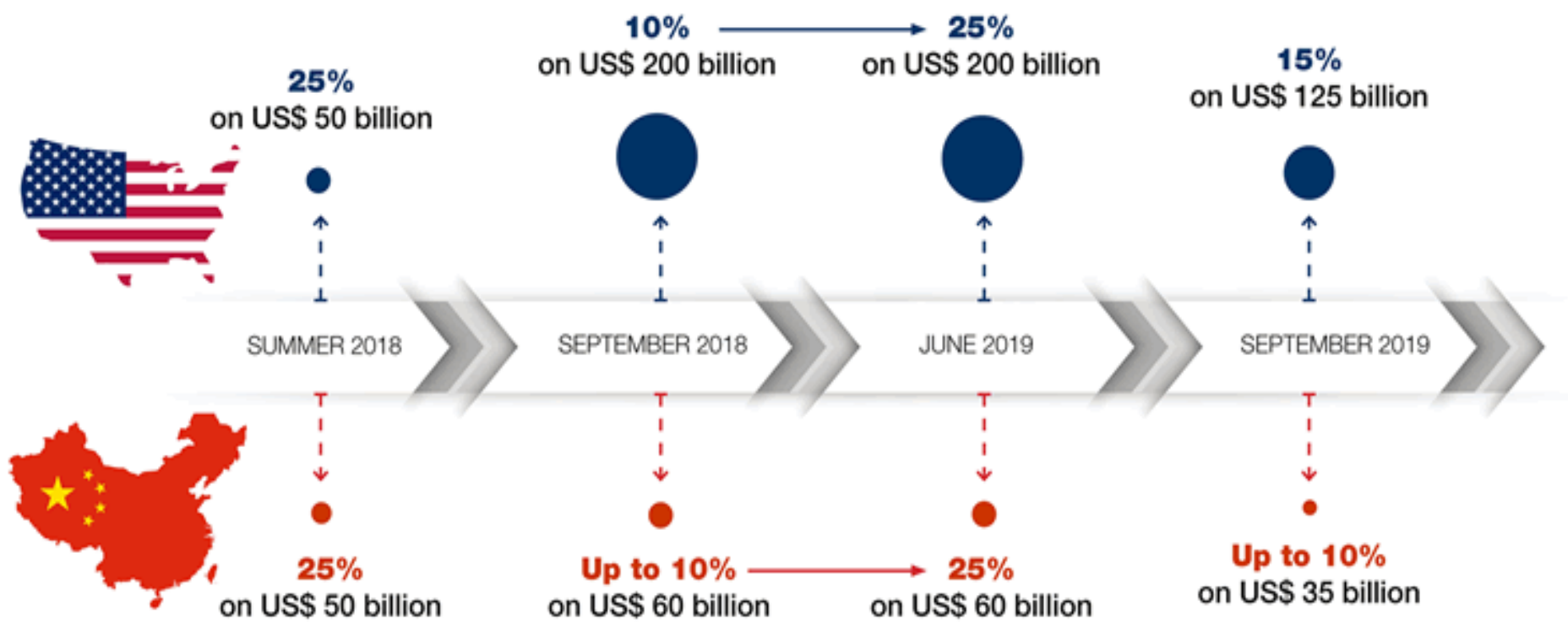


Chinese Firms in the Trade War: Decoupling through Reshoring?

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2018

February 7

US Section 201 tariffs on solar panels and washing machines

March 23

US Section 232 tariffs on steel and aluminum

April 2

China's retaliation to US Section 232 tariffs

May 1

China's MFN tariff cut on pharmaceuticals

July 1

China's MFN tariff cut on consumer goods, autos, and IT products

July 6

US Section 301 tariffs (\$3.4 billion) and China's retaliation (\$3.4 billion)

August 23

US Section 301 tariffs (\$16 billion) and China's retaliation (\$16 billion)

September 24

US Section 301 tariffs (\$200 billion) and China's retaliation (\$60 billion)

November 1

China's MFN tariff cut on industrial goods

2019

January 1

China suspends retaliation against US autos and parts (Section 301) and reduces MFN tariff rates for 2019

February 7

US Section 201 tariffs reduced on solar panels and washing machines in second year of policy

June

US Section 301 tariffs (10% to 25% increase on \$200 billion, effective June 15) and China's retaliation on some US products (subset of \$60 billion, June 1)

July 1

China's MFN tariff cut on IT products

September 1

US Section 301 tariffs (15% on subset of \$300 billion) and China's retaliation on some US products (subset of \$75 billion)

September 17

China implements product exclusions on less than \$2 billion of US exports

December 26

China implements product exclusions on less than \$1 billion of US exports

2020

February 7

US Section 201 tariffs reduced on solar panels and washing machines in year two of policy

February 8

US Section 232 tariffs extended to imports that use aluminum and steel

February 14

US Section 301 tariffs of 15% imposed on September 1, 2019 (subset of \$300 billion) cut in half, and China's retaliatory tariffs imposed on September 1, 2019 (on subset of \$75 billion list) cut in half



Research Question:

- How has the trade war impacted Chinese greenfield investment?

Motivations and Determinants of Chinese Investment

- Economists emphasize the importance of trade costs or that of firm characteristics in influencing the decision to undertake FDI
- The international business literature focuses on the liability of foreignness that firms may incur when operating in a foreign country
- Dunning's OLI Framework
- Existing theories generally point to the importance of the characteristics of parent firm, those of the host country, and the dyadic relationship between the home and destination countries for shaping FDI.

Impact of the Trade War on COFDI

- **Impact of the Tariffs**

Hypothesis 1a: Chinese investment should have declined not only in those sectors subject to the Trumps tariffs in the U.S., but also in other world markets in the since the beginning of the trade war.

Hypothesis 1b: rising U.S. tariffs on Chinese products should lead to increased Chinese investments in the U.S. market.

Hypothesis 1c: Chinese investment may have experienced a decline in the U.S., but an increase elsewhere in the world markets since the beginning of the trade war.

- **Ally-shoring**

Hypothesis 2: Chinese investment should be more likely to flow to countries with good political relations with China in the trade war compared to the pre-trade war period.

- **A BRI Effect?**

Hypothesis 3: Chinese firms should be more likely to invest in BRI partner countries in the trade war compared to the pre-trade war period.

- **Firm Ownership**

Hypothesis 4: SOEs should have been more likely to engage in outward foreign direct investment compared to non-state-owned enterprises since the beginning of the trade war.

Chinese Greenfield FDI, 2013-2021

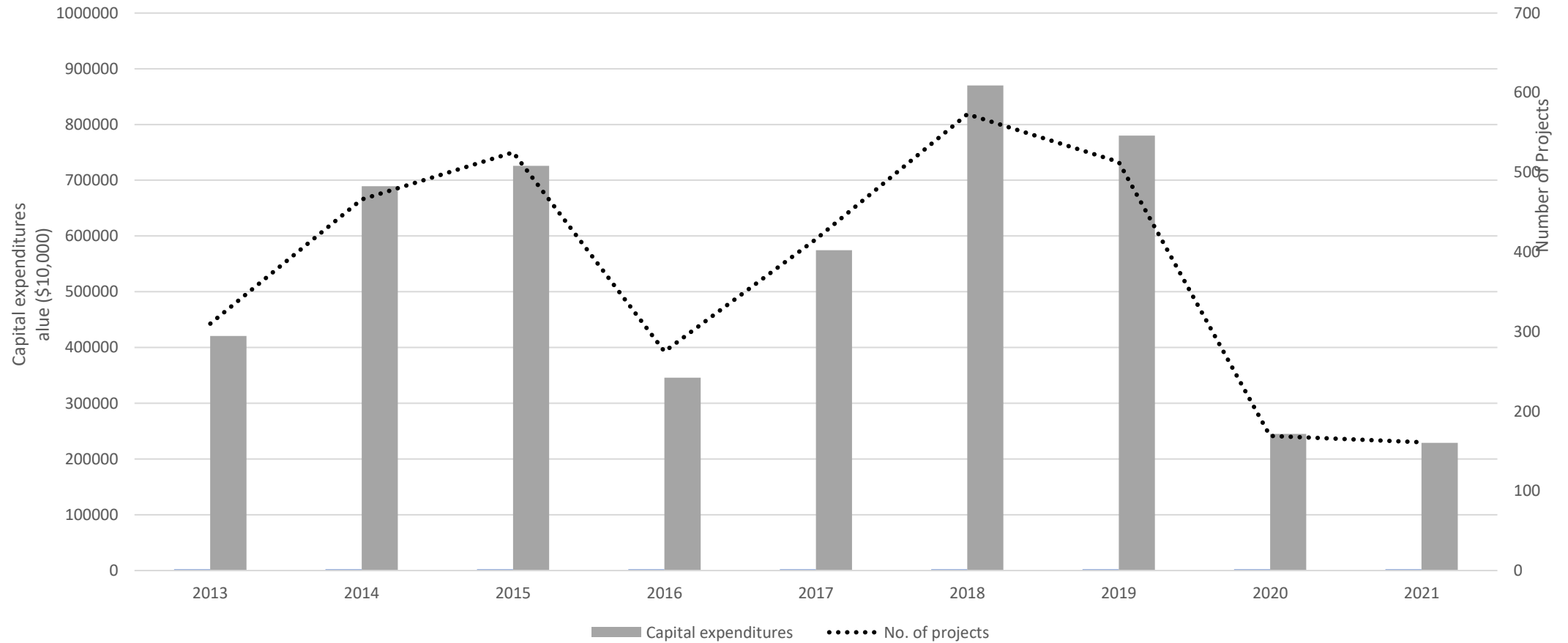
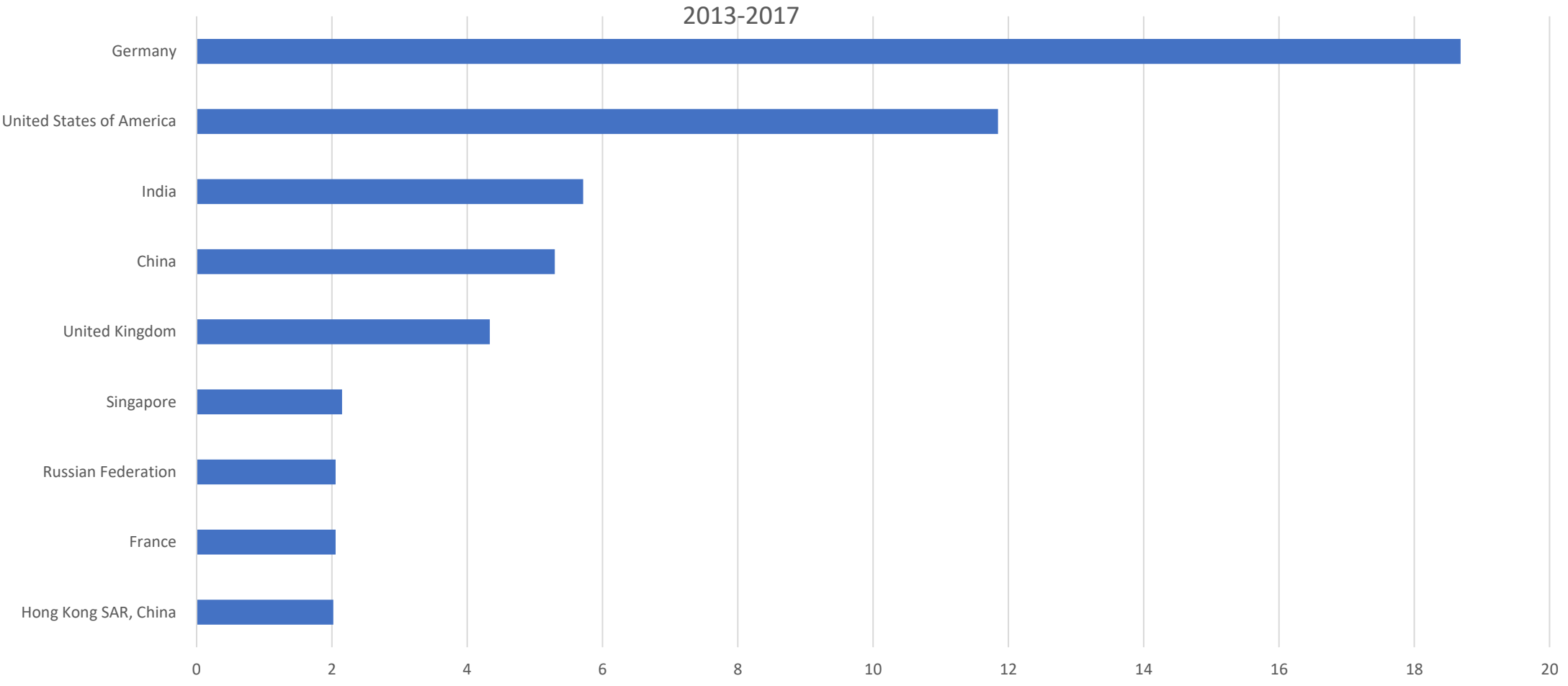
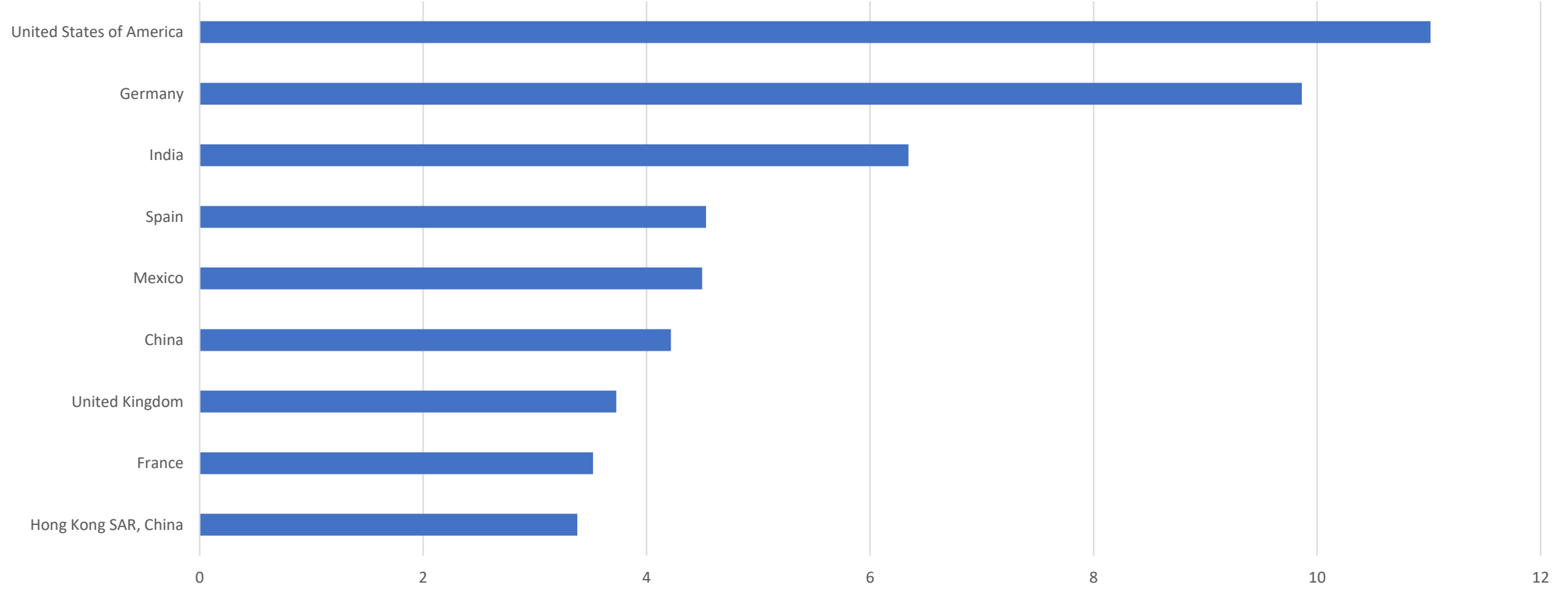


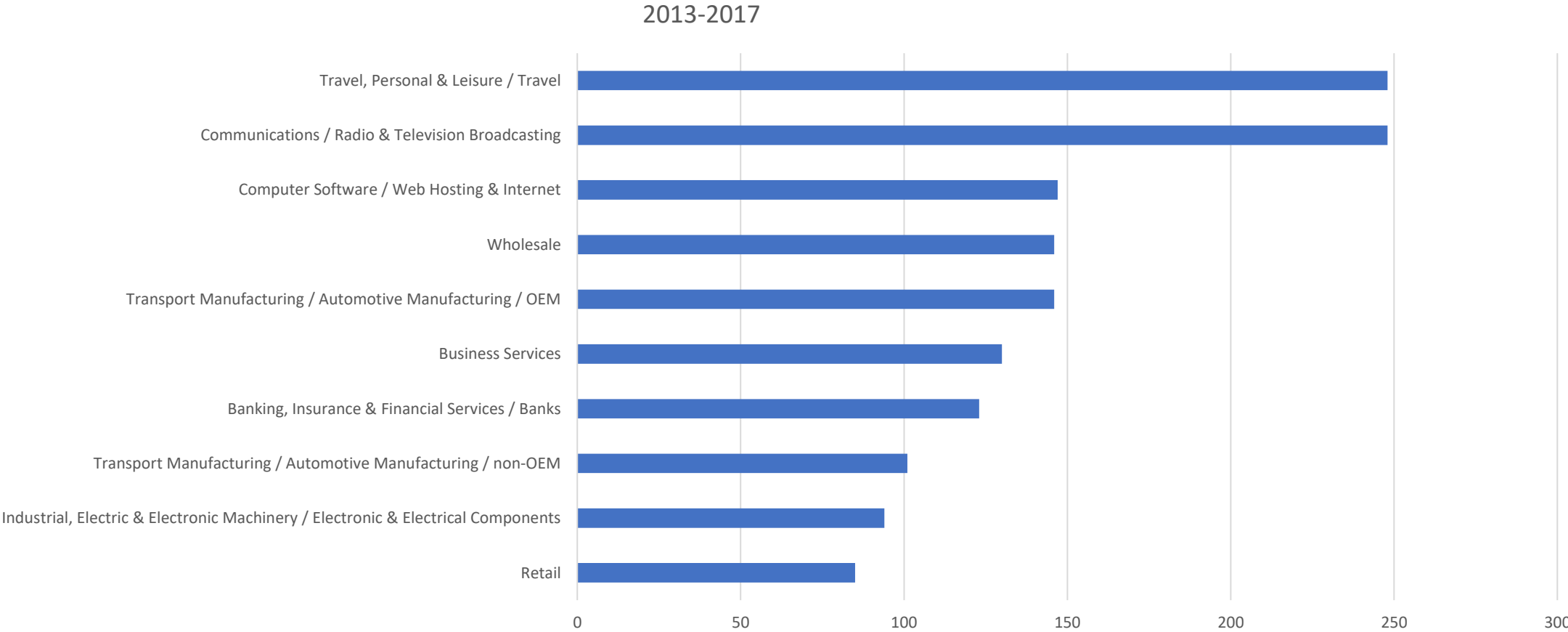
Figure 2: Top 10 Destinations of Chinese Greenfield Investment by Number of Projects, 2013-2021



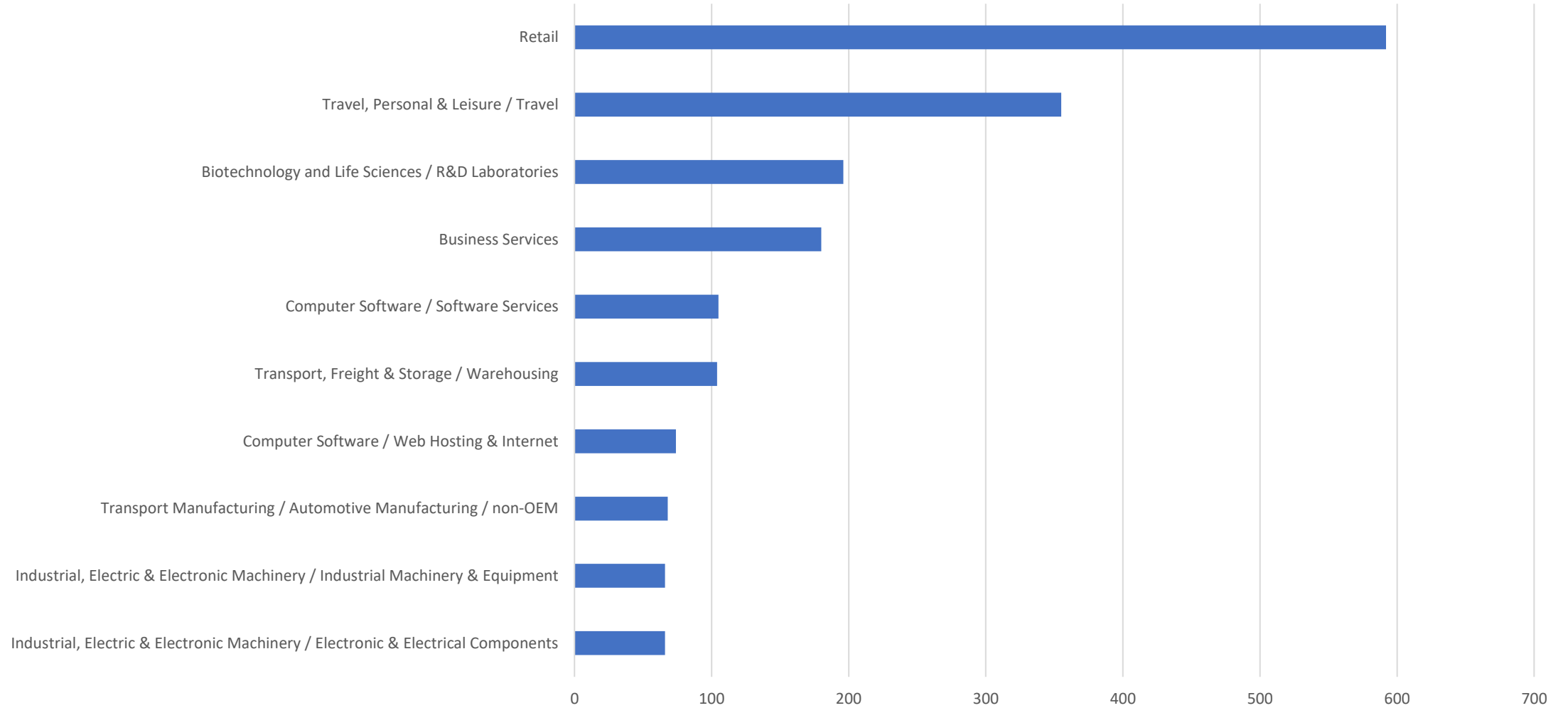
2018-2021



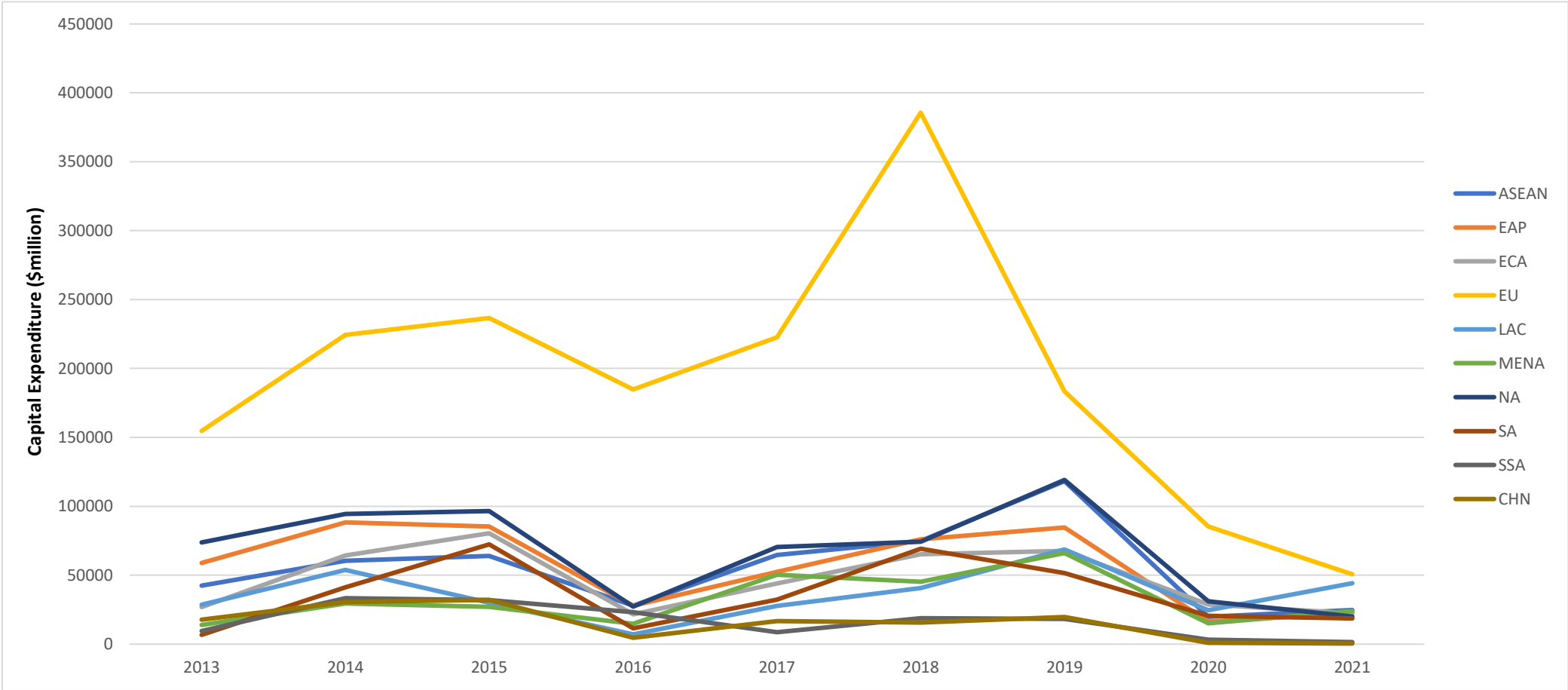
Sectoral Composition of Chinese Greenfield Investment, by Number of Projects in Primary Investing Sector, 2013-2021



2018-2021



Geographical Distribution of Chinese Greenfield Investment, 2013-2021



Data and Variables

- 4,217 greenfield investment projects made by 1,627 unique Chinese firms to 129 destination countries in the 2013-2021 period.
- Cross-sectional, time-series models with firm-destination market as the cross-section.
- Main dependent variable:
Invest: dummy variable which equals 1 if firm i has invested in country j in year t .

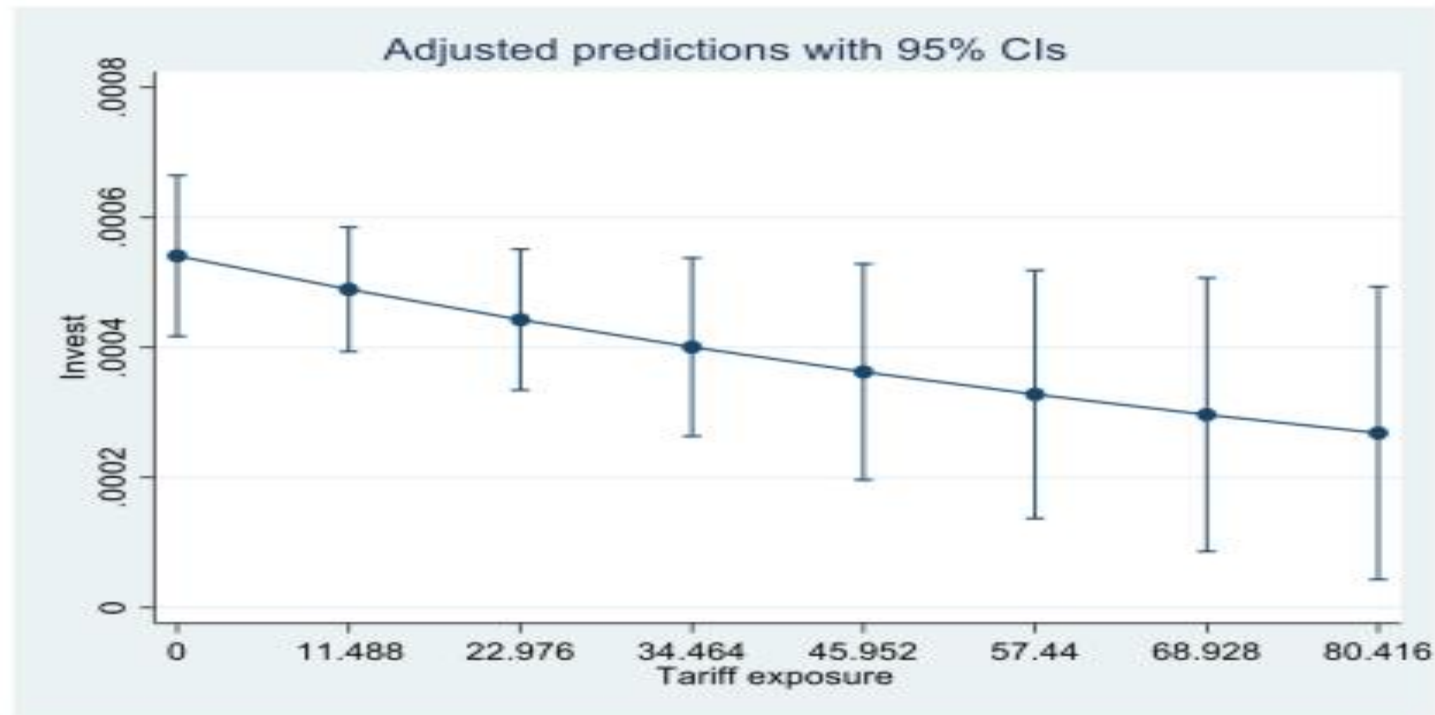
Main independent variables:

- *Tariff Exposure*: dummy variable measuring whether a firm is subject to the Trump tariffs in a given year
- SOE
- Ideal point distance
- BRI partner

Control variables

- *Firm-level variables*: Employees; Profit Margin
- *Country-level variables*: GDP; GDP per capita; Regime; Natural resource rents; FDI restrictiveness; COVID-19 cases
- *Dyadic variables*: BIT with China
- Industry export share to U.S.
- Regional dummy: ASEAN; East Asia and Pacific (EAP); EU; Middle East and North America (MENA); North America (NA); South Asia (SA); Sub-Saharan Africa (SSA)
- Interaction terms: *Tariff exposure*, independent variables of interest (*Political Distance*, *BRI Partner*, *SOE*) and the regional dummies

Predicted Probability of Firm Investment



Predicted probability of firm investment for each unit change in tariff exposure while holding all other variables at their mean based on the results in model (2) in Table 1. As Figure 1 shows, as the firm's tariff exposure increases from its minimum of 0 to the maximum of 81.72, the probability that the firm will invest in a destination country in a given year will decrease from 0.054% to 0.027%.

Table 1: Cross-Sectional Time-Series Logit Models of Greenfield FDI by Chinese Firms

<i>Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	-0.939*** (-8.12)	0.414 (0.37)	-1.038*** (-7.85)	3.399 (1.71)
SOE	0.0935 (0.99)	0.211** (1.98)	0.0945 (0.90)	0.201* (1.75)
Political Distance	-0.114 (-1.49)	-0.0721 (-0.77)	-0.0141 (-0.10)	-0.0351 (-0.20)
BRI Partner	-0.148 (-0.83)	-0.331 (-1.44)	-0.109 (-0.49)	-0.128 (-0.46)
SOE × Tariff Exposure		-0.523** (-2.35)		-0.625** (-2.26)
Political Distance × Tariff Exposure		-0.197 (-1.16)		-0.644** (-2.11)
BRI Partner × Tariff Exposure		-0.121 (-0.40)		-0.628 (-1.16)
ASEAN	1.867*** (5.79)	2.164*** (6.36)	1.992*** (3.78)	1.744*** (3.20)
East Asia & Pacific	-0.629 (-1.63)	-0.535 (-1.23)	-0.439 (-1.15)	-0.394 (-1.10)
European Union	1.294*** (6.96)	1.507*** (7.68)	1.450*** (6.27)	1.502*** (6.16)
Latin America & Caribbean	0.406 (0.81)	0.000124 (0.00)	1.332** (2.29)	0.723 (1.16)
Middle East & North America	1.224*** (4.46)	1.193*** (3.63)	1.216** (2.39)	1.167** (2.19)
North America	-12.33*** (-6.55)	-11.83*** (-6.45)	-11.26*** (-4.71)	-11.56*** (-4.76)
South America	1.685*** (4.78)	1.972*** (5.68)	2.194*** (4.51)	1.942*** (3.72)
Sub-Sahara Africa	-0.0739 (-0.17)	-0.0277 (-0.05)		

ASEAN × Tariff Exposure		0.443 (0.93)		0.547 (0.90)
East Asia & Pacific × Tariff Exposure		0.537 (0.25)		0.486 (0.73)
European Union × Tariff Exposure		-0.0546 (-0.17)		-0.137 (-0.35)
Latin America & Caribbean × Tariff Exposure		0.764 (1.51)		0.870* (1.67)
Middle East & North America × Tariff Exposure		0.926** (2.21)		-0.651 (-0.56)
North America × Tariff Exposure		-0.534 (-1.29)		-0.482 (-1.08)
South America × Tariff Exposure		0.231 (0.47)		-0.282 (-0.45)
Sub-Saharan Africa × Tariff Exposure		0.0315 (0.04)		
Constant	-8.554*** (-13.93)	-9.311*** (-13.72)	-9.293*** (-9.15)	-9.262*** (-7.84)
<i>N</i>	658,605	658,605	274,668	274,668

Estimates generated using *xtlogit* in *Stata 17*
t statistics in parentheses * $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table 2: U.S. Market

<i>Independent Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	0.648	0.721	0.110	0.175
	(1.41)	(1.51)	(0.29)	(0.43)
SOE	0.439**	0.465**	0.419**	0.442**
	(2.30)	(2.31)	(2.18)	(2.19)
SOE × Tariff Exposure		-0.249		-0.221
		(-0.45)		(-0.40)
Constant	9.691***	9.629***	0.000610	-0.0567
	(3.66)	(3.62)	(0.00)	(-0.01)
N	13,198	13,198	13,198	13,198

Table 3: non-U.S. Market

<i>Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	-0.949^{***}	0.487	-0.891^{***}	3.954
	(-8.15)	(0.43)	(-5.92)	(1.91)
SOE	0.0461	0.156	0.0331	0.136
	(0.46)	(1.37)	(0.29)	(1.11)
Ideal Point Distance	-0.138 [*]	-0.0885	-0.124	-0.150
	(-1.80)	(-0.95)	(-0.83)	(-0.85)
BRI Partner	0.194	0.0197	0.286	0.362
	(1.19)	(0.09)	(1.18)	(1.12)
BIT	0.535 ^{***}	0.538 ^{***}	0.794 ^{***}	0.793 ^{***}
	(2.78)	(2.79)	(2.75)	(2.84)
SOE × Tariff Exposure		-0.506^{**}		-0.653^{**}
		(-2.13)		(-2.13)
Political Distance × Tariff Exposure		-0.217		-0.756^{**}
		(-1.25)		(-2.38)
BRI Partner × Tariff Exposure		-0.0280		-0.834
		(-0.08)		(-1.28)
ASEAN	2.451 ^{***}	3.026 ^{***}	2.637 ^{***}	2.402 ^{***}
	(6.73)	(9.77)	(3.91)	(3.59)
East Asia & Pacific	-0.996 ^{**}	-5.034	-0.485	-0.389
	(-2.15)	(-0.86)	(-1.14)	(-0.98)
European Union	1.236 ^{***}	1.568 ^{***}	1.787 ^{***}	1.782 ^{***}
	(6.69)	(7.75)	(7.06)	(6.95)
Latin America & Caribbean	0.364	-0.212	1.103	0.490
	(0.61)	(-0.38)	(1.47)	(0.62)
Middle East & North America	1.767 ^{***}	1.910 ^{***}	1.475 [*]	1.447 [*]
	(6.31)	(6.09)	(1.84)	(1.81)
North America	0.217	0.274	0.276	0.231
	(0.52)	(0.57)	(0.62)	(0.47)
South America	1.991 ^{***}	2.560 ^{***}	2.534 ^{***}	2.333 ^{***}
	(4.75)	(7.31)	(4.52)	(3.99)
Sub-Sahara Africa	0.235	0.334		
	(0.50)	(0.62)		

ASEAN × Tariff Exposure		0.128 (0.25)		0.637 (0.96)
East Asia & Pacific × Tariff Exposure		0.324 (0.56)		0.763 (0.85)
European Union × Tariff Exposure		-0.103 (-0.31)		0.239 (0.59)
Latin America & Caribbean × Tariff Exposure		0.670 (1.27)		0.988* (1.76)
Middle East & North America × Tariff Exposure		0.632 (1.40)		-0.707 (-0.58)
North America × Tariff Exposure		0.0793 (0.09)		0.0745 (0.08)
South America × Tariff Exposure		0.0967 (0.19)		-0.373 (-0.58)
Sub-Saharan Africa × Tariff Exposure		-0.285 (-0.33)		
Constant	-8.827*** (-12.09)	-9.981*** (-14.59)	-10.02*** (-9.50)	-9.840*** (-8.15)
<i>N</i>	652,878	652878	268,941	268,941

estimates generated using *xtlogit* in *Stata 17*
statistics in parentheses * $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table 4a. Results for Different World Regions: Mexico

<i>Independent Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	-0.251 (-0.38)	-0.271 (-0.35)	-0.380 (-0.65)	-0.417 (-0.57)
Constant	-45.92 (-1.17)	-45.90 (-1.17)	35.73 (0.61)	35.85 (0.62)
<i>N</i>	13,198	13,198	13,198	13,198

Table 4b. Results for Different World Regions: ASEAN

<i>Independent Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	-0.393 (-1.62)	5.269*** (3.17)	-0.426 (-1.60)	7.621*** (3.25)
<i>N</i>	118,782	118,782	87,562	87,562

Table 4c. Results for Different World Regions: European Union

<i>Independent Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	-0.989*** (-6.40)	21.70* (1.83)	-0.246 (-1.19)	23.04* (1.89)
Constant	-13.63*** (-3.66)	-14.06*** (-3.76)	-11.04*** (-2.73)	-12.16*** (-2.93)
<i>N</i>	290,356	290,356	215,630	215,630

Table 4d. Results for Different World Regions: Latin America & Caribbean

<i>Independent Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	-0.687** (-2.33)	-3.229 (-0.86)	-0.396 (-1.20)	-4.165 (-0.65)
Constant	-7.562*** (-6.74)	-7.423*** (-6.59)	-3.245 (-1.12)	-3.284 (-1.14)
<i>N</i>	250,762	250,762	82,846	82,846

Estimates generated using *xtlogit* in *Stata 17*

t statistics in parentheses * $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Capital-Intensive Industries

<i>Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	-0.932^{***}	-0.348	-0.996^{***}	1.706
	(-7.35)	(-0.25)	(-6.93)	(0.72)
SOE	0.0778	0.208 [*]	0.0974	0.189
	(0.71)	(1.68)	(0.80)	(1.40)
Political Distance	-0.0873	-0.0835	-0.0185	-0.137
	(-0.96)	(-0.80)	(-0.10)	(-0.63)
BRI Partner	-0.0899	-0.233	0.0636	0.0767
	(-0.47)	(-0.93)	(0.25)	(0.24)
SOE × Tariff Exposure		-0.576^{**}		-0.497[*]
		(-2.26)		(-1.65)
Political Distance × Tariff Exposure		-0.116		-0.412
		(-0.58)		(-1.17)
BRI Partner × Tariff Exposure		-0.140		-0.623
		(-0.41)		(-1.10)
ASEAN × Tariff Exposure		0.473		0.828
		(0.81)		(1.18)
East Asia & Pacific × Tariff Exposure		0.304		0.104
		(0.51)		(0.16)
European Union × Tariff Exposure		0.226		0.0646
		(0.48)		(0.11)
Latin America & Caribbean × Tariff Exposure		1.471 ^{**}		1.641 ^{**}
		(2.32)		(2.17)
Middle East & North America × Tariff Exposure		0.930 [*]		-0.277
		(1.67)		(-0.21)
North America × Tariff Exposure		-0.455		-0.567
		(-0.82)		(-0.92)
South America × Tariff Exposure		0.793		0.442
		(1.26)		(0.52)
Sub-Saharan Africa × Tariff Exposure		-0.0738		
		(-0.07)		
Constant	-8.906^{***}	-8.853^{***}	-9.592^{***}	-8.989^{***}
	(-12.31)	(-10.43)	(-7.90)	(-6.42)
<i>N</i>	539,465	539,465	224,723	224,723

Table 6: Labor-Intensive Industries

<i>Independent Variable</i>	(1)	(2)	(3)	(4)
Tariff Exposure	-0.765**	2.165	-1.049**	6.989
	(-2.22)	(1.00)	(-2.47)	(2.78)
SOE	0.140	0.134	0.0508	0.116
	(0.57)	(0.49)	(0.19)	(0.62)
Political Distance	-0.107	-0.00748	0.173	0.0124
	(-0.68)	(-0.04)	(0.67)	(0.08)
BRI Partner	-0.411	-0.776	-1.234**	-0.562
	(-0.76)	(-1.14)	(-2.27)	(-1.18)
SOE × Tariff exposure		0.0201		-1.073
		(0.04)		(-1.58)
Political Distance×Tariff Exposure		-0.276		-0.766*
		(-0.83)		(-2.13)
BRI Partner × Tariff Exposure		0.0579		0.583
		(0.08)		(0.75)
Constant	-7.262***	-9.152***	-7.658***	-8.066**
	(-8.11)	(-7.45)	(-5.66)	(-6.04)
<i>N</i>	128,225	128,225	54,918	53,864

Estimates generated using *xtlogit* in *Stata 17*

t statistics in parentheses * $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table 7. Global Value Chains and Greenfield FDI by Chinese Firms

<i>Independent Variable</i>	(1)	(2)	(3)
Tariff exposure	-1.028*** (-7.94)	1.448 (0.68)	-1.142*** (-8.06)
SOE	0.0958 (0.91)	0.203* (1.74)	0.0576 (0.51)
Political Distance	-0.0713 (-0.60)	-0.0473 (-0.33)	-0.0250 (-0.14)
BRI Partner	-0.192 (-0.89)	-0.258 (-0.99)	-0.0505 (-0.18)
Backward GVC Linkage	-0.0357 (-0.89)	-0.0432 (-1.04)	-0.0372 (-0.89)
Forward GVC Linkage	0.0239 (0.85)	0.0348 (1.07)	0.0388 (1.24)
SOE × Tariff Exposure		-0.508** (-2.00)	
Political Distance × Tariff Exposure		-0.359 (-1.26)	
BRI Partner × Tariff Exposure		-0.0835 (-0.20)	
Backward GVC Linkage × Tariff Exposure		0.0559 (0.036)	
Forward GVC Linkage × Tariff Exposure		-0.0389 (-0.73)	
Constant	-10.46*** (-9.88)	-10.65*** (-8.83)	-10.77*** (-8.41)
<i>N</i>	281,244	278,982	192,381

Estimates generated using *xtlogit* in *Stata 17*
t statistics in parentheses * $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Conclusion

- Tariff exposure likely dampened investment
- Covid-19 cases associated with a lower likelihood of investment
- BRI effect
- Reduced willingness by SOEs to invest abroad
- Increased importance of political alignment in the post-2018 period



THANK YOU!