Laboratory of Applied Studies of Institutions and Social Capital (ПрИиСК)

I. Snapshot of Project Portfolio

- Institutions and Allocation of Talent
- Complementarity of Institutions: De Soto Effect Re-Visited
- License Plates and Corruption Measurement
- Historical Origins of Social Capital: The Impact of WWII
- Institutions and Visa Regimes

Institutions and Allocation of Talent

Michael Alexeev, Timur Natkhov, Leonid Polishchuk

- Institutions affect the allocation of talent between productive and (directly) unproductive activities (rent-seeking)
- Allocation of top talents is particularly sensitive to institutional quality
- We illustrate this effect by explaining Russian university students' choices of fields of study by their talent (measured by the Unified State Examination scores) and the quality of institutions in Russian regions

Institutions, Talent, and Interaction Thereof

	(1) Engineers	(2) Engineers	(3) Law and Public Administrations	(4) Law and Public Administrations
UnStEx	-0.663***	0.581***	0.376***	-0.111
	(0.0159)	(0.0593)	(0.0233)	(0.0839)
Investment Risk	-0.879***	2.112***	0.338***	-0.848***
	(0.0279)	(0.140)	(0.0399)	(0.201)
UnStEx*Investment Risk		-0.0508***		0.0196***
		(0.00234)		(0.00325)
Constant	0.264***	-0.474***	-1.816***	-1.519***
	(0.0130)	(0.0362)	(0.0189)	(0.0526)
Observations	463,071	463,071	463,071	463,071

Complementarity of Institutions: De Soto Effect Re-Visited

Paul Dower, Egor Malkov, Leonid Polishchuk, William Pyle

- Privately owned land is both an asset and a liability of Russian industrial firms. The asset part is better access to finance and the liability part is due to insecure property rights and other institutional pathologies
- Institutional quality is 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

Land Ownership and Institutional Quality

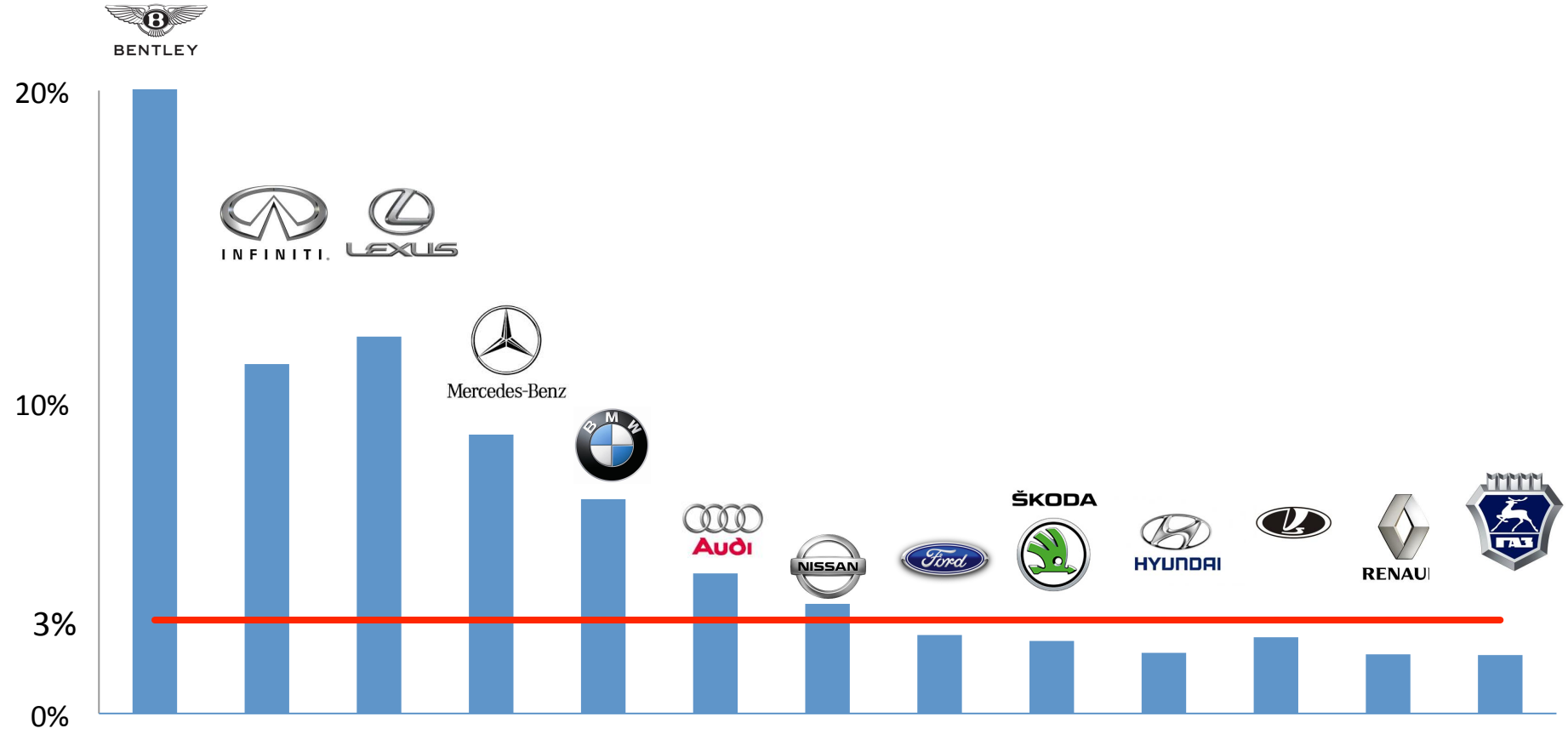
		Profit				
Share of land owned by the firm	5394518*** (1241199)	5585320*** (1240942)	$1.69 \cdot 10^7$*** (3702507)	$1.22 \cdot 10^7$*** (3671907)	$1.23 \cdot 10^7$*** (3687032)	$1.24 \cdot 10^7$*** (3707570)
Informal employment		$-1.53 \cdot 10^7$** (6986845)	-3289009 (7887644)	1191298 (7755609)	1121725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

License Plates and Corruption Measurement

Timur Natkhov, Leonid Polishchuk, Koen Schoors

- Some combinations of figures and letters on license plates are valued by Russian motorists and acquired from vehicle registration agencies by corrupt means
- Abnormal concentration of such license plates among expensive cars is an objective evidence of corruption and could be used for corruption measurement

Reallocation of Desired License Plates



Historical Origins of Social Capital: The Impact of WWII

Artem Edachev, Timur Natkhov, Leonid Polishchuk

- We provide empirical evidence that WWII had had a liberating impact on the veterans, had enhanced their dignity, individual and collective self-confidence, social capital and civic culture
- This value shift is still tangible and visible among veterans' descendants to whom war experience of their father and grandfathers has been passed through intergenerational value transmission

Treatments and Placebos

	Respons. for commun.	Respons. for commun.	Respons. for commun.	Respons. for district	Respons. for district	Respons. for district	State should allow civic particip.	State should allow civic particip	State should allow civic particip.
Grandfather veteran and survived	0.0769***			0.0480**			0.0347*		
	(0.0286)			(0.0201)			(0.0179)		
Grandfather veteran and did not survive		-0.0185			0.0167			0.00652	
		(0.0342)			(0.0237)			(0.0213)	
No grandfather veterans			-0.0556*			-0.0138			-0.00566
			(0.0288)			(0.0194)			(0.0170)
Gender	-0.0487*	-0.0480*	-0.0498*	0.00648	0.00837	0.00746	0.0151	0.0149	0.0148
	(0.0263)	(0.0263)	(0.0263)	(0.0176)	(0.0176)	(0.0177)	(0.0158)	(0.0158)	(0.0158)
Age	0.0240***	0.0260***	0.0236***	0.00796***	0.00859***	0.00843***	-0.00386	-0.00333	-0.00340
	(0.00418)	(0.00421)	(0.00427)	(0.00286)	(0.00290)	(0.00296)	(0.00237)	(0.00240)	(0.00244)
Age^2	-0.000238***	-0.000262***	-0.000237***	-6.78e-05**	-7.66e-05***	-7.47e-05**	2.95e-05	2.25e-05	2.33e-05
	(4.33e-05)	(4.33e-05)	(4.41e-05)	(2.94e-05)	(2.97e-05)	(3.04e-05)	(2.48e-05)	(2.49e-05)	(2.54e-05)
Education	0.00780	0.00961	0.00944	0.0182***	0.0196***	0.0194***	-0.00141	-0.000689	-0.000713
	(0.00855)	(0.00851)	(0.00852)	(0.00570)	(0.00570)	(0.00570)	(0.00510)	(0.00511)	(0.00510)
Income	0.0225	0.0240*	0.0248*	0.0335***	0.0348***	0.0348***	-0.00948	-0.00831	-0.00845
	(0.0140)	(0.0140)	(0.0140)	(0.00930)	(0.00933)	(0.00933)	(0.00817)	(0.00820)	(0.00820)

II. Institutions and Visa Regimes

Kamila Gracheva, Leonid Polishchuk, Koen Schoors, Alexander Yarkin

Costs and Benefits of Visas

Countries of the world apply differentiated visa regimes vis-à-vis visitors from other countries – from visa wavers and customs and immigration unions to tight and strictly enforced visa requirements

Visa restrictions impose significant business, tourism, trade and other cross-border exchange losses and transaction costs (Neumayer, 2010, 2011), largely borne by the receiving countries. Yet they are maintained and often elevated ("Fortress Europe", "Wall Around the West" – see e.g. Andreas and Snyder, 2000), reflecting receiving countries' perception of various risks of admission of other countries' nationals, such as illegal migration and employment (violation of visa rule), crime, terrorism, etc.

Institutions Matter?

Visa rules are national policy decisions reflecting complex cost-benefits considerations and preferences of various pressure groups, balancing perceived gains and costs and risks. We are interested in how sending countries' formal and informal institutions affect outcomes of such balancing acts.

Institutions and social capital explain a plethora of social, economic and political outcomes – does this include visa regimes as well? Is it true that better formal institutions make citizens of the country more welcome abroad? Ditto informal institutions (social capital)?

What Is Known About Factors of Visa Regimes

Factors shown to affect visa barriers (Neumayer, 2006; Hobolth, 2012):

- GDP per capita of the sending country (lower barriers)
- Distance between countries (lower barriers)
- Tourism/business ties (lower barriers)
- Risks of political instability in the sending country (higher barriers)
- Risks of terrorism and conflicts in the sending country (higher barriers)

Better Institutions – Lower Barriers?

Strong institutions protect rights and freedoms, improve the quality of governance and public service delivery and complement human capital. Hence one could expect that strong institutions make life in the home country better and hence illegal migration less likely, even after controlling for GDP per capita

Good institutions cultivate compliance with rules, which makes less likely violation of visa rules and abuse of liberal regimes in destination countries

Better Institutions – Higher Barriers?

Strong institutions restrict crime, violence, rent-seeking and other forms of unproductive and/or unlawful behavior in the home country. This could prompt potential perpetrators of such behavior (‘bad guys’) to seek ill-gotten gains abroad, rising the likelihood that a visa applicant is not a well-intentional visitor (a spillover effect)

Role of Informal Institutions

Informal institutions which are ingredients of social capital affect norms, values, morale, trust and trustworthiness. Migrants are shown to bring such norms to the receiving countries (Fernández, 2010) and keep them for long periods of time. Social capital is also correlated with trust in and respect of official rules, which include visa requirements and other laws and regulations of the receiving country. One could expect higher law obedience from visitors from countries rich in social capital, and hence lower visa barriers for citizens of such countries traveling abroad

Complementarity of Formal Institutions and Social Capital

Formal institutions and social capital often complement each other, e.g. in ensuring democratic accountability and effective governance (Bowles, Gintis, 2001)

Similar complementarity can be expected in the case of visa barriers – stronger rule of law in countries with strong moral traits is less likely to cause a noticeable export of 'bad guys', than a similar institutional change in a country with lower moral standards

A Model: Institutions

Formal institutions

Institutions-services $a>0$ improve productivity; every agent engaged in productive activities produces gross income a

Institutions-rules $\sigma \in [0,1]$ restrict unlawful and/or unproductive behavior; agents engaged in production keep share σ of their gross income

Informal institutions

Share p of population (normalized to unity) has an idiosyncratic aversion to rent-seeking /unlawful activities which exceeds material gains of illegality. The rest of the population are “ethically blind” and driven by material gains

Activities

Assume that unlawful behavior is more profitable than productive one, so all agents without intrinsic aversion to rent-seeking are engaged in such activities at home or abroad

Rent-seeking abroad involves cost $c \geq 0$ of relocation abroad which is distributed across the population with c.d.f. $G(c)$. Rent-seeking abroad earns a fixed payoff Δ, which is assumed higher than all domestic payoffs

Numbers of agents involved in rent-seeking at home and abroad are resp. $r\downarrow 1$ and $r\downarrow 2$; one has $p + r\downarrow 1 + r\downarrow 2 = 1$

Payoffs:

- Productive behavior $a\sigma$
- Domestic rent-seeking $a(1-\sigma)p/r\downarrow 1$
- Foreign rent-seeking $\Delta - c$

Equilibrium

Let $n \equiv p/r_1$ be the ratio of those engaged in productive behavior to domestic rent-seekers. Then

$$r_1 = (1-p)[1-G(\Delta - a(1-\sigma)n)], \quad r_2 = (1-p)G(\Delta - a(1-\sigma)n)$$

In equilibrium

$$n = p/(1-p)[1-G(\Delta - (1-\sigma)n)]$$

Equilibrium exists and is unique.

Comparative Statics

Equilibrium value of $r\downarrow 1$ *de*creases in σ (stronger institutions-rules suppresses domestic rent-seeking) and *in*creases in a

Equilibrium value of $r\downarrow 2$ *in*creases in σ (stronger institutions-rules increases rent-seeking export) and *de*creases in a and p.

Hence strengthening of the domestic rule of law increases the number of visa applicants intended to violate the law of the receiving country. This effect is more pronounce for lower stocks of domestic social capital. At the same time improvement of domestic institutions-services decreases the number of ill-intended applicants

Processing Visa Applications

Share of the population $\alpha \in (0,1)$ would like to travel abroad for legitimate reasons and apply for visas; $r\downarrow 2$ applicants are illegitimate. The share of illegitimate applicants in the total pool of visa applicants equals $\pi \equiv r\downarrow 2 /(\alpha(1-r\downarrow 2)+r\downarrow 2)$; this share also increases in σ and p and decreases in a.

A consular officer processing an application watches for a signal $x \geq 0$ of inadmissibility; such signal is distributed with c.d.f. function $F\downarrow 0(x)$ for a legitimate applicant and $F\downarrow 1(x)$ for an illegitimate one. It is assumed that $F\downarrow 1(x) > F\downarrow 0(x)$ and furthermore the likelihood ratio $f\downarrow 1(x)/$

Consular Decisions

The officer refuses a visa if a posteriory probability $PIllegx$ that for a given signal x an applicant is illegitimate exceeds a certain "alarm threshold" δ, i.e. whenever

$$\pi f\downarrow 1\ (x)/\pi f\downarrow 1\ (x)+(1-\pi)f\downarrow 0\ (x) > \delta$$

The cuttoff level $x\uparrow *\ (\pi)$ of signal after which applications are turned down decreases in π, and so the a priori probability of visa refusal (rejection rate)

$$\pi(1-F\downarrow 1\ (x\uparrow *\ (\pi))+ (1-\pi)(1-F\downarrow 0\ (x\uparrow *\ (\pi))$$

increases in π . Therefore the visa rejection rate increases in σ and

Hypotheses

The above model leads to the following testable hypotheses:

- Visa barriers (measured by the refusal rate) rise in the quality of domestic institutions-rules and decline in the quality of domestic institutions-services
- Visa barriers decline in the stock of domestic social capital (norms and values)
- An decrease in norms and values amplifies the increase of visa barriers caused by the strengthening of institutions-rules

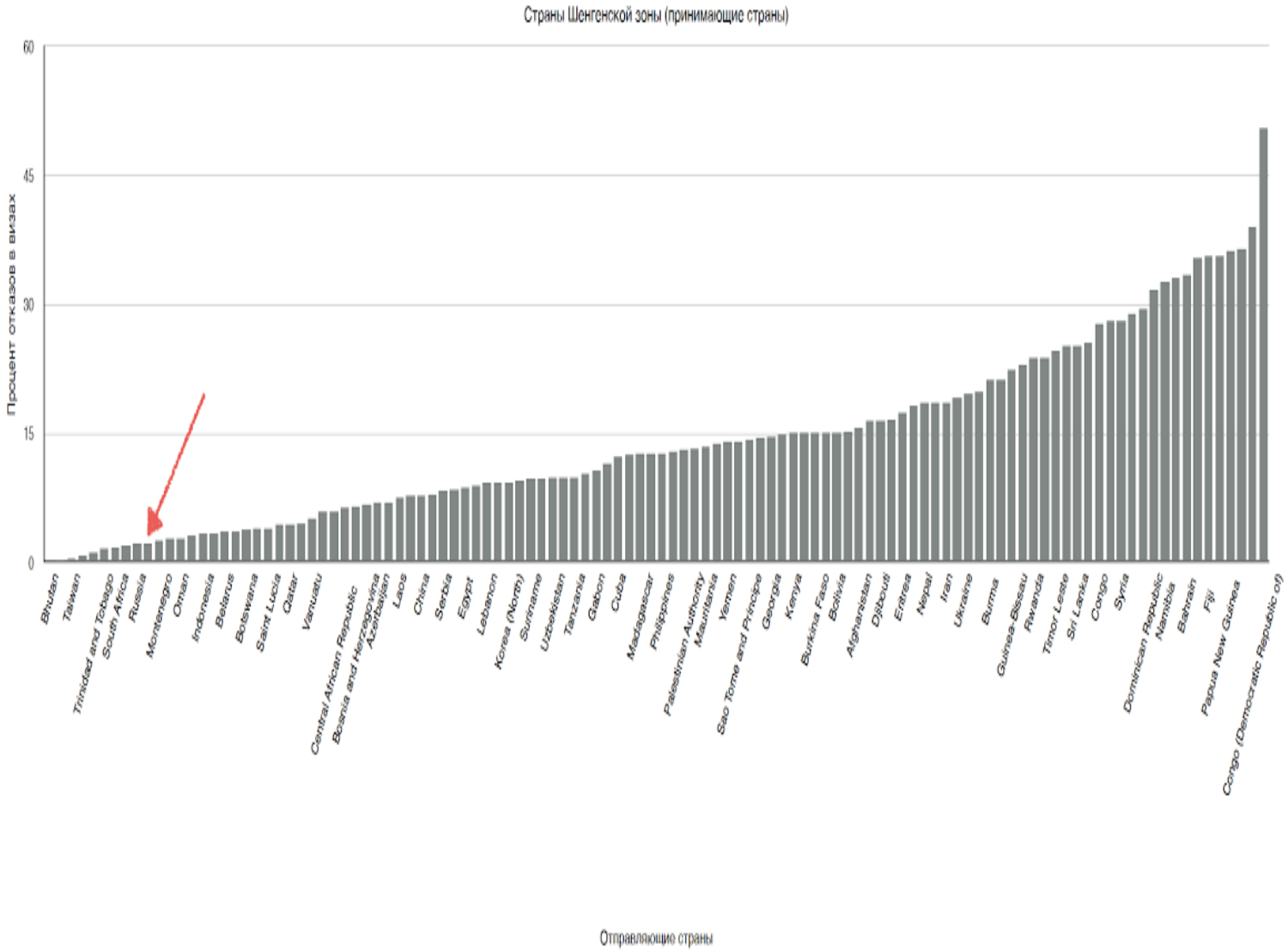
Data on Visa Barriers

The European Visa Database: annual visa refusal rates by Schengen countries 2006 – 2011 (Hobolth, 2014)

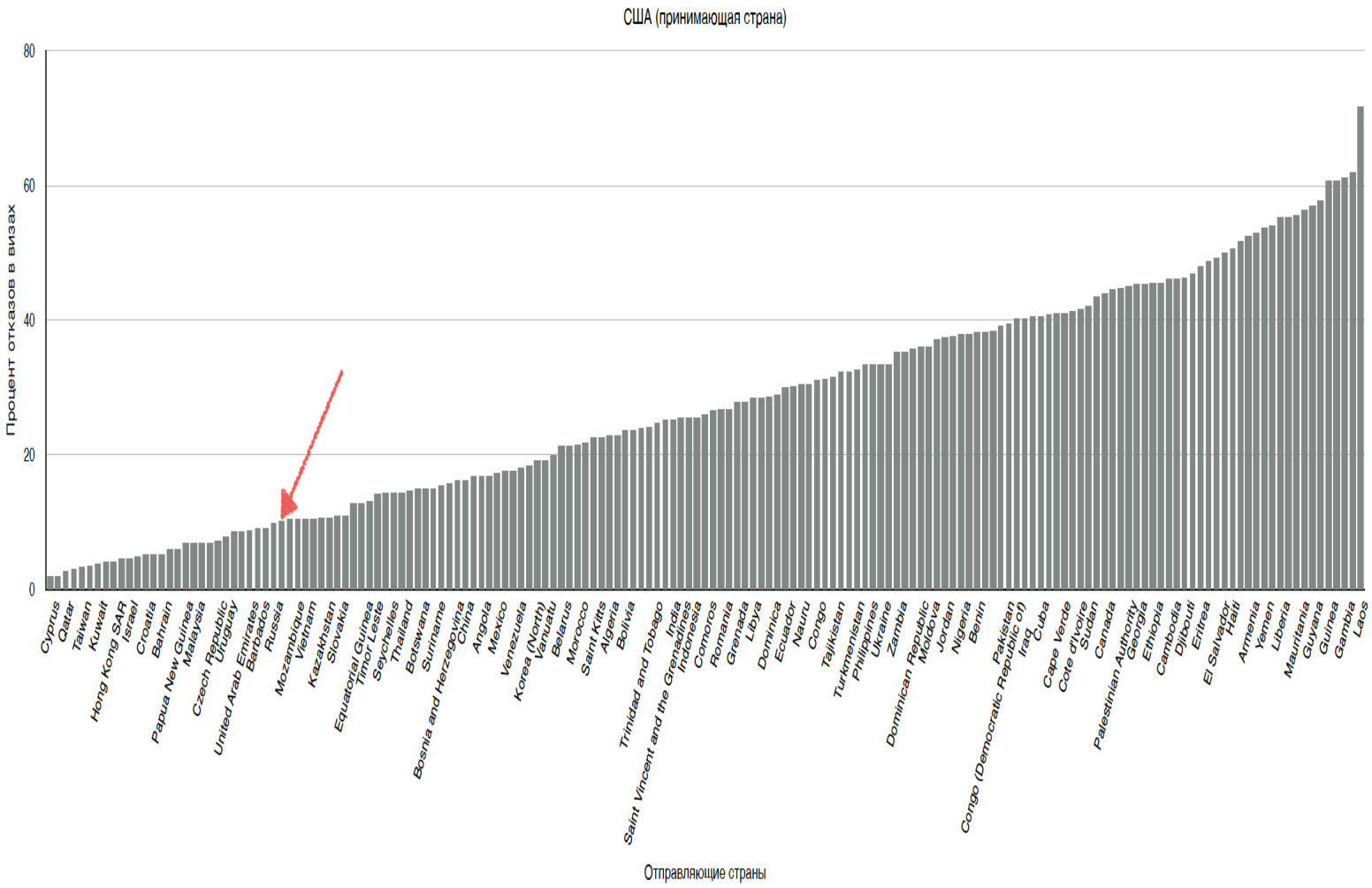
Visa-free regime = zero refusal rate

Dependent variable – average (for the period) refusal rate for a non-Schengen country by a Schengencountry

Schengen Refusal Rates



US Refusal Rates



Data on Institutions

Formal institutions

- Indexes of the Governance Matters project: Rule of Law and Corruption Prevention (institutions-rules) and Government Effectiveness (institution-service)
- Property rights (Frazer Institute; institution-rule)

Informal institutions (all from Wave 5 of the World Values Survey)

- Trust (can people be trusted?) and opportunistic behavior (would people take advantage of you)
- Ethical norms: Is it justifiable to take bribes and cheat on taxes? Is it important to help people and behave properly

Control Variables

1. GDP per capita of a sending country, World Bank (GDPpc)
2. Distance from the Schengen zone, Hobolth (2014) (DistKm)
3. Tourism activity in a sending country, World Bank
4. Business ties, World Bank (Foreign Direct Investment inflows)
5. Political stability and absence of violence/terrorism in a sending country, World Bank

Impact of Formal Institutions

Institutions-rules and institutions-services have the predicted signs for visa barriers and are statistically significant. These findings are robust to various controls and specifications

VARIABLES	RefusalRate	RefusalRate	RefusalRate	RefusalRate	RefusalRate	RefusalRate
GDPpc	-8.30e-05***	-8.37e-05***	-0.000118***	-0.000103***	-0.000136***	-0.000133***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DistKm	-0.000109	-0.000146*	-0.000176**	-9.17e-05	-0.000300***	-0.000229***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
TourExp	-6.57e-11***	-6.18e-11***	-7.75e-11***	-7.45e-11***	-6.26e-11***	-6.32e-11***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
PolStabTerr	-3.153***	-3.070***	-3.564***	-3.937***	-3.813***	-4.208***
	(0.498)	(0.473)	(0.498)	(0.503)	(0.501)	(0.512)
Voice	-0.688*	-0.674*	-1.588***	-1.347***	-0.806	-1.079**
	(0.377)	(0.363)	(0.447)	(0.460)	(0.493)	(0.508)
RuleLaw			2.144***	6.873***		4.179***
			(0.679)	(1.167)		(1.456)
GovernEff				-5.172***		-4.566***
				(1.092)		(1.336)
ContrCorr					5.974***	5.659***
					(0.850)	(1.395)
RegQual					-4.523***	-3.408***
					(0.897)	(1.121)
Dummy for r.c.	no	yes	yes	yes	yes	yes
					(0.897)	(1.121)
Constant	13.54***	20.95***	21.83***	21.76***	23.35***	23.32***
	(0.738)	(1.513)	(1.540)	(1.531)	(1.547)	(1.540)
Observations	1,241	1,241	1,241	1,241	1,241	1,241
R-squared	0.161	0.228	0.233	0.245	0.253	0.261

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Impact of Social Capital

VARIABLES	(1) RefusalRate	(2) RefusalRate	(3) RefusalRate	(4) RefusalRate	(5) RefusalRate	(6) RefusalRate
RuleLaw	6.473***	5.544***	6.058***	7.975***		
	(0.950)	(1.075)	(1.087)	(1.087)		
distrust_bin	25.71***		20.20***	20.45***	18.98***	13.18***
	(3.720)		(4.301)	(4.249)	(4.218)	(4.490)
trust_ord		-2.833***	-1.292**	-1.146*	-1.152*	-1.583**
		(0.577)	(0.634)	(0.648)	(0.667)	(0.665)
Voice				-2.769***	-3.493***	
				(0.859)	(0.863)	
ContrCorr					6.317***	
					(0.974)	
property_rights						2.284***
						(0.372)
Standard controls	yes	yes	yes	yes	yes	yes
Dummy for r.c.	yes	yes	yes	yes	yes	yes
Constant	-19.22***	41.29***	-2.432	-4.780	-2.609	-2.262
	(6.804)	(4.039)	(10.34)	(10.20)	(10.46)	(10.53)
Observations	563	534	517	557	557	517
R-squared	0.352	0.334	0.374	0.349	0.329	0.363

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) RefusalRate	(2) RefusalRate	(3) RefusalRate	(4) RefusalRate
RuleLaw	-10.47**	-30.16***	-50.70***	-46.75***
	(4.471)	(5.952)	(7.342)	(7.739)
ContrCorr	8.321***	13.64***	12.96***	8.917***
	(2.323)	(2.447)	(2.904)	(3.044)
GovernEff	-3.414	-6.918***	-6.115***	-2.926
	(2.236)	(2.365)	(2.306)	(2.835)
Bribe	1.728**	4.484***	6.803***	6.211***
	(0.847)	(0.949)	(1.109)	(1.360)
Properly		-1.382	6.486**	5.924**
		(1.333)	(2.661)	(2.854)
Help			-13.24***	-13.86***
			(3.365)	(3.793)
trust_ord				-1.896***
				(0.696)
Rule_Bribe	7.080***	11.78***	12.78***	10.78***
	(1.895)	(2.163)	(2.194)	(2.506)
Rule_Properly		3.089***	4.827**	6.265***
		(1.097)	(2.207)	(2.355)
Rule_Help			7.408***	6.210***
			(1.564)	(1.694)
Dummy for r.c.	yes	yes	yes	yes
Standard controls included	yes	yes	yes	yes
R-squared	0.334	0.399	0.431	0.465

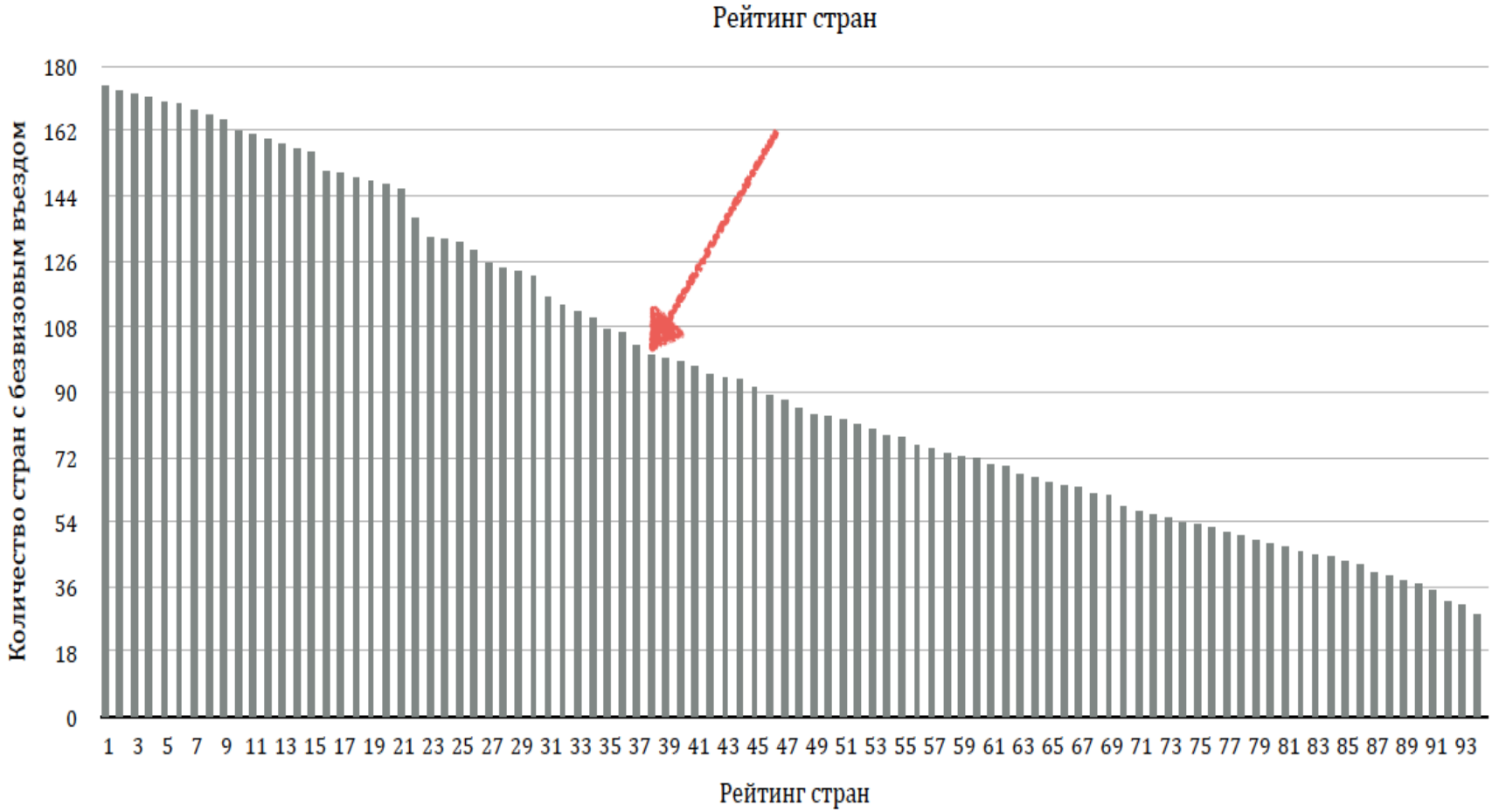
Social Capital, Rule of Law, and Visa Barriers

Countries with lower trust and higher propensity for opportunistic behavior face ceteris paribus higher visa barriers.

Low level of social capital makes visa barriers more sensitive to the conditions of domestic institutions-rules – such barriers rise more sharply in response to strengthening of the rule of law

The full marginal effect (inclusive of the interaction with social capital) of strengthening of the rule of law for visa barriers is negative and significant only for sufficiently "immoral" countries.

Alternative Specification: Henley and Partners' Visa Restriction Index



Institutions and Passport Power

VARIABLES	(1) VRI	(2) VRI	(3) VRI	(4) VRI
GDPpc	0.000927***	0.000606**	0.000665**	0.000612**
	(0.00)	(0.00)	(0.00)	(0.00)
PolStabTerr	6.096*	9.443***	5.631*	9.554***
	(3.392)	(3.242)	(3.273)	(3.306)
tourarriv	5.85e-07***	4.91e-07***	3.35e-07**	4.02e-07***
	(0.00)	(0.00)	(0.00)	(0.00)
Voice	24.49***	18.93***	18.64***	18.57***
	(3.606)	(3.980)	(4.195)	(3.948)
RoL		-15.13**		-18.30**
		(6.401)		(8.608)
RegQual		26.46***		20.10***
		(4.534)		(6.161)
CoC			-15.64***	-7.069
			(5.900)	(6.070)
GovEff			28.55***	17.36*
			(6.405)	(9.079)
Constant	83.87***	86.02***	86.69***	85.98***
	(3.042)	(3.075)	(3.183)	(3.056)
Observations	150	150	150	150
R-squared	0.731	0.779	0.762	0.786

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Conclusions

Formal and informal institutions matter for visa barriers, although in different and sometimes counterintuitive ways

Formal and informal institutions complement each other as factors of visa barriers

Improvement of institutions-services, such as government effectiveness, lowers the barriers

Improvement of institutions-rules could make barriers higher, if there is a lack of morality and other traits in the sending country