The Role of Formal and Informal Institutions on the Innovation Performance of Foreign Subsidiaries in Africa: The Role of Ambidexterity

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Introduction

- Companies that operate internationally, known as multinational enterprises (MNEs), invest heavily in technological development.
- Organizational Ambidexterity: Organization's ability to engage in both exploratory and exploitative activities (March, 1991; Chang et al., 2009; Boumgarden et al., 2012; Luger et al., 2018).
- Exploration involves experimentation, discovery, revolutionary change (March, 1991; Luger et al., 2018).
- Exploitation is focused on optimizing existing processes, refining established products, maximizing efficiency (Gupta et al., 2006; Luger et al., 2018).

Introduction

- To safeguard their technologies and maintain their competitive advantage, MNEs often internalize their operations through foreign direct investment (FDI) in R&D.
- Applying their technologies worldwide (Hymer, 1976; Buckley & Casson, 1976; Dunning, 1988; Kogut & Zander, 1993; Rugman & Verbeke, 2001).
- Exploration technologies often provide significant market opportunities and reflect a firm's absorptive capacity.
- Access locally available technological knowledge and creating new knowledge (exploration/radical R&D) (Vrontis and Christofi, 2019).

Introduction

- Exploitation/incremental R&D (Vrontis and Christofi, 2019; Lampert and Kim, 2019; Archibugi and Pietrobelli, 2003).
- Modify their products or processes to meet local customer preferences or regulations without creating radically new technologies (Paul & Feliciano-Cestero, 2020; Adarkwah & Malonæs, 2022).
- Improving manufacturing efficiency using technologies already developed by the company (Meyer et al., 2020; Papanastassiou et al., 2020).
- Ambidextrous activities: Subsidiaries perform both roles simultaneously-global creation of technologies.

Introduction

Dimension	*Exploitation-Incremental*	*Exploration-Radical*
Primary objective	Leverage and commercialize existing firm-specific knowledge	Acquire, create, and recombine new knowledge
Knowledge source	Existing technologies developed by headquarters or other subsidiaries	Technological knowledge from host-country innovation systems
Technology transfer	Headquarters → Foreign subsidiary	Foreign subsidiary → Headquarters (reverse knowledge transfer)
Typical R&D activities	Process optimization, Product adaptation, Incremental product improvements, Replication of established R&D routines	Acquire and create new knowledge, Patent-generating research, Technology scouting, Knowledge sourcing from innovation clusters, Collaborations
Competitive advantage	Efficiency, market adaptation	Learning, capability building, technological leadership

Introduction

- Institutions significantly influence MNEs behavior. Existing literature has primarily focused on FDI as a consequence of institutional quality (Bénassy-Quéré, Coupet, & Mayer, 2007; Bevan, Meyer, Estrin, Bhaumik, & Peng, 2009; Buchanan, Le, & Rishi, 2012).

- Scholars typically portray the relationship between FDI and institutional quality as one where FDI flows into a country to take advantage of the quality of domestic institutions (Globerman & Shapiro, 2002; Disdier & Mayer, 2004; Gastanaga, Julio & Yook, 2016).

- Leverage the intellectual property (IP) protections and other institutional frameworks available in the host country to maximize the value derived from their technologies (Teece, 1986).

Introduction

- Studies have examined the relationship between technologies and internationalization (Cantwell, 1989; Cantwell and Piscitello, 2000; Narula, 2003) considering various institutional frameworks supporting technology transfer (Glass and Saggi, 2002; Branstetter, 2006; Brander et al., 2017).

- There is limited understanding of how this process happens in under-developed institutional environments.

- In the African context, previous reviews have predominantly treated FDI as an outcome of institutional quality (Asiedu, 2002, 2006; Ajide & Raheem, 2016).

- Absence of research Institutions-Organizational Ambidexterity-FDI in R&D.

Contribution

- Investigate how both formal and informal institutions affect the innovation performance of foreign subsidiaries operating in Africa, focusing on the role of firm ambidexterity.
- Ambidexterity, which refers to a firm's ability to simultaneously explore new opportunities and exploit existing capabilities, has been positively and significantly associated with firm performance.
- However, the interaction between formal and informal institutions, firm ambidexterity and innovation performance of foreign subsidiaries in Africa has never been explored.

Contribution

- Unique dataset comprised of firm, project and country-level data we aim to build a comprehensive understanding of how formal and informal institutions impact the innovation performance of foreign subsidiaries in Africa, while also examining the role of ambidexterity.

- Allow us to draw meaningful conclusions and provide recommendations for firms operating in heterogeneous institutional contexts.

Methodology

- The role of formal and informal institutions on FDI in RD considering the role of ambidexterity is investigated using a panel fixed effects model,

$$y_{imjt} = \mu_{imj} + \beta' x_{imjt} + e_{imjt}$$

- where the dependent variable y_{imjt} is a scalar and measures the level of FDI in RD, x_{imjt} is a $\kappa \times 1$ vector of determinants, β is a $\kappa \times 1$ vector of unknown parameters, e_{imjt} is an error term for firm $i = 1, \ldots, N$, for project $m = 1, \ldots, M$, for the African country $j = 1, \ldots, J$, and time $t = 2003, \ldots, 2023$.

Methodology

- FDI in R&D percentage, Exploration, Exploitation, Balanced ambidexterity (BD), Combined ambidexterity (CD), BDCD.
- Sociocultural Institutions: Access and Distribution of Opportunities, Equality and Distribution of Power, Freedom and Autonomy, Pluralism, Social tensions.
- Political Institutions: Control of corruption, Government effectiveness, Political stability, Rule of law, Regulatory quality, Voice and accountability.
- Inflation, Unemployment Rate, Log Per Capita GDP, Colonial Ties , Natural Resource Rents, Age.

Empirical Results: Political Institutions and FDI in RD

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7-BD	Model 8-CD	Model 9-BDCD
Ambidexterity									
Exploration		-0.0612***							
		(0.0127)							
Exploitation			-0.0493***						
			(0.0032)						
Balanced ambidexterity (BD)				-0.2382***			-0.2068***		
				(0.0361)			(0.0598)		
Combined ambidexterity (CD)					0.8494***			0.7997***	
					(0.1228)			(0.2052)	
*BD*CD*						1.9665***			2.4157***
						(0.3648)			(0.6361)
Political Institutions									
Control of corruption	0.0923***	0.0898***	0.0969***	0.0876***	0.0876***	0.0903***	0.3931*	0.0734**	0.0732**
	(0.0318)	(0.0316)	(0.0294)	(0.0314)	(0.0313)	(0.0315)	(0.2076)	(0.0319)	(0.0320)
Government effectiveness	0.0293	-0.0296	-0.0410	-0.0278	-0.0297	-0.0361	-0.2081	-0.0208	-0.0376
	(0.0363)	(0.0360)	(0.0336)	(0.0358)	(0.0357)	(0.0360)	(0.1909)	(0.0365)	(0.0364)
Political stability	0.0123	0.0128	0.0317**	0.0187	0.0191	0.0163	0.1702**	0.0084	0.0098
	(0.0147)	(0.0146)	(0.0136)	(0.0145)	(0.0145)	(0.0146)	(0.0671)	(0.0149)	(0.0149)
Rule of law	0.0833**	0.0776**	0.0703**	0.0712*	0.0706*	0.0770**	0.7354***	0.0486	0.0638*
	(0.0376)	(0.0373)	(0.0348)	(0.0371)	(0.0370)	(0.0373)	(0.2572)	(0.0376)	(0.0378)
Regulatory quality	-0.0062	-0.0065	-0.0335	-0.0126	-0.0108	-0.0020	0.4569**	0.0025	0.0039
	(0.0321)	(0.0319)	(0.0298)	(0.0317)	(0.0316)	(0.0318)	(0.1942)	(0.0319)	(0.0321)
Voice and accountability	0.0088	0.0075	0.0202	0.0106	0.0101	0.0074	0.0528	0.0100	0.0064
	(0.0145)	(0.0143)	(0.0134)	(0.0142)	(0.0142)	(0.0143)	(0.0953)	(0.0144)	(0.0145)

Empirical Results: Political Institutions and FDI in RD

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7-BD	Model 8-CD	Model 9-BDCD
Political Institutions*Ambidexterity									
Control of corruption							0.3154	1.5139**	6.9700***
							(0.2113)	(0.7109)	(2.2180)
Government effectiveness							0.1906	-0.4928	1.2736
							(0.1959)	(0.6828)	(2.5576)
Political stability							0.1618**	0.5276**	1.0032
							(0.0690)	(0.2350)	(0.7094)
Rule of law							0.6847***	2.4940***	6.1712***
							(0.2612)	(0.8560)	(2.4056)
Regulatory quality							0.4586**	1.5097**	3.5132*
							(0.1961)	(0.6480)	(2.0356)
Voice and accountability							-0.0424	0.1575	0.7582
							(0.0963)	(0.3279)	(1.0269)
Constant	1.7652	1.1632	4.1233	1.3874	1.4717	1.2395	0.9025	1.2375	1.7255
	(3.8636)	(3.8346)	(3.5758)	(3.8058)	(3.7997)	(3.8261)	(3.8098)	(3.8036)	(3.8210)
Observations	**1392**	**1392**	**1392**	**1392**	**1392**	**1392**	**1392**	**1392**	**1392**
Year FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Industry FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Empirical Results: Sociocultural Institutions and FDI in RD

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7-BD	Model 8-CD	Model 9-BDCD
Ambidexterity									
Exploration		-0.0536***							
		(0.0128)							
Exploitation			-0.0435***						
			(0.0033)						
Balanced ambidexterity (BD)				-0.2461***			-0.1141		
				(0.0385)			(0.0719)		
Combined ambidexterity (CD)					0.8637***			0.4622*	
					(0.1282)			(0.2394)	
*BD*CD*						2.0049***			1.8415***
						(0.3616)			(0.6269)
Sociocultural Institutions									
Access and Distribution of Opportunities	0.0304***	0.0296***	0.0319***	0.0320***	0.0328***	0.0338***	-0.0266	0.0320***	0.0322***
	(0.0112)	(0.0112)	(0.0106)	(0.0111)	(0.0110)	(0.0111)	(0.0684)	(0.0114)	(0.0114)
Equality and Distribution of Power	-0.0231	-0.0225	0.0299**	0.0252*	0.0263*	0.0279*	0.0398	-0.0228	0.0245*
	(0.0146)	(0.0145)	(0.0138)	(0.0144)	(0.0144)	(0.0145)	(0.0915)	(0.0149)	(0.0149)
Freedom and Autonomy	0.0147	0.0128	0.0212**	0.0137	0.0135	0.0139	0.0178	0.0107	0.0085
	(0.0102)	(0.0101)	(0.0096)	(0.0100)	(0.0100)	(0.0101)	(0.0573)	(0.0104)	(0.0103)
Pluralism	-0.0070	-0.0055	-0.0052	-0.0064	-0.0059	-0.0054	-0.0771	-0.0024	-0.0039
	(0.0089)	(0.0088)	(0.0083)	(0.0087)	(0.0087)	(0.0088)	(0.0519)	(0.0090)	(0.0090)
Social tensions	-0.0723	-0.0722	-0.0446	0.0859*	0.0858*	-0.0761	0.8582**	0.1183**	0.1138**
	(0.0509)	(0.0505)	(0.0479)	(0.0501)	(0.0500)	(0.0503)	(0.3490)	(0.0512)	(0.0513)

Empirical Results: Sociocultural Institutions and FDI in RD

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7-BD	Model 8-CD	Model 9-BDCD
Sociocultural Institutions*Ambidexterity									
Access and Distribution of Opportunities							0.0593	-0.0304	0.7071
							(0.0702)	(0.2266)	(0.5714)
Equality and Distribution of Power							-0.0633	0.0012	-1.1592
							(0.0938)	(0.2939)	(0.7304)
Freedom and Autonomy							-0.0057	0.0994	0.9116*
							(0.0589)	(0.1942)	(0.5175)
Pluralism							0.0744	-0.1873	0.2403
							(0.0533)	(0.1704)	(0.4722)
Social tensions							0.9724***	3.3283***	10.7797***
							(0.3563)	(1.1047)	(2.9074)
Constant	-0.0007	-0.7931	-0.1383	-0.9874	-0.8331	-0.5675	-1.0988	-1.0247	-0.4076
	(3.4875)	(3.4702)	(3.2797)	(3.4381)	(3.4308)	(3.4492)	(3.4366)	(3.4257)	(3.4302)
Observations	**1296**	**1296**	**1296**	**1296**	**1296**	**1296**	**1296**	**1296**	**1296**
Year FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Industry FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Empirical Results: Political and Sociocultural Institutions and FDI in RD

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7-BD	Model 8-CD	Model 9-BDCD
Ambidexterity									
Exploration		-0.0541***							
		(0.0127)							
Exploitation			-0.0446***						
			(0.0033)						
Balanced ambidexterity (BD)				-0.2390***			-0.3725**		
				(0.0386)			(0.1634)		
Combined ambidexterity (CD)					0.8404***			1.2076**	
					(0.1284)			(0.5062)	
*BD*CD*						1.9533***			3.1860**
						(0.3617)			(1.4212)

Empirical Results: Political and Sociocultural Institutions and FDI in RD

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7-BD	Model 8-CD	Model 9-BDCD
Sociocultural Institutions									
Access and Distribution of Opportunities	0.0219*	0.0228*	0.0251**	0.0243*	0.0258*	0.0280**	-0.0587	0.0312**	0.0302**
	(0.0134)	(0.0133)	(0.0126)	(0.0132)	(0.0132)	(0.0133)	(0.0784)	(0.0136)	(0.0137)
Equality and Distribution of Power	0.0113	0.0125	0.0054	0.0068	0.0058	0.0059	0.1382	0.0041	0.0079
	(0.0170)	(0.0168)	(0.0159)	(0.0167)	(0.0167)	(0.0168)	(0.1255)	(0.0170)	(0.0171)
Freedom and Autonomy	0.0363**	0.0318*	0.0374**	0.0300*	0.0284*	0.0285	0.3093**	0.0167	0.0167
	(0.0177)	(0.0176)	(0.0166)	(0.0175)	(0.0175)	(0.0176)	(0.1408)	(0.0178)	(0.0180)
Pluralism	-0.0031	-0.0020	-0.0011	-0.0022	-0.0019	-0.0018	-0.0669	-0.0001	-0.0007
	(0.0093)	(0.0092)	(0.0087)	(0.0092)	(0.0092)	(0.0092)	(0.0554)	(0.0094)	(0.0094)
Social tensions	0.1153*	0.1147*	0.0973*	0.1402**	0.1402**	0.1240**	1.1833***	0.1762***	0.1669***
	(0.0599)	(0.0595)	(0.0561)	(0.0591)	(0.0590)	(0.0592)	(0.4130)	(0.0598)	(0.0602)
Political Institutions									
Control of corruption	0.0866**	0.0863**	0.0872***	0.0844**	0.0835**	0.0824**	0.2515	0.0697**	0.0701**
	(0.0355)	(0.0352)	(0.0332)	(0.0350)	(0.0349)	(0.0351)	(0.3406)	(0.0351)	(0.0353)
Government effectiveness	-0.0073	-0.0113	-0.0249	-0.0163	-0.0201	-0.0246	0.4266	-0.0377	-0.0444
	(0.0466)	(0.0463)	(0.0437)	(0.0460)	(0.0459)	(0.0462)	(0.3061)	(0.0466)	(0.0467)
Political stability	0.0207	0.0203	0.0351*	0.0302	0.0300	0.0237	-0.0264	0.0225	0.0212
	(0.0193)	(0.0192)	(0.0181)	(0.0191)	(0.0190)	(0.0191)	(0.0810)	(0.0194)	(0.0194)
Rule of law	0.0620	0.0561	0.0534	0.0467	0.0449	0.0495	0.8285***	0.0192	0.0316
	(0.0409)	(0.0406)	(0.0383)	(0.0404)	(0.0403)	(0.0405)	(0.3175)	(0.0408)	(0.0410)
Regulatory quality	0.0230	0.0260	0.0020	0.0264	0.0288	0.0330	1.1120***	0.0634	0.0568
	(0.0412)	(0.0410)	(0.0387)	(0.0406)	(0.0406)	(0.0408)	(0.2961)	(0.0409)	(0.0411)
Voice and accountability	0.0813***	0.0780***	0.0689***	0.0727***	0.0708**	0.0716**	0.2488	0.0615**	0.0650**
	(0.0285)	(0.0283)	(0.0267)	(0.0281)	(0.0280)	(0.0282)	(0.1874)	(0.0287)	(0.0288)

Empirical Results: Political and Sociocultural Institutions and FDI in RD

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7-BD	Model 8-CD	Model 9-BDCD
Sociocultural Institutions*Ambidexterity									
Access and Distribution of Opportunities							0.0900	-0.2094	0.2082
							(0.0806)	(0.2583)	(0.6924)
Equality and Distribution of Power							-0.1351	0.2733	-0.3864
							(0.1280)	(0.3901)	(1.0181)
Freedom and Autonomy							0.2908**	0.9167**	2.1153**
							(0.1435)	(0.4224)	(0.9881)
Pluralism							0.0664	-0.1760	0.0847
							(0.0569)	(0.1813)	(0.5038)
Social tensions							1.3555***	4.1679***	11.4574***
							(0.4210)	(1.3112)	(4.0103)
Political Institutions*Ambidexterity									
Control of corruption							0.1793	-0.8762	-3.5066
							(0.3442)	(1.0666)	(2.8646)
Government effectiveness							-0.4598	1.3701	3.3629
							(0.3119)	(1.0203)	(3.6329)
Political stability							0.0477	-0.1821	-0.3116
							(0.0828)	(0.2847)	(0.9744)
Rule of law							0.8059**	2.8428***	6.0144**
							(0.3224)	(1.0334)	(2.7460)
Regulatory quality							1.1734***	3.4625***	5.7844**
							(0.2995)	(0.9363)	(2.6569)
Voice and accountability							0.1860	-0.7027	-2.0218
							(0.1908)	(0.6029)	(1.9344)
Constant	0.6507	-0.0179	2.7199	-0.1185	0.0784	0.3305	-0.7567	-0.4325	0.4724
	(3.9154)	(3.8926)	(3.6711)	(3.8613)	(3.8538)	(3.8734)	(3.8289)	(3.8198)	(3.8474)
Observations	**1296**	**1296**	**1296**	**1296**	**1296**	**1296**	**1296**	**1296**	**1296**
Year FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Industry FE	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Conclusions and Next Steps

- Formal and informal institutions impact the innovation performance of foreign subsidiaries in Africa, while also examining the role of ambidexterity.
- Important role of Exploration, Exploitation, Balanced ambidexterity (BD), Combined ambidexterity (CD), BDCD.
- Significant role of Political and Sociocultural Institutions.
- MNEs shaping institutional context in Africa.

Thank you!!

Questions?

Algeria	Madagascar
Angola	Malawi
Botswana	Mali
Burkina Faso	Mauritania
Cameroon	Mauritius
Chad	Morocco
Cote d Ivoire	Mozambique
Democratic Republic of Congo	Namibia
Djibouti	Niger
Egypt	Nigeria
Equatorial Guinea	Rwanda
Ethiopia	Senegal
Gabon	South Africa
Ghana	Sudan
Guinea	Tanzania
Kenya	Tunisia
Lesotho	Uganda
Liberia	Zambia
Libya	Zimbabwe

Variable	***Description and Source***
FDI in R&D percentage	FDI in R&D percentage measured as the FDI in R&D from a certain investing company in a certain African country in a certain year for a certain project divided by the total FDI in R&D from a certain investing company in a certain African country in a certain year for all projects. *i=company and t=year*
Ambidexterity	
Exploration	A firm's FDI in R&D activity if it is established in a field/sector that the firm was not involved within the last five years (t – 5 to t – 1)
Exploitation	A firm's FDI in R&D activity if it is established in a field/sector that the firm was involved within the last five years (t – 5 to t – 1)
Balanced ambidexterity (BD)	Absolute value of the difference between exploration and exploitation. Higher values indicate greater imbalance.
Combined ambidexterity (CD)	Interaction between exploration and exploitation
BDCD	Interaction between BD and CD

Sociocultural Institutions (Informal Institutions)	
Access and Distribution of Opportunities	
Access to public services distributed by socio-economic position	Access to basic public services, such as order and security, primary education, clean water, and healthcare, distributed equally according to socio-economic position. Higher values indicate higher access. ***Source: Pemstein et al. (2023) from V-DEM.***
Access to state jobs by socio-economic position	Access to state jobs open to qualified individuals, regardless of socio-economic position. Higher values indicate higher access. ***Source: Pemstein et al. (2023) from V-DEM.***
Access to state business opportunities by socio-economic position	Access to state business opportunities distributed to qualified individuals regardless of socio-economic position. Higher values indicate higher access. ***Source: Pemstein et al. (2023) from V-DEM.***
Access to state business opportunities by gender	Access to state business opportunities equally available to qualified individuals or firms regardless of gender. Higher values indicate higher access. ***Source: Pemstein et al. (2023) from V-DEM.***
Access to state jobs by social group	Access to state jobs equally open to qualified individuals regardless of social group. Higher values indicate higher access. ***Source: Pemstein et al. (2023) from V-DEM.***
Access to state business opportunities by social group	Access to state business opportunities equally available to qualified individuals or firms regardless of social group. Higher values indicate higher access. ***Source: Pemstein et al. (2023) from V-DEM.***
Access to public services distributed by social group	Equal opportunities to public services, such as order and security, primary education, clean water, and healthcare, distributed equally across social groups. Higher values indicate higher access. ***Source: Pemstein et al. (2023) from V-DEM.***
Social group exclusion	Index of exclusion by social group. Individuals are denied access to services or participation in governed spaces based on their identity or belonging to a particular group. Higher values indicate a more democratic and equal status. ***Source: Pemstein et al. (2023) from V-DEM.***
Equal access index	Index of equal access to power of different groups to participate, serve, put issues on the political agenda, and influence policymaking. Higher values indicate greater equality in power of the different groups. ***Source: Pemstein et al. (2023) from V-DEM.***
Equality and Distribution of Power	
Ethnic & social group equality	Social group equality in respect for civil liberties. Higher values indicate equality between groups distinguished by language, ethnicity, religion, race, region, or caste. ***Source: Pemstein et al. (2023) from V-DEM.***
Social class equality	Social class equality in respect for civil liberties. Higher values indicate equality between richer and poorer people. ***Source: Pemstein et al. (2023) from V-DEM.***
Equal distribution of resources index	Index of equality in the distribution of resources among different groups as distinguished by socio-economic groups, genders, or income. Higher values indicate greater equality. ***Source: Pemstein et al. (2023) from V-DEM.***
Power distributed by socioeconomic position	The distribution of political power according to socioeconomic position. Higher values indicate higher equality between people of all income levels. ***Source: Pemstein et al. (2023) from V-DEM.***
Power distributed by social group	The distribution of political power according to social groups. Higher values indicate higher equality between groups distinguished by caste, ethnicity, language, race, region, or religion. ***Source: Pemstein et al. (2023) from V-DEM.***

Freedom and Autonomy	
Freedom of discussion	Formal and informal restrictions in citizens openly expressing their political views. Higher values indicate greater freedom of discussion and fewer restrictions. ***Source: Pemstein et al. (2023) from V-DEM.***
Uniformity of respect for civil liberties	Respect for civil liberties is equal and consistent in most or all areas/regions of a country. ***Source: Pemstein et al. (2023) from V-DEM.***
Freedom of expression	Freedom of academic and cultural expression, where higher values indicate greater freedom of expression. ***Source: Pemstein et al. (2023) from V-DEM.***
Pluralism	
Educational pluralism	The extent to which diverse views and interpretations of historical events are taught to students. Higher values indicate higher educational pluralism. ***Source: Pemstein et al. (2023) from V-DEM.***
Social tensions	
Harassment	Specific ethnic groups are the subject of online harassment. Higher values indicate lower harassment incidents. ***Source: Pemstein et al. (2023) from V-DEM.***
Polarization	The extent of differences of opinions on major political issues in society, where higher values indicate no polarization. ***Source: Pemstein et al. (2023) from V-DEM.***
Hate Speech	The extent to which political parties use hate speech, where higher values indicate limited use of hate speech. ***Source: Pemstein et al. (2023) from V-DEM.***

Political Institutions (Formal Institutions)	
Control of corruption	"Control of Corruption" measures perceptions of corruption, conventionally defined as the exercise of public power for private gain. The particular aspect of corruption measured by the various sources differs somewhat, ranging from the frequency of "additional payments to get things done", to the effects of corruption on the business environment, to measuring "grand corruption" in the political arena or in the tendency of elite forms to engage in "state capture". Higher values represent better governance and lower corruption. **Source: The Worldwide Governance Indicators (2024).**
Government effectiveness	"Government Effectiveness" combines into a single grouping responses on the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies. The main focus of this index is on "inputs" required for the government to be able to produce and implement good policies and deliver public goods. Higher values represent better governance and more effective governance. **Source: The Worldwide Governance Indicators (2024).**
Political stability	"Political Stability" combines several indicators which measure perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including domestic violence and terrorism. Higher values represent better governance and more political stability. **Source: The Worldwide Governance Indicators (2024).**
Rule of law	"Rule of Law" includes several indicators which measure the extent to which agents have confidence in and abide by the rules of society. These include perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. Together, these indicators measure the success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions and the extent to which property rights are protected. Higher values represent better governance. **Source: The Worldwide Governance Indicators (2024).**
Regulatory quality	"Regulatory Quality" includes measures of the incidence of market unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development. Higher values represent better governance. **Source: The Worldwide Governance Indicators (2024).**
Voice and accountability	"Voice and Accountability" includes a number of indicators measuring various aspects of the political process, civil liberties and political rights. These indicators measure the extent to which citizens of a country are able to participate in the selection of governments. This category also includes indicators measuring the independence of the media, which serves an important role in monitoring those in authority and holding them accountable for their actions. Higher values represent better governance. **Source: The Worldwide Governance Indicators (2024).**

Country and other controls	
Inflation	Annual average percent change in the consumer price index. **World Bank-World Development Indicators (WDI).**
Unemployment Rate	Unemployment Rate. **World Bank-World Development Indicators (WDI).**
Log Per Capita GDP	Log of the real GDP to population. **World Bank-World Development Indicators (WDI).**
Colonial Ties	Dummy variable indicating if the host African country has colonial ties with the home country. Author's calculations.
Natural Resource Rents (% GDP)	Total natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents. **World Bank-World Development Indicators (WDI).**
Sector	Industry of the investing firm/project.
Age	Age of the investing firm.
Year	Year dummy as a trend. Author's calculations.
High Tech Dummy	Dummy indicating high tech industries according to the Standard Industrial Code (Kile and Phillips, 2009) including pharmaceuticals and medical supplies, computer and office equipment, communications equipment, electronic components and accessories,, measuring and controlling devices, telephone communications, communication services, computer and data processing services, research and testing services.