The Effects of International Economic Agreements on FDI: Evidence from Africa

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Puzzle: Does joining an international economic agreement increase capital flows?

- Why would countries join international economic agreements?

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  - International institutional weakness: Downs et al. (1996), Rose (2004)
  - Domestic institutional weakness: Chayes and Chayes (1998), Gray (2014)

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- This is more likely in an international institution with an enforcement mechanism

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- Countries were bound by the WTO Dispute Settlement Mechanism

Case selection: Africa

Research Design: Matching and Difference-in-difference analyses

FSA membership in Africa

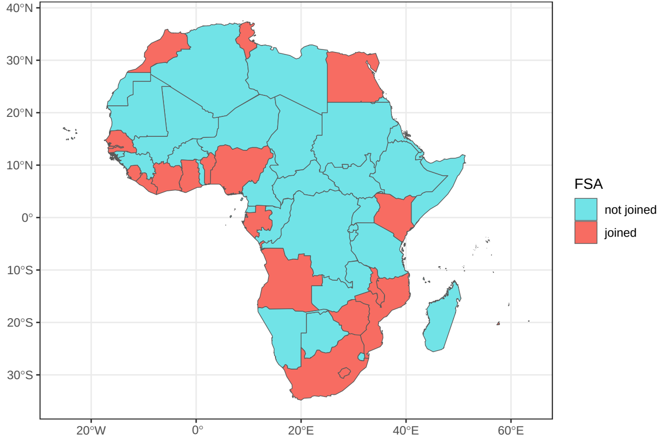

Figure: FSA membership in Africa

Member countries have changed domestic regulations in line with their liberalization commitments

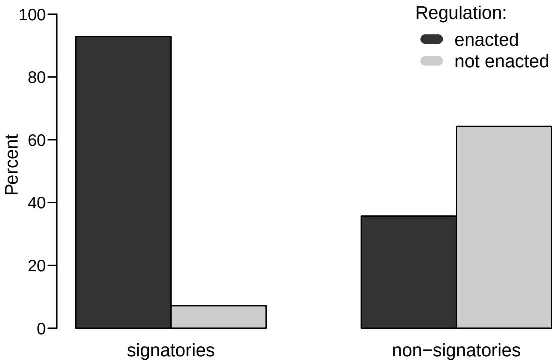

Figure: Domestic Financial Regulatory Reform on Foreign Entry and Liberalization based on FSA status.

Financial Services agreement: Nigeria's schedule

THE FEDERAL REPUBLIC OF NIGERIA
SCHEDULE OF SPECIFIC COMMITMENTS

Modes of supply: 1) Cross-border supply 2) Consumption abroad 3) Commercial presence 4) Presence of natural persons

Sector or Sub-sector	Limitations on Market Access	Limitations on National Treatment	Additional Commitments

7. FINANCIAL SERVICES

(i) Nigeria undertakes commitments on financial services in accordance with the "Understanding on Commitments in Financial Services" (the Understanding).

(ii) The market access commitments in respect of modes (1) and (2) apply only to the transactions indicated in paragraphs B.3 (a) and (b) and B.4 (a) and (b) of the market access section of the Understanding, respectively.

(iii) No foreign company can establish a subsidiary in Nigeria unless it is duly incorporated in Nigeria.

(iv) Foreigners, corporate or individuals can own up to 100 per cent equity in any enterprise.

(v) The Most Favoured Nation (MFN) treatment is accorded to all countries. However, as a member of the Economic Community of West African States (ECCWAS), Nigeria is currently negotiating the use of travellers cheques in the course of the economic integration of the Sub-region.

(vi) The transfer of information containing personal data, bank secret, securities secret and/or business secret is not allowed.

(vii) The Nigerian Investment Promotion Commission Decree of 1995 guarantees against expropriation.

Selected political and economic characteristics

	Not joined	Joined	Diff. (p-val)
GDP per capita (USD)	2549.82	4039.68	0.012
	(274.33)	(560.36)	
Regime type	−1.2	−0.8	0.656
	(0.58)	(0.67)	
Foreign Bank Share (%)	45.39	34.21	0.036
	(3.73)	(3.41)	
Domestic Credit to Financial Sector per GDP (%)	19.07	35.6	0.001
	(2.32)	(4.41)	
Export of goods and services per GDP (%)	25.36	28.31	0.208
	(1.67)	(1.51)	
Corruption	4.93	4.85	0.745
	(0.18)	(0.20)	

Note: Pre-treatment (1994-1996) covariate averages. Entries are means with standard errors in parentheses. Final column displays p-value from two-sided t-test. Regime type is polity score (Marshall and Gurr, 2021), which ranges from -10 (authoritarian) to +10 (democratic). Data for GDP per capita, exports, financial development, and the share of foreign banks come from the World Development Indicator (World Bank, 2020). Corruption is an index of political corruption from 1 to 6 from ICRG (2013).

Empirical Strategy 1: Matching

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- Treatment group: Mozambique, Malawi, Ghana, Ivory Coast, Senegal, Kenya, Zimbabwe, Nigeria, Angola, Morocco, Egypt, Tunisia, and South Africa

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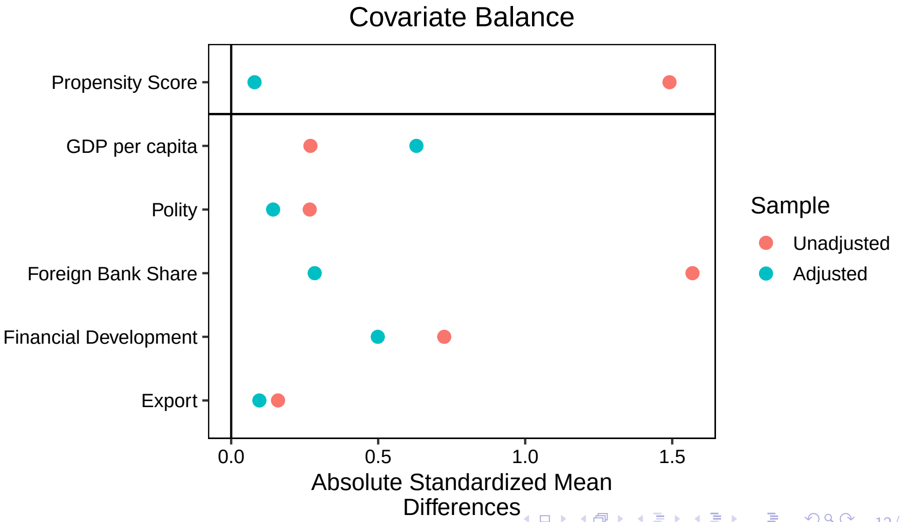
- Treatment group: Mozambique, Malawi, Ghana, Ivory Coast, Senegal, Kenya, Zimbabwe, Nigeria, Angola, Morocco, Egypt, Tunisia, and South Africa
- Control group: Uganda, Burkina Faso, Togo, Mali, Tanzania, Madagascar, Niger, Zambia, Cameroon, Namibia, Botswana, and Algeria

Balance among covariates before and after matching



Effect of FSA membership on FDI inflows

	OLS		Matching		Matching + controls	
	(1)	(2)	(3)	(4)	(5)	(6)
A: Listwise deletion (25 countries)						
FSA membership	0.539	0.523	0.822	0.822	0.539	0.701
	(0.188)	(0.165)	(0.259)	(0.210)	(0.121)	(0.154)
B: Multiple imputation (39 countries)						
FSA membership	0.370	0.385	0.528	0.563	0.550	0.463
	(0.111)	(0.111)	(0.199)	(0.204)	(0.184)	(0.180)
Covariate set	basic	full	basic	full	basic	full

Note: OLS and Matching estimates (1997-2007). Matching estimators in columns (3-6) employ optimal matching on pre-treatment (1994-1996) covariate averages. Columns (5-6) include covariates in outcome regression. Multiple imputation based on 25 data sets imputed using weighted predictive mean matching. Imputation results combined following Rubin (1978). Robust standard errors in parentheses. Dependent variables measured in billion USD. Basic covariate set includes polity from Marshall and Gurr (2021), GDP per capita (log), exports of goods and services, level of financial development, and share of foreign banks from World Bank (2020); full set adds resource wealth from Coppedge et al. (2022) and a measure of corruption from ICRG (2013). Table A.2 in the Appendix provides estimates for all controls.

Robustness tests: Effect of FSA membership on FDI inflows

	OLS	Matching
Legal Origin: UK	0.469	0.539
	(0.149)	(0.119)
Property Rights	0.446	0.504
	(0.146)	(0.128)
Exchange Rate Stability	0.608	0.547
	(0.185)	(0.114)
Inequality (Gini)	0.497	0.563
	(0.156)	(0.116)

Note: Based on OLS and matching analyses with full covariates as in Panel (a) of Table 2. Legal origin data from La Porta, Lopez-de Silanes and Shleifer (2008). Property rights data from La Porta, Lopez-de Silanes and Shleifer (2002). Exchange rate stability data comes from ICRG (2013). Inequality is measured as the Gini of market income obtained from Solt (2020).

Empirical Strategy 2: Difference-in-Difference

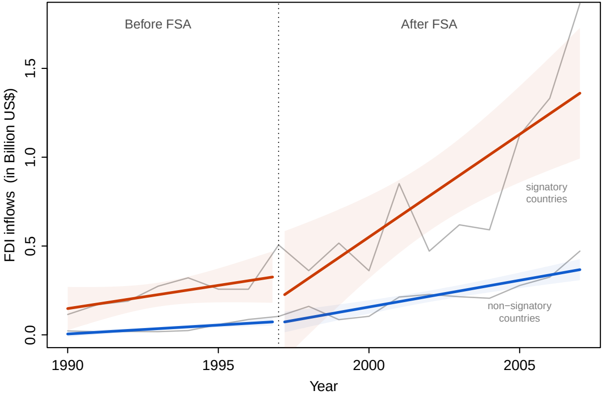


Figure: FDI inflows for Signatory and Non-signatory countries before and after signing the FSA.

Difference-in-Difference estimates of effect of FSA membership on FDI inflows

	(1)	(2)	(3)
FSA membership	0.386	0.323	0.359
	(0.177)	(0.162)	(0.164)
Conditional parallel trends	N	Y	Y
N observations	648	630	510
N countries	37	36	29

Note: Panel-difference-in-difference estimates, 1990-2007. Cluster-robust standard errors in parentheses.

Discussion

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- Joining an international economic agreement increases capital flows, even in developing countries
- Developing countries can benefit from joining an international agreement because it signals that they are open to business, provides transparent information about their regulatory developments, and binds them to international liberalization commitments
- Implications for the proliferation of preferential trade agreements that close development space for developing countries

Thank you!

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Countries in the Sample

Listwise deletion (25 countries)		Multiple Imputation (39 countries)	
Algeria	Namibia	Algeria	Morocco
Burkina Faso	Niger	Angola	Madagascar
Botswana	Nigeria	Burkina Faso	Mali
Ivory Coast	Sudan	Burundi	Mozambique
Cameroon	Senegal	Benin	Malawi
Egypt	Togo	Botswana	Namibia
Ghana	Tunisia	Ivory Coast	Niger
Kenya	Tanzania	Cameroon	Nigeria
Morocco	Uganda	Central frican Republic	Rwanda
Madagascar	South Africa	Djibouti	Sudan
Mali	Zambia	Egypt	Senegal
Mozambique	Zimbabwe	Eritrea	Sierra Leone
Malawi		Ethiopia	Eswatini
		Gabon	Togo
		Ghana	Tunisia
		Gambia	Tanzania
		Equatorial Guinea	Uganda
		Kenya	South Africa
		Lesotho	Zambia
			Zimbabwe

	OLS		Matching		Matching + controls	
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A: Listwise deletion (25 countries)						
FSA membership	0.539	0.523	0.822	0.822	0.539	0.701
	(0.188)	(0.165)	(0.259)	(0.210)	(0.121)	(0.154)
GDP per capita	0.770	0.358			0.770	0.534
	(0.163)	(0.107)			(0.126)	(0.098)
Polity	0.004	0.013			0.004	0.014
	(0.020)	(0.014)			(0.007)	(0.016)
Foreign bank share	0.004	0.006			0.004	0.014
	(0.005)	(0.005)			(0.007)	(0.008)
Domestic Credit	0.005	0.006			0.005	0.007
	(0.004)	(0.004)			(0.004)	(0.005)
Export	-0.027	-0.017			-0.027	-0.018
	(0.008)	(0.006)			(0.008)	(0.009)
Corruption		-0.169				-0.288
		(0.087)				(0.123)
Nat. Resources Inc.pc		0.002				0.003
		(0.001)				(0.001)
B: Multiple imputation (39 countries)						
FSA membership	0.370	0.385	0.528	0.563	0.550	0.463
	(0.111)	(0.111)	(0.199)	(0.204)	(0.184)	(0.180)
GDP per capita	0.055	0.097			0.054	0.095
	(0.015)	(0.024)			(0.020)	(0.051)
Polity	0.011	0.014			0.020	0.030
	(0.011)	(0.012)			(0.016)	(0.019)
Foreign bank share	-0.001	0.000			-0.003	-0.002
	(0.002)	(0.003)			(0.004)	(0.004)
Domestic Credit	0.008	0.008			0.007	0.007
	(0.002)	(0.002)			(0.003)	(0.004)
Export	-0.002	-0.004			-0.001	0.001
	(0.005)	(0.005)			(0.006)	(0.006)
Corruption		-0.068				-0.060
		(0.047)				(0.095)
Nat. Resources Inc.pc		0.000				0.000
		(0.000)				(0.000)

Note: Matching estimators in columns (3-6) employ optimal matching on pre-treatment (1994-1996) covariate averages. Columns (5-6) include covariates in outcome regression. Multiple imputation based on 25 data sets imputed using weighted predictive mean matching. Imputation results combined following Rubin (1978). Robust standard errors in parentheses. Dependent variables measured in billion USD. Basic covariate set includes polity from Marshall and Gurr (2021), GDP per capita (log), exports of goods and services, level of financial development, and share of foreign banks from World Bank (2020); full set adds resource wealth from Coppedge et al. (2022) and a measure of corruption from ICRG (2013).