regional institutions	2.681 (0.415)	-0.016 (-1.080)	0.035 (0.456)	-1.556 (-0.216)	-0.023 (-1.627)	-0.057 (-0.638)
State owned	-4.288 (-1.433)	0.017* (1.805)	-0.099** (-2.455)	-4.193 (-1.447)	0.017* (1.820)	-0.100** (-2.518)
Firm level controls	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
Region effect	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.40	0.26	0.38	0.40	0.26	0.38
N	1847	1849	1849	1847	1849	1849

Political influence, quality of regional institutions and firms' performance

Dependent variable:	ROA	Cash	Leverage	ROA	Cash	Leverage
	Regional democratic development			Regional market freedom		
Influence	12.18*** (3.981)	0.027*** (2.806)	0.003 (0.070)	9.577*** (3.821)	0.020*** (2.753)	0.018 (0.585)
Influence*Regional institutions	-11.21*** (-3.048)	-0.027** (-2.483)	-0.009 (-0.193)	-9.131*** (-2.652)	-0.020** (-2.129)	-0.040 (-0.886)
Influence lost	0.393 (0.088)	0.027** (2.247)	-0.057 (-1.215)	2.928 (0.656)	0.027*** (2.713)	-0.002 (-0.032)
Influence lost*Regional institutions	2.681 (0.415)	-0.016 (-1.080)	0.035 (0.456)	-1.556 (-0.216)	-0.023 (-1.627)	-0.057 (-0.638)
State owned	-4.288 (-1.433)	0.017* (1.805)	-0.099** (-2.455)	-4.193 (-1.447)	0.017* (1.820)	-0.100** (-2.518)
Firm level controls	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
Region effect	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2	0.40	0.26	0.38	0.40	0.26	0.38
N	1847	1849	1849	1847	1849	1849

Political influence and Pre-crisis liquidation of firms

Logit marginal effects

Dependent variable:	Liquidated 2004-08=1	Liquidated 2004-08=1	Liquidated 2004-08=1	Liquidated 2004-08=1
Influence	-0.010 (-0.970)	-0.009 (-0.713)	-0.012 (-1.485)	-0.012 (-0.706)
Influence lost	-0.002 (-0.145)	-0.005 (-0.402)	-0.006 (-0.540)	-0.007 (-0.516)
Log assets 2003-04	-0.011** (-1.992)	-0.010 (-0.855)	-0.011* (-1.849)	-0.010 (-0.736)
ROA 2003-04	-0.001** (-1.994)	-0.001** (-2.545)	-0.001* (-1.721)	-0.001* (-1.931)
Cash 2003-04	-0.002 (-0.775)	-0.001 (-0.409)	-0.002 (-0.756)	-0.001 (-0.376)
Leverage 2003-04	0.007 (0.567)	0.008 (0.513)	0.009 (0.868)	0.010 (0.532)
Industry effect	No	Yes	No	Yes
Region effect	No	No	Yes	Yes
Pseudo R ²	0.38	0.44	0.42	0.46
N	351	254	301	216

Political influence and Pre-crisis liquidation of firms

Logit marginal effects

Dependent variable:	Liquidated 2004-08=1	Liquidated 2004-08=1	Liquidated 2004-08=1	Liquidated 2004-08=1
Influence	-0.010 (-0.970)	-0.009 (-0.713)	-0.012 (-1.485)	-0.012 (-0.706)
Influence lost	-0.002 (-0.145)	-0.005 (-0.402)	-0.006 (-0.540)	-0.007 (-0.516)
Log assets 2003-04	-0.011** (-1.992)	-0.010 (-0.855)	-0.011* (-1.849)	-0.010 (-0.736)
ROA 2003-04	-0.001** (-1.994)	-0.001** (-2.545)	-0.001* (-1.721)	-0.001* (-1.931)
Cash 2003-04	-0.002 (-0.775)	-0.001 (-0.409)	-0.002 (-0.756)	-0.001 (-0.376)
Leverage 2003-04	0.007 (0.567)	0.008 (0.513)	0.009 (0.868)	0.010 (0.532)
Industry effect	No	Yes	No	Yes
Region effect	No	No	Yes	Yes
Pseudo R ²	0.38	0.44	0.42	0.46
N	351	254	301	216

Political influence and Post-crisis liquidation of firms

Logit marginal effects

Dependent variable:	Liquidated 2009-10=1	Liquidated 2009-10=1	Liquidated 2009-10=1	Liquidated 2009-10=1
Influence	0.033 (1.111)	0.046* (1.785)	0.039 (1.327)	0.036* (1.753)
Influence lost	0.078** (2.357)	0.076** (2.510)	0.082** (2.197)	0.074** (2.362)
Log assets 2003-04	-0.017* (-1.734)	-0.018** (-2.106)	-0.018** (-1.977)	-0.016** (-2.113)
ROA 2003-04	-0.002** (-2.215)	-0.001* (-1.817)	-0.002** (-2.109)	-0.001** (-1.964)
Cash 2003-04	0.007* (1.777)	0.002 (0.597)	0.004 (1.267)	0.000 (0.079)
Leverage 2003-04	0.041 (0.904)	0.091 (1.578)	0.054 (1.223)	0.093* (1.718)
Industry effect	No	Yes	No	Yes
Region effect	No	No	Yes	Yes
Pseudo R ²	0.08	0.18	0.14	0.28
N	331	291	302	264

Political influence and Post-crisis liquidation of firms

Logit marginal effects

Dependent variable:	Liquidated 2009-10=1	Liquidated 2009-10=1	Liquidated 2009-10=1	Liquidated 2009-10=1
Influence	0.033 (1.111)	0.046* (1.785)	0.039 (1.327)	0.036* (1.753)
Influence lost	0.078** (2.357)	0.076** (2.510)	0.082** (2.197)	0.074** (2.362)
Log assets 2003-04	-0.017* (-1.734)	-0.018** (-2.106)	-0.018** (-1.977)	-0.016** (-2.113)
ROA 2003-04	-0.002** (-2.215)	-0.001* (-1.817)	-0.002** (-2.109)	-0.001** (-1.964)
Cash 2003-04	0.007* (1.777)	0.002 (0.597)	0.004 (1.267)	0.000 (0.079)
Leverage 2003-04	0.041 (0.904)	0.091 (1.578)	0.054 (1.223)	0.093* (1.718)
Industry effect	No	Yes	No	Yes
Region effect	No	No	Yes	Yes
Pseudo R ²	0.08	0.18	0.14	0.28
N	331	291	302	264

Conclusions

- Political influence at the regional level positively affects firms' profitability
- Firms that enjoyed regional political influence but lost it due to regional governors replacement hoard more cash relative to non-influential firms
- Political influence and access to finance are not significantly related

Conclusions

- The higher the level of the regional institutional development the lower is the impact of political influence on firms' accounting performance
- Break-up of the political connections and loss of influence has a significantly negative impact on the probability of firm's survival during the financial crisis