Changes in institutional design and extraction path

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ONLINE APPENDIX

Table A1. Robustness check with quadratic function of depletion effect

	(1) Ln (Prod/Res)	(2) Ln (Prod/Res)	(3) Ln (Prod/Res)	(4) Ln (Prod/Res)
Oil governance change dummy	-0.385***	-0.381***	-0.317**	-0.358***
	(0.132)	(0.128)	(0.120)	(0.114)
Linear term depletion effect[a]	0.059***	0.054***	0.012	0.047***
	(0.013)	(0.013)	(0.011)	(0.011)
Quadratic term depletion effect[a]	-0.001***	-0.001***	-0.000	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Flow of capital[b]		0.081***		
		(0.026)		
Lag flow of capital[b]			0.175***	
			(0.025)	
Stock of capital[c]				0.263***
				(0.029)
Observations	5632	5632	4944	5611

Notes:
Standard errors are clustered for 596 fields in parentheses. Each column includes field and year fixed effects.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
[a] Proxy by number of years in production.
[b] Proxy by number of development drilling/reserve.
[c] Proxy by number of development drilling projects in the past 3 years/reserve.

Table A2. Robustness check by clustering standard error at basin level

	(1) Ln (Prod/Res)	(2) Ln (Prod/Res)	(3) Ln (Prod/Res)	(4) Ln (Prod/Res)	(5) Ln (Prod/Res)	(6) Ln (Prod/Res)	(7) Ln (Prod/Res)	(8) Ln (Prod/Res)
Gov. change dummy	-0.388*** (0.139)	-0.388*** (0.139)	-0.383*** (0.132)	-0.383*** (0.132)	-0.317** (0.141)	-0.317** (0.141)	-0.360*** (0.112)	-0.360*** (0.113)
Depletion effect[a]		0.037*** (0.011)		0.032*** (0.011)		0.009 (0.011)		0.024*** (0.009)
Flow of capital[b]			0.084*** (0.025)	0.084*** (0.025)				
Lag flow of capital[b]					0.176*** (0.028)	0.176*** (0.028)		
Stock of capital[c]							0.264*** (0.038)	0.264*** (0.038)
Observations	5632	5632	5632	5632	4944	4944	5611	5611

Notes:
Standard errors are adjusted for 53 clusters of basin and are written in parentheses. Each column includes field and year fixed effects.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
[a] Proxy by number of years in production.
[b] Proxy by number of development drilling/reserve.
[c] Proxy by number of development drilling projects in the past 3 years/reserve.

Table A3. Robustness check by clustering standard error at country level

	(1) Ln (Prod/Res)	(2) Ln (Prod/Res)	(3) Ln (Prod/Res)	(4) Ln (Prod/Res)	(5) Ln (Prod/Res)	(6) Ln (Prod/Res)	(7) Ln (Prod/Res)	(8) Ln (Prod/Res)
Gov. change dummy	-0.388*** (0.104)	-0.388*** (0.103)	-0.383*** (0.094)	-0.383*** (0.094)	-0.317* (0.131)	-0.317* (0.131)	-0.360*** (0.059)	-0.360*** (0.059)
Depletion effect[a]		0.037*** (0.010)		0.032*** (0.009)		0.009 (0.011)		0.024*** (0.005)
Flow of capital[b]			0.084*** (0.017)	0.084*** (0.017)				
Lag flow of capital[b]					0.176*** (0.030)	0.176*** (0.030)		
Stock of capital[c]							0.264*** (0.036)	0.264*** (0.037)
Observations	5632	5632	5632	5632	4944	4944	5611	5611

Notes:
Standard errors are adjusted for 9 clusters of countries and are written in parentheses. Each column includes field and year fixed effects.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
[a] Proxy by number of years in production.
[b] Proxy by number of development drilling/reserve.
[c] Proxy by number of development drilling projects in the past 3 years/reserve.

Table A4. Robustness check by dropping fields whose production started after year of 2002

	(1) Ln (Prod/Res)	(2) Ln (Prod/Res)	(3) Ln (Prod/Res)	(4) Ln (Prod/Res)	(5) Ln (Prod/Res)	(6) Ln (Prod/Res)	(7) Ln (Prod/Res)	(8) Ln (Prod/Res)
Gov. change dummy	-0.388*** (0.137)	-0.388*** (0.137)	-0.381*** (0.133)	-0.381*** (0.133)	-0.300** (0.117)	-0.300** (0.117)	-0.360*** (0.121)	-0.360*** (0.121)
Depletion effect[a]		0.028*** (0.009)		0.022** (0.009)		0.005 (0.008)		0.017* (0.009)
Flow of capital[b]			0.114*** (0.028)	0.114*** (0.028)				
Lag flow of capital[b]					0.190*** (0.028)	0.190*** (0.028)		
Stock of capital[c]							0.258*** (0.032)	0.258*** (0.032)
Observations	4764	4764	4764	4764	4595	4595	4750	4750

Notes:
Standard errors are clustered for 413 fields in parentheses. Each column includes field and year fixed effects.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
[a] Proxy by number of years in production.
[b] Proxy by number of development drilling/reserve.
[c] Proxy by number of development drilling projects in the past 3 years/reserve.

Table A5. Robustness check with basin fixed effects

	(1) Ln (Prod/Res)	(2) Ln (Prod/Res)	(3) Ln (Prod/Res)
Oil gov. change dummy	-0.246**	-0.219*	-0.258**
	(0.121)	(0.121)	(0.114)
Depletion effect[a]		-0.011***	-0.006**
		(0.003)	(0.003)
Flow of capital[b]			0.150***
			(0.026)
Observations	5688	5632	5632

Notes:
Standard errors are clustered for 413 fields in parentheses. Each column includes basin and year fixed effects.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.
[a] Proxy by number of years in production.
[b] Proxy by number of development drilling/reserve.

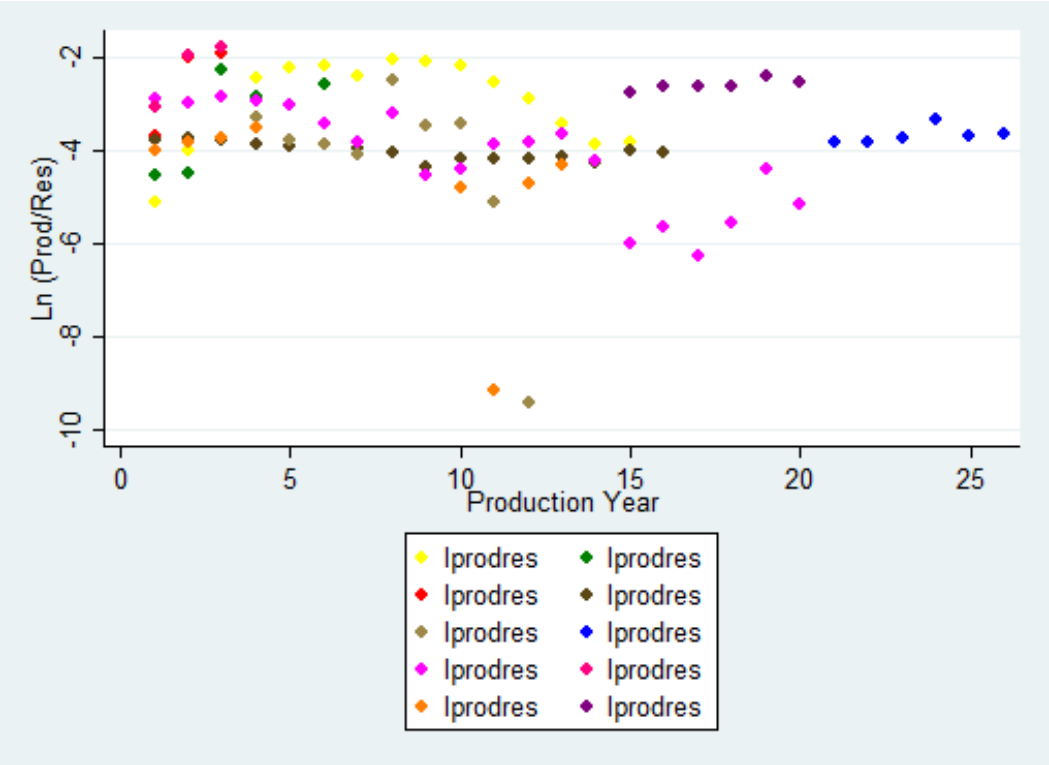

Figure A1. Scatter plot extraction rate vs year in production for 10 random fields

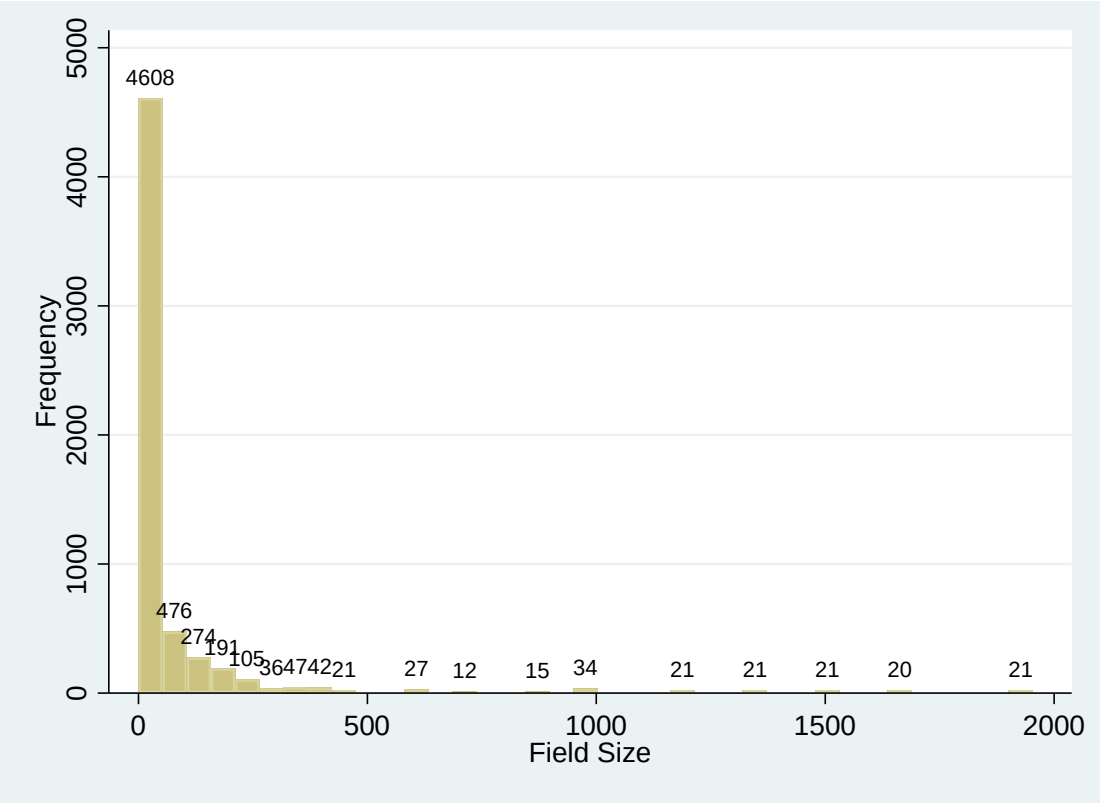

Figure A2. Distribution of field sizes