

The Oligarch Vanishes: Defensive Ownership, Property Rights, and Political Connections

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Property-rights protection

- ▶ **Protection of property rights** (from arbitrary/illegal seizure by state/private actors) widely understood as a necessary condition for investment and growth (North, 1981; Olson, 1993; Acemoglu and Johnson, 2005)

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- ▶ **Protection of property rights** (from arbitrary/illegal seizure by state/private actors) widely understood as a necessary condition for investment and growth (North, 1981; Olson, 1993; Acemoglu and Johnson, 2005)
- ▶ Traditional understanding: state provides such protection as a **public good** (Bueno de Mesquita and Root, 2000; North, Wallis and Weingast, 2009)

Property-rights protection

- ▶ Lesson from postcommunist, other environments: firm owners can take **private actions** to protect property from competitors and state
 - Form alliances with politicians (Shleifer, 1997; Markus and Charnysh, 2017) and stakeholders (Markus, 2015)
 - Seek political office (Gehlbach, Sonin and Zhuravskaya, 2010; Szakonyi, 2018)
 - Build financial relationships with foreign firms (Betz and Pond, 2019)
 - Form links with other local firms (Johns and Wellhausen, 2016)
 - Accept protection of mob and other “violent entrepreneurs” (Frye and Zhuravskaya, 2000; Volkov, 2002)
 - Reduce accounting transparency (Durnev and Guriev, 2011)
 - Perform “good works” to increase perceived legitimacy of property rights (Frye, 2006, 2017)

Property-rights protection

- ▶ Implicit assumption: property held transparently or directly
- ▶ But: frontmen and related individuals, shell companies, offshores (“defensive ownership”)
 - Create obscure legal target
 - Transfer profits and liquid assets out of reach of state authorities / hostile raiders
 - Exploit protection of foreign jurisdictions
- ▶ Effective even if ultimate owner common knowledge, foreign investment “round trip”

Defensive ownership



Rinat Akhmetov (System
Capital Management)

▶ Before 2004

- Relative transparency, short ownership chains ending in Akhmetov himself
- Quintessential “Blue” oligarch, chief sponsor of Viktor Yanukovich

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- ▶ Orange Revolution (2004)
 - **Viktor #1:** Yanukovych
 - **Viktor #2:** Yushchenko (ultimately, unexpectedly, the victor)
- ▶ After 2004
 - Criminal investigation, threats of “reprivatization”
 - SCM restructured to obscure ownership behind offshore firms, increase difficulty of seizing assets

Defensive ownership



Petro Poroshenko
(UkrPromInvest)

- ▶ “Chocolate king” (later president) of Ukraine
- ▶ Complicated ownership chains, lots of offshores
- ▶ “Orange” oligarch: supported Viktor Yushchenko during 2004 presidential campaign
- ▶ Little change in ownership structure after Orange Revolution (though Panama Papers...)

Defensive ownership and political connections

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- ▶ Ex ante ambiguous relationship between **defensive ownership and political connections**: depends on substitutability, complementarity of defensive ownership and connections
[formal argument]

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 - identify and characterize **ownership chains** of > 300 key enterprises
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 - compare ownership patterns of **oligarchs more (“Blue”) or less (“Orange”) connected** to incumbent regime in 2004
 - examine **changes** in ownership patterns after unexpected political turnover of **Orange Revolution**
- ▶ We find:
 - **Orange** oligarchs more likely to engage in defensive ownership **before** Orange Revolution
 - **Blue** oligarchs increase defensive ownership (esp. offshore entities) **after** Orange Revolution

Contributions

- ▶ **Political connections** (e.g., Fisman, 2001; Faccio, 2006)
 - Oligarchs in postcommunist countries (Earle and Gehlbach, 2015; Treisman, 2016; Lamberova and Sonin, 2018; Guriev and Rachinsky, 2005; Gorodnichenko and Grygorenko, 2008)
 - This paper: ownership chains before/after political shock, relationship between defensive ownership and connections

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 - This paper: ownership chains before/after political shock, relationship between defensive ownership and connections
- ▶ **Economics of property rights**
 - Incentives within firms (Coase, 1937; Williamson, 1985; Grossman and Hart, 1986; Hart and Moore, 1990), bargaining between firms and state (Shleifer and Vishny, 1994)
 - Little work on *how* rights are held (pyramids: La Porta, Lopez-de Silanes and Shleifer, 1999)

Contributions

▶ Political economy of FDI

- Foreign investment as protection for domestic firms (e.g., Chernykh, 2011): “backdoor lobbyists” (Markus, 2015), international investment agreements (Betz and Pond, 2019)
- Our setting: “foreign” owners may be shell companies controlled by domestic oligarch

▶ Hidden wealth

- Journalistic accounts (e.g., Obermayer and Obermaier, 2016)
- Academic work: anonymous shell companies (Findley, Nielson and Sharman, 2014), banks (Chernykh and Mityakov, 2017), petroleum rents and hidden wealth (Andersen et al., 2017), inequality (e.g., Zucman, 2015; Novokmet, Piketty and Zucman, 2018), foreign aid (Andersen, Johannesen, and Rijkers, 2020)
- Common story: tax evasion (e.g., Zucman, 2014)
- Our work: *arbitrary* taxation \implies role for political connections

Identifying ownership chains

Lists of **oligarch-controlled firms circa 2004** (just prior to Orange Revolution)

- ▶ Delo (*InvestGazeta*): annual lists of oligarch holdings



- ▶ *Ukrains'ka Pravda*: “Who Owns What in Ukraine”
- ▶ Together, 442 firms from 34 oligarch groups (376/29 [with ownership data](#), 329(299)/26 with various covariates)

Identifying ownership chains

Data sources on **firm ownership**

- ▶ Joint Stock Company Registry (JSCReg)
 - Owners with $\geq 10\%$ stake
 - Individual owners not identified
 - Essentially voluntary reporting, so data missing for some JSCs
 - Restrict to owners as of April 2004 (November 2006)
- ▶ Single Registry (SReg)
 - Records of “all” ownership changes
 - Many obvious errors and omissions
 - Ownership structure difficult to infer
 - Restrict to owners from January 1999 through April 2004 (November 2006)

Identifying ownership chains

Basic algorithm: beginning with Delo/*Ukrains'ka Pravda* firms, and then again for any subsequently identified Ukrainian corporate owners,

1. Ukrainian firm?

Yes Go to (2)

No Stop

2. Present in JSCReg?

Yes Extract corporate owners, go to (3)

No Extract corporate and individual owners from SReg, go to (4)

3. Individual owners in JSCReg?

Yes Extract individual owners from SReg, go to (4)

No Go to (4)

4. Owner identified in (2) or (3) state agency, charity, etc.?

Yes Remove owner

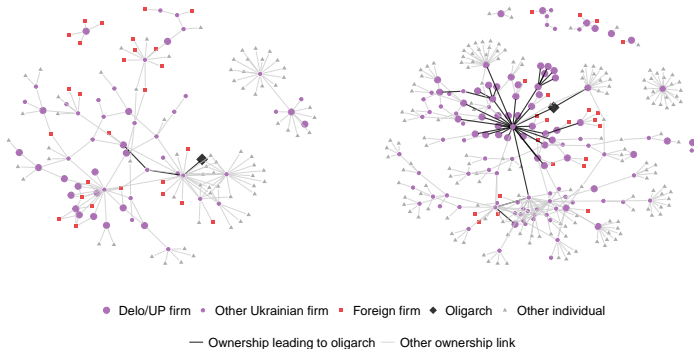
No Stop

Identifying ownership chains

Result of algorithm: ownership chains for **376 firms**, comprising

- ▶ 937 Ukrainian firms (including “root” firms)
- ▶ 350 foreign firms
- ▶ 1107 Ukrainian individuals (including oligarchs, their relatives, and known associates)
- ▶ 20 foreign individuals

Identifying ownership chains



Ownership networks in 2004 for UkrPromInvest (Petro Poroshenko) and System Capital Management (Rinat Akhmetov), respectively.

Characterizing ownership chains

	Share	Number
No oligarch in chain	0.708	233
Oligarch in chain	0.292	96
Oligarch in chain, 1 step	0.040	13
Oligarch in chain, ≤ 2 steps	0.173	57
Oligarch in chain, ≤ 3 steps	0.274	90
Oligarch in chain, ≤ 4 steps	0.289	95
Foreign in chain	0.629	188
Offshore in chain	0.421	126

Notes: Shares based on regression sample of 329 and 299 firms, respectively. Distance to oligarch ($1 - 1/\text{steps}$): mean 0.855, standard deviation 0.254.

[\[Foreign/offshore by country\]](#) [\[Missing ownership data\]](#)

Political connections

- ▶ **Orange (97 firms):** Aval, Brinkford (David Zhvania), Finansy i Kredyt (Kostyantyn Zhevago), Orlan, Pryvat (Ihor Kolomoyskyy), Oleksandr Tretiakov, UkrPromInvest (Petro Poroshenko)
- ▶ **Blue (165 firms):** Andriy Derkach, Energo (Victor Nusenkis), Anatoliy and Igor Franchuk, Interpipe (Viktor Pinchuk), Vasyl Khmelnytskyi, Andriy and Serhiy Kliuev, Kyiv Seven, "Old Donetsk," Radon, System Capital Management (Rinat Akhmetov), Dmytro Tabachnyk, TAS (Serhiy Tihipko), Ukrinterproduct (Oleksandr Leshchynskyi)
- ▶ **Gray (67 firms):** Basis, Oleksandr Feldman, Intercontact, ISD (Serhiy Taruta), UkrSotsBank (Valeriy Khoroshkovskyy), UkrSybBank (Oleksandr Yaroslavsky)

Empirical strategy

Defensive ownership = f (Political connections)

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Identification (measurement error [faulty recall, mixing], joint determination of defensive ownership and political connections)

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1. Sector fixed effects, controls for employment, TFP, privatized (Frye, 2006; Denisova et al., 2009; Frye, 2017)
2. Instrument political connections (**Orange** (not **Gray**), **Color** $\in \{0, 1, 2\}$) on oblast-level **vote for Yushchenko** in 2004 (regional concentration of oligarch groups and political parties; composition effects, selection of governors)
3. Compare change in defensive ownership among Blue and Orange firms after 2004 (unanticipated turnover, frictions in establishing and breaking connections; identifying ownership changes in SReg \implies foreign/offshore only)

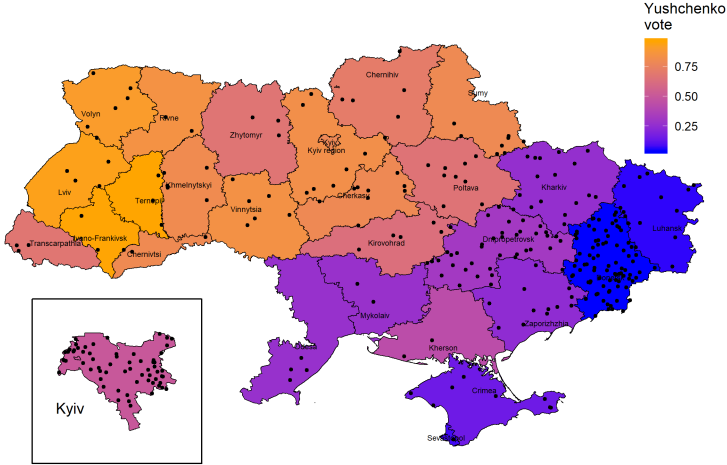
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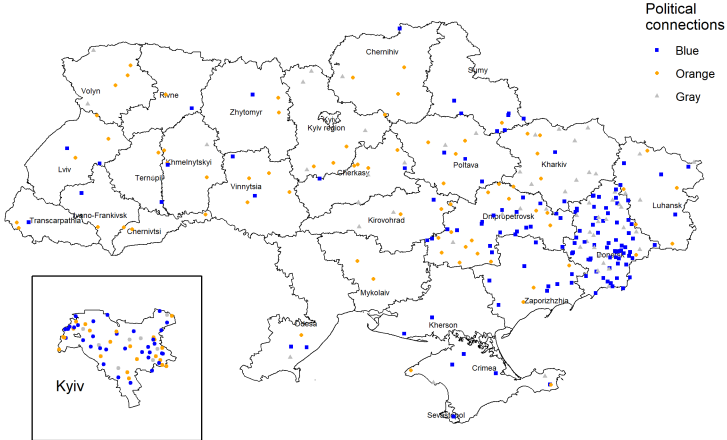
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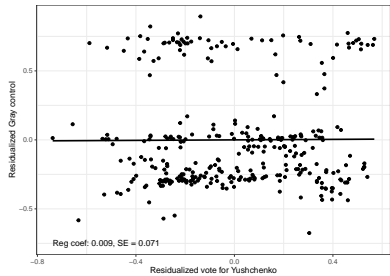
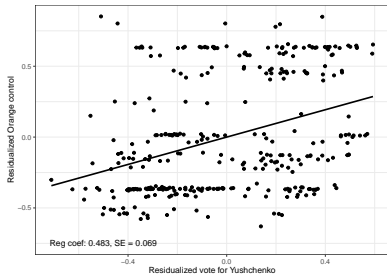
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Empirical strategy

[It is] difficult to move from one cart to another. . . Ukrainians are zero-sum players. They remember who helped you in the past.

Empirical strategy

On a **two-period panel**,

$$\begin{aligned} O_{it} = & \beta_1 ORANGE_i + \beta_{11} ORANGE_i \cdot t + \beta_2 GRAY_i + \beta_{21} GRAY_i \cdot t \\ & + \beta_3 SIZE_i + \beta_{31} SIZE_i \cdot t + \beta_4 TFP_i + \beta_{41} TFP_i \cdot t \\ & + \beta_5 PRIVATIZED_i + \beta_{51} PRIVATIZED_i \cdot t \\ & + SECTOR_i \gamma + SECTOR_i \gamma_1 \cdot t + \alpha_i + u_{it}, \end{aligned}$$

where i indexes firms; $t \in \{0, 1\}$ indexes periods, with all variables measured at $t = 0$; and O_{it} is a measure of defensive ownership.

Differencing the equation for $t = 0$ from that for $t = 1$ gives

$$\begin{aligned} \Delta O_i = & \beta_{11} ORANGE_i + \beta_{21} GRAY_i + \beta_{31} SIZE_i + \beta_{41} TFP_i + \\ & \beta_{51} PRIVATIZED_i + SECTOR_i \gamma_1 + \epsilon_i, \end{aligned}$$

where ΔO_i is change in defensive ownership from $t = 0$ to $t = 1$ and $\epsilon_i \equiv u_{i1} - u_{i0}$.

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Political connections and defensive ownership

	(1)	(2)	(3)	(4)
	No oligarch in chain OLS	IV	Distance to oligarch OLS	IV
Orange	0.290 (0.095)	0.534 (0.247)	0.134 (0.054)	0.202 (0.116)
Gray	0.170 (0.129)	0.263 (0.137)	0.095 (0.060)	0.121 (0.065)
Sector FEs	Yes	Yes	Yes	Yes
Observations	329	329	329	329
First-stage F -stat		10.09		10.09
Vote for Yushchenko (reduced form)		0.258 (0.109)		0.098 (0.056)

Notes: Linear regressions. Controls: employment, TFP, privatized. In parentheses, heteroskedasticity-robust standard errors that correct for clustering at oligarch level. [\[first-stage results\]](#)

Political connections and defensive ownership

	(5)	(6)	(7)	(8)
	Foreign in chain OLS	Foreign in chain IV	Offshore in chain OLS	Offshore in chain IV
Orange	0.130 (0.137)	0.519 (0.315)	0.168 (0.125)	0.319 (0.310)
Gray	-0.191 (0.138)	-0.044 (0.153)	-0.243 (0.104)	-0.186 (0.160)
Sector FEs	Yes	Yes	Yes	Yes
Observations	299	299	299	299
First-stage F -stat		9.11		9.11
Vote for Yushchenko (reduced form)		0.241 (0.144)		0.148 (0.151)

Notes: Linear regressions. Controls: employment, TFP, privatized. In parentheses, heteroskedasticity-robust standard errors that correct for clustering at oligarch level. [\[first-stage results\]](#)

Political connections and defensive ownership

Foreign/offshore ownership by “color,” 2004 and 2006

	Baseline		JSCReg only	
	2004	2006	2004	2006
Foreign	188	212	131	135
Blue	99	116	66	70
Orange	63	64	48	48
Gray	26	32	17	17
Offshore	126	172	76	102
Blue	65	95	35	55
Orange	50	49	36	35
Gray	11	28	5	12

Political connections and defensive ownership

	Baseline			
	DO → FO	DO → OFF	NOFF → OFF	FO → DO
All	0.333	0.279	0.500	0.069
Blue	0.444	0.352	0.529	0.071
Orange	0.190	0.143	0.308	0.048
Gray	0.250	0.250	0.600	0.115

	JSCReg only			
	DO → FO	DO → OFF	NOFF → OFF	FO → DO
All	0.296	0.255	0.436	0.191
Blue	0.412	0.353	0.484	0.258
Orange	0.222	0.167	0.250	0.083
Gray	0.138	0.138	0.500	0.235

Notes: Proportion of firms transitioning to/from:

- Domestic ownership only (DO)
- Foreign ownership (FO)
- Foreign but only non-offshore ownership (NOFF)
- Foreign offshore ownership (OFF).

Political connections and defensive ownership

Change in foreign/offshore owners, 2004 to 2006

	(1)	(2)	(3)	(4)
	Change in foreign		Change in offshore	
	Baseline	JSCReg only	Baseline	JSCReg only
Orange	-0.116 (0.089)	-0.050 (0.123)	-0.219 (0.062)	-0.198 (0.080)
Gray	-0.023 (0.098)	-0.035 (0.129)	0.084 (0.085)	-0.026 (0.098)
Employment	-0.005 (0.010)	-0.016 (0.011)	0.005 (0.017)	-0.008 (0.019)
TFP	-0.007 (0.009)	-0.013 (0.009)	0.008 (0.009)	0.010 (0.019)
Privatized	-0.020 (0.063)	-0.029 (0.089)	0.101 (0.059)	0.056 (0.074)
Sector FEs	Yes	Yes	Yes	Yes
Observations	299	229	299	229

Notes: Linear regressions. In parentheses, heteroskedasticity-robust standard errors that correct for clustering at oligarch level.

Political connections and defensive ownership

Change in foreign/offshore owners, 2002 to 2004 (placebo)

	(1)	(2)	(3)	(4)
	Change in foreign		Change in offshore	
	Baseline	JSCReg only	Baseline	JSCReg only
Orange	0.020 (0.140)	-0.042 (0.122)	0.136 (0.124)	0.025 (0.077)
Gray	0.042 (0.146)	0.003 (0.117)	0.032 (0.137)	-0.008 (0.062)
Employment	-0.017 (0.026)	0.003 (0.024)	-0.025 (0.025)	0.000 (0.028)
TFP	0.021 (0.016)	0.013 (0.030)	0.012 (0.017)	0.028 (0.034)
Privatized	-0.209 (0.116)	-0.019 (0.083)	-0.247 (0.130)	-0.068 (0.097)
Sector FEs	Yes	Yes	Yes	Yes
Observations	284	207	284	207

Notes: Linear regressions. Controls: employment, TFP, privatized. In parentheses, heteroskedasticity-robust standard errors that correct for clustering at oligarch level.

Summary

- ▶ Importance of **defensive ownership** as strategy to prevent predation in environment of poor protection of property rights
- ▶ Incentive to engage in defensive ownership depends on political connections of asset owners
 - **Orange** oligarchs more likely to engage in defensive ownership **before** Orange Revolution
 - **Blue** oligarchs increase defensive ownership (esp. offshore entities) **after** Orange Revolution
 - Similar patterns in much larger sample of **JSCs**
- ▶ Relationship to **theoretical framework**: political connections reduce threat of predation more than they reduce cost of defensive ownership

Discussion

- ▶ Different results in countries with **stronger property rights** and more **regular political turnover** (Koch brothers, Bezos, Bloomberg)?
- ▶ Why not collective action to **improve property rights** and save cost of defensive ownership (North and Weingast, 1989; North, 1990; Ansell and Samuels, 2014)? If anything, property rights *less* secure after Orange Revolution (Markus, 2016)
 - Difficult to influence design of institutions when regime change sudden (Albertus and Menaldo, 2018)
 - Benefits to rich of weak property rights (Sonin, 2003; Hoff and Stiglitz, 2004), with costs offset by strategies such as defensive ownership

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Theoretical framework

Relationship between political connections and defensive ownership?

- ▶ Probability of successful predation $P(\omega; \chi)$, cost of defensive ownership $C(\omega; \chi)$, where ω is level of defensive ownership and χ is strength of political connections
- ▶ Optimal ω equates marginal benefit and marginal cost of defensive ownership:

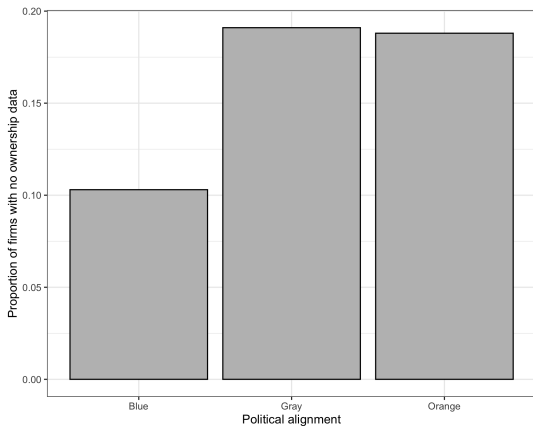
$$-P_{\omega}(\pi - C) = C_{\omega}(1 - P),$$

where π is baseline value of firm

- ▶ Ambiguous relationship between defensive ownership and political connections: depends on substitutability, complementarity of defensive ownership and connections

[\[Return to presentation\]](#)

Firms with missing ownership data



[\[Return to presentation\]](#) [\[Return to presentation 2\]](#)

Number of firms with owners in foreign locations

	Number of firms		Share	
	2004	2006	2004	2006
<i>Offshore locations</i>	126	172	0.421	0.575
Cyprus	72	107	0.241	0.358
British Virgin Islands	64	78	0.214	0.261
Panama	23	21	0.077	0.070
Isle of Man	17	17	0.057	0.057
Bahamas	15	14	0.050	0.047
Belize	14	26	0.047	0.087
Gibraltar	7	16	0.023	0.054
Other offshore	19	16	0.064	0.054
<i>Non-offshore locations</i>	140	132	0.468	0.441
United Kingdom	78	80	0.261	0.268
United States	66	56	0.221	0.187
Netherlands	23	36	0.077	0.120
Switzerland	17	11	0.057	0.037
Spain	13	6	0.043	0.020
Other non-offshore	50	41	0.167	0.137

[Return to presentation](#)

First-stage results

	(1)	(2)
Vote for Yushchenko	0.483 (0.152)	0.465 (0.154)
Gray	-0.335 (0.134)	-0.320 (0.132)
Employment	0.019 (0.018)	0.011 (0.015)
TFP	-0.010 (0.015)	-0.006 (0.014)
Privatized	0.032 (0.077)	0.053 (0.080)
Sector FEs	Yes	Yes
Observations	329	299

Notes: In parentheses, heteroskedasticity-robust standard errors that correct for correlation of error terms at oligarch level. [[Return to presentation](#)]

- Acemoglu, Daron and Simon Johnson. 2005. "Unbundling Institutions." *Journal of Political Economy* 113(5):949–995.
- Albertus, Michael and Victor Menaldo. 2018. *Authoritarianism and the Elite Origins of Democracy*. New York: Cambridge University Press.
- Andersen, Jørgen Juel, Niels Johannesen, David Dreyer Lassen and Elena Paltseva. 2017. "Petro Rents, Political Institutions, and Hidden Wealth: Evidence from Offshore Bank Accounts." *Journal of the European Economic Association* 15(4):818–860.
- Ansell, Ben and David Samuels. 2014. *Inequality and Democratization*. New York: Cambridge University Press.
- Betz, Timm and Amy Pond. 2019. "Foreign Financing and the International Sources of Property Rights." *World Politics* 71(3):503–541.
- Bueno de Mesquita, Bruce and Hilton L. Root, eds. 2000. *Governing for Prosperity*. New Haven: Yale University Press.
- Chernykh, Lucy. 2011. "Profit or Politics? Understanding Renationalizations in Russia." *Journal of Corporate Finance* 17(5):1237–1253.

Chernykh, Lucy and Sergey Mityakov. 2017. "Offshore Schemes and Tax Evasion: The Role of Banks." *Journal of Financial Economics* 126(3):516–542.

Coase, Ronald. 1937. "The Nature of the Firm." *Economica* 4(16):386–405.

Denisova, Irina, Markus Eller, Timothy Frye and Ekaterina V. Zhuravskaya. 2009. "Who Wants to Revise Privatization? The Complementarity of Market Skills and Institutions." *American Political Science Review* 103(2):284–304.

Durnev, Art and Sergei Guriev. 2011. "Expropriation Risk and Firm Growth: A Corporate Transparency Channel." CEPR Discussion Paper No. DP6547.

Earle, John S. and Scott Gehlbach. 2015. "The Productivity Consequences of Political Turnover: Firm-Level Evidence from Ukraine." *American Journal of Political Science* 59(3):708–723.

Faccio, Mara. 2006. "Politically Connected Firms." *American Economic Review* 96:369–386.

Findley, Michael G., Daniel L. Nielson and J.C. Sharman. 2014.

Global Shell Games: Experiments in Transnational Relations, Crime, and Terrorism. New York: Cambridge University Press.

Fisman, Raymond. 2001. "Estimating the Value of Political Connections." *American Economic Review* 91(4):1095–1102.

Frye, Timothy. 2006. "Original Sin, Good Works, and Property Rights in Russia." *World Politics* 58(4):479–504.

Frye, Timothy. 2017. *Property Rights and Property Wrongs: How Power, Institutions, and Norms Shape Economic Conflict in Russia*. New York: Cambridge University Press.

Frye, Timothy and Ekaterina Zhuravskaya. 2000. "Rackets, Regulation, and the Rule of Law." *The Journal of Law, Economics, and Organization* 16(2):478–502.

Gehlbach, Scott, Konstantin Sonin and Ekaterina Zhuravskaya. 2010. "Businessman Candidates." *American Journal of Political Science* 54(3):718–736.

Gorodnichenko, Yuriy and Yegor Grygorenko. 2008. "Are Oligarchs Productive? Theory and Evidence." *Journal of Comparative Economics* 36(1):17–42.

- Grossman, Sanford and Oliver Hart. 1986. "The Costs and Benefits of Ownership: A Theory of Lateral and Vertical Integration." *Journal of Political Economy* 94(4):691–719.
- Guriev, Sergei and Andrei Rachinsky. 2005. "The Role of Oligarchs in Russian Capitalism." *Journal of Economic Perspectives* 19(1):131–150.
- Hart, Oliver and John Moore. 1990. "Property Rights and the Nature of the Firm." *Journal of Political Economy* 98(6):1119–1158.
- Hoff, Karla and Joseph E. Stiglitz. 2004. "After the Big Bang? Obstacles to the Emergence of the Rule of Law in Post Communist Societies." *American Economic Review* 94(3):753–763.
- Johns, Leslie and Rachel L. Wellhausen. 2016. "Under One Roof: Supply Chains and the Protection of Foreign Investment." *American Political Science Review* 110(1):31–51.
- La Porta, Rafael, Florencio Lopez-de Silanes and Andrei Shleifer. 1999. "Corporate Ownership Around the World." *Journal of Finance* 54(2):471–517.

- Lamberova, Natalia and Konstantin Sonin. 2018. "Economic Transition and the Rise of Alternative Institutions: Political Connections in Putin's Russia." *Economics of Transition* 26(4):615–648.
- Markus, Stanislav. 2015. *Property, Predation, and Protection*. New York: Cambridge University Press.
- Markus, Stanislav. 2016. "Sovereign Commitment and Property Rights: The Case of Ukraine's Orange Revolution." *Studies in Comparative International Development* 51(4):411–433.
- Markus, Stanislav and Volha Charnysh. 2017. "The Flexible Few: Oligarchs and Wealth Defense in Developing Democracies." *Comparative Political Studies* 50(12):1632–1665.
- North, Douglass C. 1981. *Structure and Change in Economic History*. New York: W.W. Norton and Company.
- North, Douglass C. 1990. *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.
- North, Douglass C. and Barry R. Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing

Public Choice in Seventeenth-Century England." *Journal of Economic History* 49(4):803–832.

North, Douglass C., John Joseph Wallis and Barry R. Weingast. 2009. *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. New York: Cambridge University Press.

Novokmet, Filip, Thomas Piketty and Gabriel Zucman. 2018. "From Soviets to Oligarchs: Inequality and Property in Russia 1905–2016." *Journal of Economic Inequality* 16(2):189–223.

Obermayer, Bastian and Frederik Obermaier. 2016. *The Panama Papers: Breaking the Story of How the Rich and Powerful Hide Their Money*. London: Oneworld Publications.

Olson, Mancur. 1993. "Dictatorship, Democracy, and Development." *American Political Science Review* 87(3):567–576.

Shleifer, Andrei. 1997. "Government in Transition." *European Economic Review* 41(3-5):385–410.

Shleifer, Andrei and Robert W. Vishny. 1994. "Politicians and Firms." *Quarterly Journal of Economics* 109(4):995–1025.

- Sonin, Konstantin. 2003. "Why the Rich May Favor Poor Protection of Property Rights." *Journal of Comparative Economics* 31(4):715–731.
- Szakonyi, David. 2018. "Businesspeople in Elected Office: Identifying Private Benefits from Firm-Level Returns." *American Political Science Review* 112(2):322–338.
- Treisman, Daniel. 2016. "Russia's Billionaires." *American Economic Review* 106(5):236–41.
- Volkov, Vadim. 2002. *Violent Entrepreneurs: The Use of Force in the Making of Russian Capitalism*. Ithaca, NY: Cornell University Press.
- Williamson, Oliver. 1985. *The Economic Institutions of Capitalism*. New York: Free Press.
- Zucman, Gabriel. 2014. "Taxing across Borders: Tracking Personal Wealth and Corporate Profits." *Journal of Economic Perspectives* 28(4):121–48.
- Zucman, Gabriel. 2015. *The Hidden Wealth of Nations: The Scourge of Tax Havens*. Chicago: University of Chicago Press.