

Internet Appendix for
“How Do Foreign Labor Regulations Affect Firms’ Operating
Strategies?”

(not for publication)

S. Katie Moon and Giorgio Sertsios

This Internet Appendix contains additional tables that are mentioned and described in the paper but were not reported there to preserve space.

Table IA.1: Global Business Relationships of General Electric Co. in 2012

The table reports business partners of General Electric Co. in 2012 in various types of partnerships identified by the FactSet Revere Relationship database.

<i>Partner-Joint Venture</i>	<i>Country</i>	<i>Partner-Distribution</i>	<i>Country</i>
Braskem SA	Brazil	Ingeteam Corporación SA	Spain
GOL Linhas Aéreas Inteligentes SA	Brazil	<i>Partner-Equity Investment</i>	<i>Country</i>
Aviation Industry Corp. of China Ltd.	China	ATP Oil & Gas Corp.	U.S.
A-Power Energy Generation Systems Ltd.	China	<i>Partner-Supplier</i>	<i>Country</i>
China Energy Investment Corp.	China	China Energy Investment Corp.	China
China Huadian Corp. Ltd.	China	Government of China	China
Government of China	China	Harbin Electric, Inc.	China
Huadian Energy Co., Ltd.	China	Harbin Electric Co. Ltd.	China
State Grid Corp. of China	China	State Grid Corp. of China	China
Safran SA	France	Aircraft Industries as	Czech
Rolls-Royce Holdings Plc	U.K.	E.ON SE	Germany
Triveni Engineering & Industries Ltd.	India	Safran SA	France
Triveni Turbine Ltd.	India	The University of Nottingham	U.K.
Wipro Ltd.	India	HCL Technologies Ltd.	India
Komatsu Ltd.	Japan	Triveni Engineering & Industries Ltd.	India
Mitsubishi Electric Corp.	Japan	Wipro Ltd.	India
Hitachi Ltd.	Japan	Komatsu Ltd.	Japan
Honda Motor Co., Ltd.	Japan	Nissan Motor Co., Ltd.	Japan
Kazatomprom JSC	Kazakhstan	Mitsubishi Corp.	Japan
Qatar Petrochemical Co. Ltd.	Qatar	Toshiba Corp.	Japan
Rosneft Oil Co.	Russia	Kazatomprom JSC	Kazakhstan
Keppel Corp. Ltd.	Singapore	Airbus SE	Netherlands
Boston Scientific Corp.	U.S.	Equinor ASA	Norway
Cavium, Inc.	U.S.	Synergy Group Corp.	Panama
Comcast Corp.	U.S.	National University of Singapore	Singapore
ConocoPhillips	U.S.	Türkiye Lokomotif ve Motor Sanayii	Turkey
Intel Corp.	U.S.	Cavium, Inc.	U.S.
NRG Energy, Inc.	U.S.	CenterPoint Energy, Inc.	U.S.
Microsoft Corp.	U.S.	Chesapeake Energy Corp.	U.S.
The AES Corp.	U.S.	Dyax Corp.	U.S.
United Technologies Corp.	U.S.	Eli Lilly & Co.	U.S.
University of Pittsburgh Medical Center	U.S.	eSolar, Inc.	U.S.
<i>Partner-Marketing</i>	<i>Country</i>	First Solar, Inc.	U.S.
Ingeteam Corporación SA	Spain	Fluor Corp.	U.S.
Honda Motor Co., Ltd.	Japan	General Motors Co.	U.S.
Taylor Morrison Home Corp.	U.S.	Geron Corp.	U.S.
<i>Partner-Licensing</i>	<i>Country</i>	ImaginAb, Inc.	U.S.
Türkiye Lokomotif ve Motor Sanayii AS	Turkey	Immunomedics, Inc.	U.S.
Briggs & Stratton Corp.	U.S.	Intel Corp.	U.S.
Dyax Corp.	U.S.	JPMorgan Chase & Co.	U.S.
eSolar, Inc.	U.S.	Lockheed Martin Corp.	U.S.
Immunomedics, Inc.	U.S.	Microsoft Corp.	U.S.
Geron Corp.	U.S.	Norfolk Southern Corp.	U.S.
		The Boeing Co.	U.S.

Table IA.2: LRI and Country-level Characteristics

The table presents results from estimating country-level panel regressions with country and year fixed effects (Panel A) and pooled panel regressions with year fixed effects only (Panel B). The dependent variable is the LRI index. The explanatory variables are the country-level control variables used in Equation (1). Standard errors (in parentheses) are adjusted for heteroscedasticity and clustered at the country level. Significant at: *10%, **5% and ***1%.

Panel A: Within-country panel regression

VARIABLES	1	2	3	4	5	6	7	8	9
					LRI				
GDP Growth (%)	-0.001 (0.015)								
Credit to GDP (%)		-0.001 (0.005)							
Log(GDP)			0.006 (0.017)						
Log(Exchange Rate)				-0.002 (0.003)					
Political & Business					-0.026 (0.033)				
Corporate Tax Rate (%)						-0.021 (0.022)			
Inflation (%)							0.006 (0.005)		
Economic Freedom								-0.053 (0.047)	
Government Integrity									0.018 (0.022)
Observations	1,132	1,077	1,132	1,102	1,078	1,143	1,132	1,110	1,110
R-squared	0.982	0.982	0.982	0.982	0.982	0.982	0.982	0.981	0.981
Sample	Country-year level								
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Pooled panel regression

VARIABLES	1	2	3	4	5	6	7	8	9
					LRI				
GDP Growth (%)	-0.540** (0.210)								
Credit to GDP (%)		0.000 (0.022)							
Log(GDP)			0.004 (0.007)						
Log(Exchange Rate)				-0.009** (0.004)					
Political & Business					0.115 (0.078)				
Corporate Tax Rate (%)						-0.203 (0.134)			
Inflation (%)							-0.140 (0.089)		
Economic Freedom								-0.030 (0.126)	
Government Integrity									0.009 (0.054)
Observations	1,132	1,077	1,132	1,102	1,078	1,143	1,132	1,110	1,112
R-squared	0.041	0.008	0.007	0.044	0.032	0.021	0.016	0.007	0.006
Sample	Country-year level								
Country FE	No	No	No	No	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table IA.3: Robustness using Additive Fixed Effects

The table presents analogous results to Table 4 that estimate Equation (1) by using less stringent fixed effects. In Table 4, the regression models include firm-by-country and firm-by-year fixed effects, while the regression models in this table include firm, country, and year fixed effects separately. Country control variables include the log of GDP, GDP growth, inflation, corporate tax rate, private credit to GDP ratio, economic freedom index, political and business stability index, log of the exchange rate, and government integrity. All variables are defined in Appendix C. Standard errors (in parentheses) are adjusted for heteroscedasticity and two-way clustered at the firm and country levels. Significant at: *10%, **5% and ***1%.

VARIABLES	1 Partner Dummy	2 Joint Venture Dummy	3 Supplier Dummy	4 Others Dummy
LRI	0.148** (0.057)	0.058** (0.024)	0.067 (0.047)	0.070* (0.041)
Observations	360,354	360,354	360,354	360,354
R-squared	0.187	0.113	0.180	0.176
Sample	Firm-country-year level			
Firm FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Country Controls	Yes	Yes	Yes	Yes

Table IA.4: Robustness after Excluding the Financial Crisis Period

The table presents analogous results to Table 4 that estimate Equation (1) after excluding observations during the crisis period: 2008 and 2009. Country control variables include the log of GDP, GDP growth, inflation, corporate tax rate, private credit to GDP ratio, economic freedom index, political and business stability index, log of the exchange rate, and government integrity. All variables are defined in Appendix C. Standard errors (in parentheses) are adjusted for heteroscedasticity and two-way clustered at the firm and country levels. Significant at: *10%, **5% and ***1%.

VARIABLES	1 Partner Dummy	2 Joint Venture Dummy	3 Supplier Dummy	4 Others Dummy
LRI	0.190** (0.077)	0.127*** (0.037)	0.078 (0.055)	0.060 (0.046)
Observations	283,159	283,159	283,159	283,159
R-squared	0.657	0.616	0.647	0.660
Sample		Firm-country-year level		
Firm-Year FE	Yes	Yes	Yes	Yes
Firm-Country FE	Yes	Yes	Yes	Yes
Country Controls	Yes	Yes	Yes	Yes

Table IA.5: The Effects of LRI Components

The table reports analogous results to Table 4 that estimate Equation (1) by replacing LRI with the five components that compose LRI.

VARIABLES	1 Partner Dummy	2 Joint Venture Dummy	3 Supplier Dummy	4 Others Dummy
Employment contracts	0.036* (0.021)	0.007 (0.008)	0.025 (0.019)	0.017 (0.016)
Working time	0.023 (0.049)	0.051*** (0.019)	-0.023 (0.036)	0.011 (0.028)
Employee representation	-0.032 (0.023)	-0.007 (0.011)	-0.008 (0.021)	-0.003 (0.023)
Dismissal	0.032 (0.027)	0.026** (0.011)	0.003 (0.022)	-0.000 (0.018)
Industrial action	-0.039 (0.088)	-0.051 (0.046)	-0.004 (0.071)	-0.022 (0.062)
Observations	349,607	349,607	349,607	349,607
R-squared	0.658	0.615	0.651	0.660
Sample		Firm-country-year level		
Firm-Year FE	Yes	Yes	Yes	Yes
Firm-Country FE	Yes	Yes	Yes	Yes
Country Controls	Yes	Yes	Yes	Yes

Table IA.6: Summary Statistics of the Event-study Sample

The table presents summary statistics of the event-study sample that is used for the dynamic analyses in Figure 3. We present variables for the numbers of business partners (aggregate and by type) in Panel A, offshore textual mentions in Panel B, M&A transactions and divestitures in Panel C, and country characteristics in Panel D. Observations are at the firm-country-year level in the first three panels and at the country-year level in the last table. The detailed descriptions of variables are available in Appendix C.

	Mean	P10	P25	P50	P75	P90	SD	Obs.
Panel A: FactSet Revere Relationship Data								
Business Partners	0.18	0.00	0.00	0.00	0.00	1.00	0.65	87,631
Partner Dummy	0.09	0.00	0.00	0.00	0.00	0.00	0.29	87,631
Joint Ventures	0.02	0.00	0.00	0.00	0.00	0.00	0.14	87,631
Suppliers	0.08	0.00	0.00	0.00	0.00	0.00	0.33	87,631
Others	0.09	0.00	0.00	0.00	0.00	0.00	0.42	87,631
Joint Venture Dummy	0.01	0.00	0.00	0.00	0.00	0.00	0.12	87,631
Supplier Dummy	0.06	0.00	0.00	0.00	0.00	0.00	0.24	87,631
Other Dummy	0.06	0.00	0.00	0.00	0.00	0.00	0.23	87,631
Panel B: Hoberg and Moon (2017, 2019) Offshore Network Data								
Output	1.23	0.00	0.00	0.00	1.00	4.00	3.28	87,631
Input	1.43	0.00	0.00	0.00	1.00	4.00	4.63	87,631
Internal Input	0.85	0.00	0.00	0.00	0.00	2.00	2.80	87,631
External Input	0.09	0.00	0.00	0.00	0.00	0.00	0.58	87,631
Employee	0.20	0.00	0.00	0.00	0.00	0.00	1.13	87,631
High Internal Input	0.09	0.00	0.00	0.00	0.00	0.00	0.28	87,631
High Internal Input (3Y)	0.08	0.00	0.00	0.00	0.00	0.00	0.27	87,631
High Internal Input (5Y)	0.08	0.00	0.00	0.00	0.00	0.00	0.27	87,631
Panel C: SDC Platinum M&A Data								
M&A Active	0.08	0.00	0.00	0.00	0.00	0.00	0.28	87,631
M&A Active (3Y)	0.01	0.00	0.00	0.00	0.00	0.00	0.12	87,631
M&A Active (5Y)	0.02	0.00	0.00	0.00	0.00	0.00	0.15	87,631
M&A	0.09	0.00	0.00	0.00	0.00	0.00	0.30	7,262
Divestitures	0.01	0.00	0.00	0.00	0.00	0.00	0.12	7,262
M&A Dummy	0.08	0.00	0.00	0.00	0.00	0.00	0.28	7,262
Divestiture Dummy	0.01	0.00	0.00	0.00	0.00	0.00	0.11	7,262
Panel D: Country-level Variables								
LRI	0.49	0.34	0.42	0.49	0.56	0.61	0.11	431
Log(GDP)	25.02	23.08	23.76	24.63	26.40	27.57	1.66	431
GDP Growth %	0.05	0.01	0.03	0.05	0.07	0.10	0.05	431
Inflation %	0.10	0.02	0.04	0.08	0.14	0.20	0.10	431
Corporate Tax Rate	0.26	0.18	0.22	0.28	0.31	0.35	0.07	431
Credit to GDP %	0.38	0.10	0.15	0.28	0.48	0.74	0.33	423
Economic Freedom	0.58	0.50	0.54	0.58	0.62	0.66	0.07	404
Political & Business Stability	0.56	0.43	0.49	0.54	0.62	0.72	0.11	407
Log(Exchange Rate)	4.22	0.83	1.84	3.80	6.35	8.32	2.76	422
Government Integrity	0.34	0.21	0.24	0.30	0.39	0.59	0.16	406

Table IA.7: LRI and M&A or Divestitures

The table presents results from estimating Equation (1) where the dependent variable is an indicator of whether a firm has M&A transactions or divestitures in a given year. In columns 1 and 2, we use only firm-country pairs where M&A transactions have been reported during the sample period to avoid sparse-matrix problems in the estimations. Columns 3 and 4 report the results for the full sample. Country control variables include the log of GDP, GDP growth, inflation, corporate tax rate, private credit to GDP ratio, economic freedom index, political and business stability index, and log of the exchange rate. All variables are defined in Appendix C. Standard errors (in parentheses) are adjusted for heteroscedasticity and two-way clustered at the firm and country levels. Significant at: *10%, **5% and ***1%.

VARIABLES	1 M&A Dummy	2 Divestiture Dummy	3 M&A Dummy	4 Divestiture Dummy
LRI	-0.314*** (0.115)	0.094*** (0.030)	-0.017 (0.014)	0.005 (0.004)
Observations	30,260	30,260	349,607	349,607
R-squared	0.328	0.350	0.231	0.239
Sample	M&A-active firm-country-year		Firm-country-year	
Firm-Year FE	Yes	Yes	Yes	Yes
Firm-Country FE	Yes	Yes	Yes	Yes
Country Controls	Yes	Yes	Yes	Yes

Table IA.8: Past Measures of Integrated Operations

The table reports analogous results to Table 5 Panel A, but using past measures of integrated operations, based on M&A activity and Internal Input mentions in the previous 5 or 3 years.

VARIABLES	1	2 Partner Dummy	3
<i>Panel A: Previous 5 years</i>			
LRI	0.124* (0.063)	0.118* (0.065)	0.111* (0.066)
LRI x M&A Active (5Y)	0.431** (0.189)		0.407** (0.186)
LRI x High Internal Input (5Y)		0.122** (0.059)	0.104* (0.059)
Observations	349,607	349,607	349,607
R-squared	0.658	0.658	0.658
<i>Panel B: Previous 3 years</i>			
LRI	0.124* (0.063)	0.117* (0.064)	0.110* (0.064)
LRI x M&A Active (3Y)	0.612*** (0.154)		0.584*** (0.155)
LRI x High Internal Input (3Y)		0.140** (0.070)	0.121* (0.069)
Observations	349,607	349,607	349,607
R-squared	0.658	0.658	0.658
Sample		Firm-country-year level	
Firm-Year FE	Yes	Yes	Yes
Firm-Country FE	Yes	Yes	Yes
Country Controls	Yes	Yes	Yes

Table IA.10: Other Margins of Operating Adjustments with Equal Weights

The table presents analogous results to Table 7 that estimate Equation (3) by using the equal weighting scheme (OLS) instead of the country importance-weighting scheme (GLS). We also estimate an extended version of Equation (3) that includes the interaction between LRI and an indicator for M&A activeness or intense internal input offshoring. The dependent variable is M&A Dummy that is one if the firm is involved in any M&A transactions in other foreign countries in the same continent or income group excluding the focal country. The income group categories are obtained from the World Bank (high, upper-middle, lower-middle, and low). Country control variables include the log of GDP, GDP growth, inflation, corporate tax rate, private credit to GDP ratio, economic freedom index, political and business stability index, and log of the exchange rate. All variables are defined in Appendix C. Standard errors (in parentheses) are adjusted for heteroscedasticity and two-way clustered at the firm and country levels. Significant at: *10%, **5% and ***1%.

VARIABLES	1	2	3	4	5	6	7	8
	M&A Dummy							
Country groups	Same continent				Similar income group			
LRI	0.050** (0.022)	0.039 (0.028)	0.035 (0.021)	0.026 (0.026)	0.062* (0.034)	0.061* (0.034)	0.034 (0.033)	0.034 (0.033)
LRI x M&A Active		0.097 (0.087)		0.088 (0.089)		0.016 (0.042)		-0.002 (0.041)
LRI x High Internal Input			0.071** (0.030)	0.064** (0.032)			0.132*** (0.028)	0.132*** (0.027)
Observations	349,607	349,607	349,607	349,607	349,607	349,607	349,607	349,607
R-squared	0.612	0.612	0.612	0.612	0.782	0.782	0.782	0.782
Sample	Firm-country-year level							
Firm-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table IA.11: Aggregate Firm-level Outcomes

The table presents analogous results to Column 1 of Table 9 and all columns in Table 10 that estimate the regressions where the dependent variables are sales growth, firm profitability, investment, or financial leverage. In Tables 9 and 10, the observations are at the firm-country-year level, while the observations in this table are at the firm-year level. We use the country importance-weighting scheme (GLS) used in Table 7 for Panel A and the equal-weighting scheme (OLS) in Panel B. Some observations are dropped in Panel A, as we cannot assign weights to countries with no offshore mentions. All variables are defined in Appendix C. Standard errors (in parentheses) are adjusted for heteroscedasticity and clustered at the firm level. Significant at: *10%, **5% and ***1%.

Panel A: Country importance-weighting scheme

VARIABLES	1 Sales Growth	2 ROA	3 Capex/Sales	4 R&D/Sales	5 Book Leverage
Foreign LRI	-0.243*** (0.080)	-0.104** (0.049)	-0.136** (0.066)	-0.055 (0.268)	0.044 (0.045)
Observations	27,919	28,490	28,054	28,054	28,362
R-squared	0.299	0.704	0.684	0.760	0.792

Panel B: Equal-weighting scheme

VARIABLES	1 Sales Growth	2 ROA	3 Capex/Sales	4 R&D/Sales	5 Book Leverage
Foreign LRI	-0.319*** (0.122)	-0.187** (0.073)	-0.026 (0.094)	0.194 (0.380)	-0.064 (0.076)
Observations	30,407	31,045	30,563	30,563	30,911
R-squared	0.297	0.705	0.684	0.761	0.796
Sample	Firm-year level				
Firm FE	Yes	Yes	Yes	Yes	Yes
Ind-Year FE	Yes	Yes	Yes	Yes	Yes
Firm controls	Yes	Yes	Yes	Yes	Yes