Economic Trends in Asia

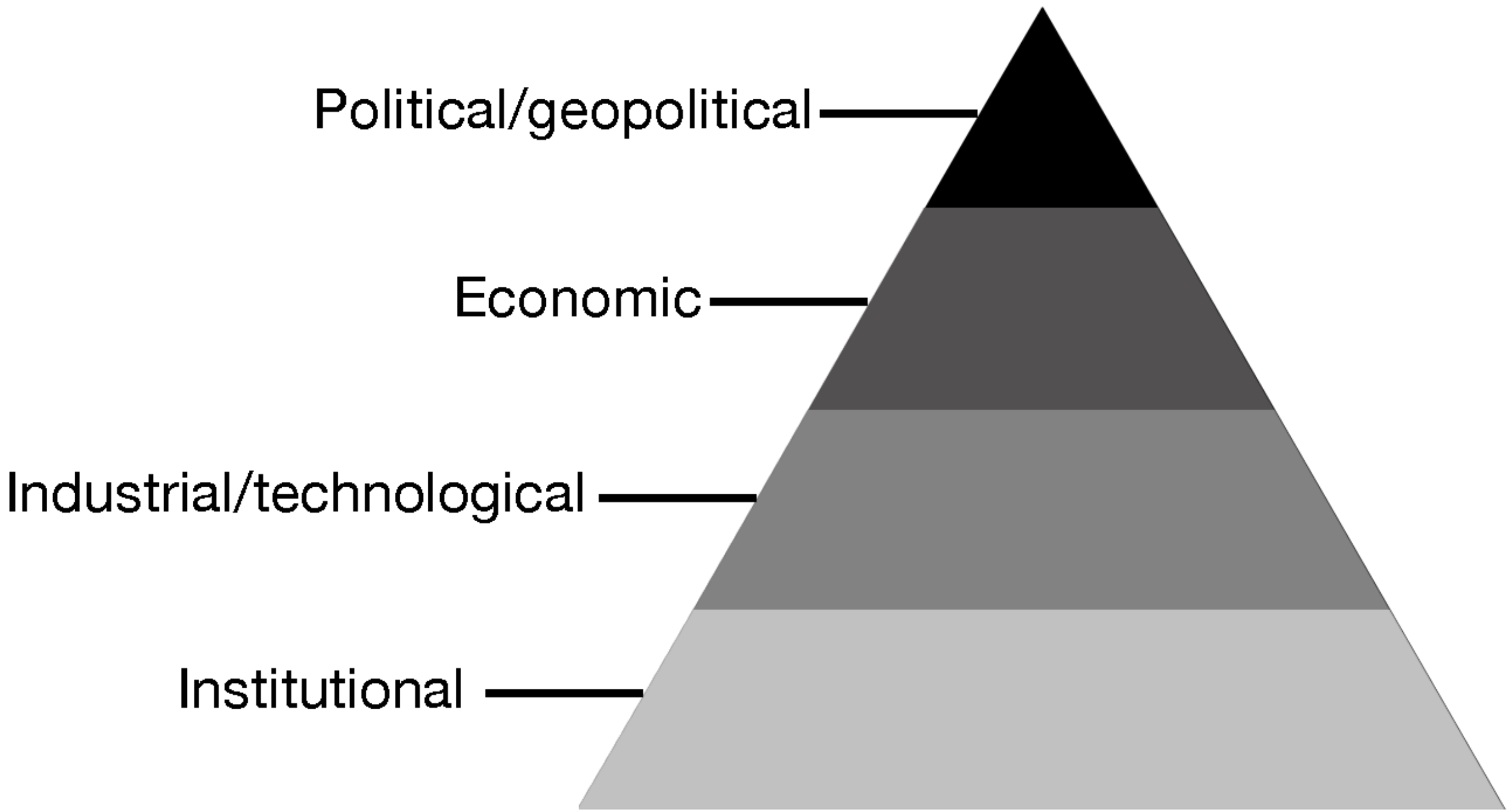
SAIS

May 2017

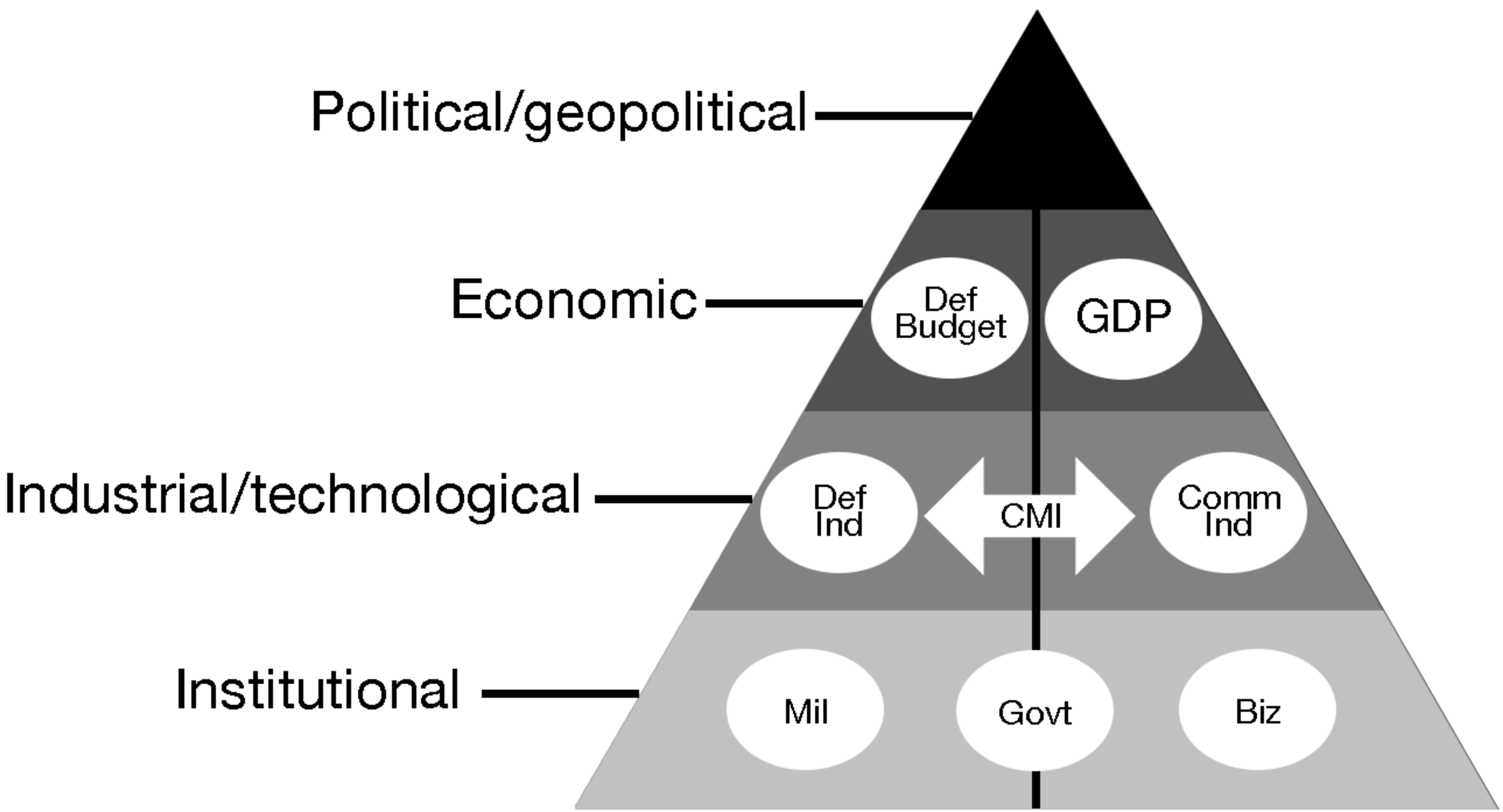
Starting premises

- Economics is a security concern
- Asia story is “unipolar”
- Strategic competition underway
- Observable metrics

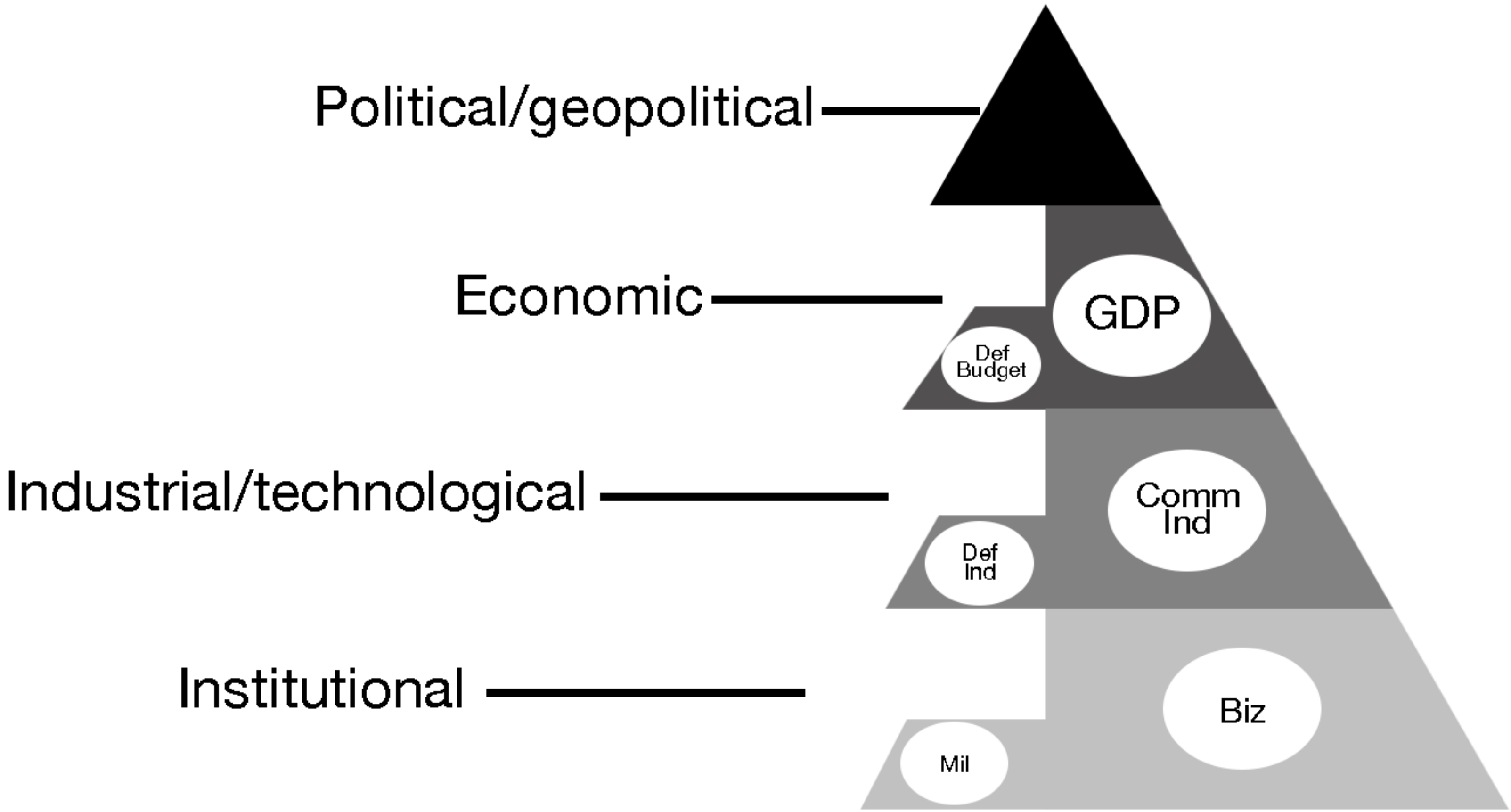
Foundations of power



Economics vs security

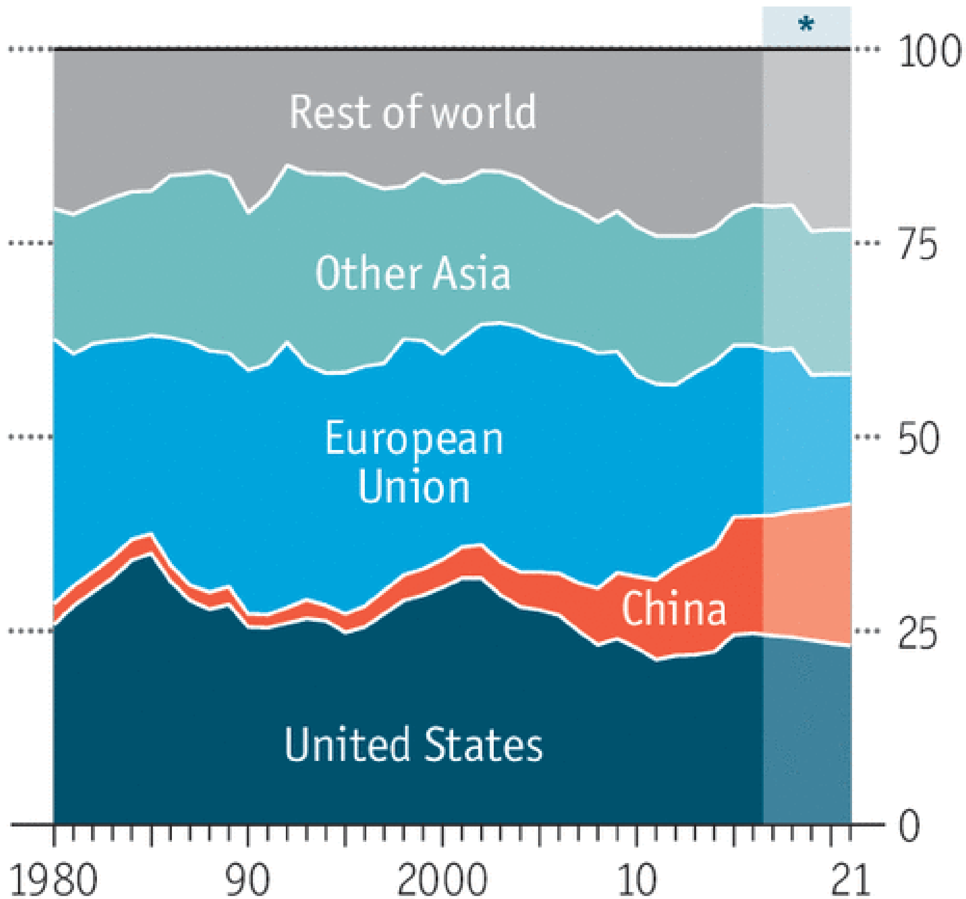


Competition between nations



Asia is a “unipolar” story

Share of global GDP, at market prices *(%)*



Source: IMF

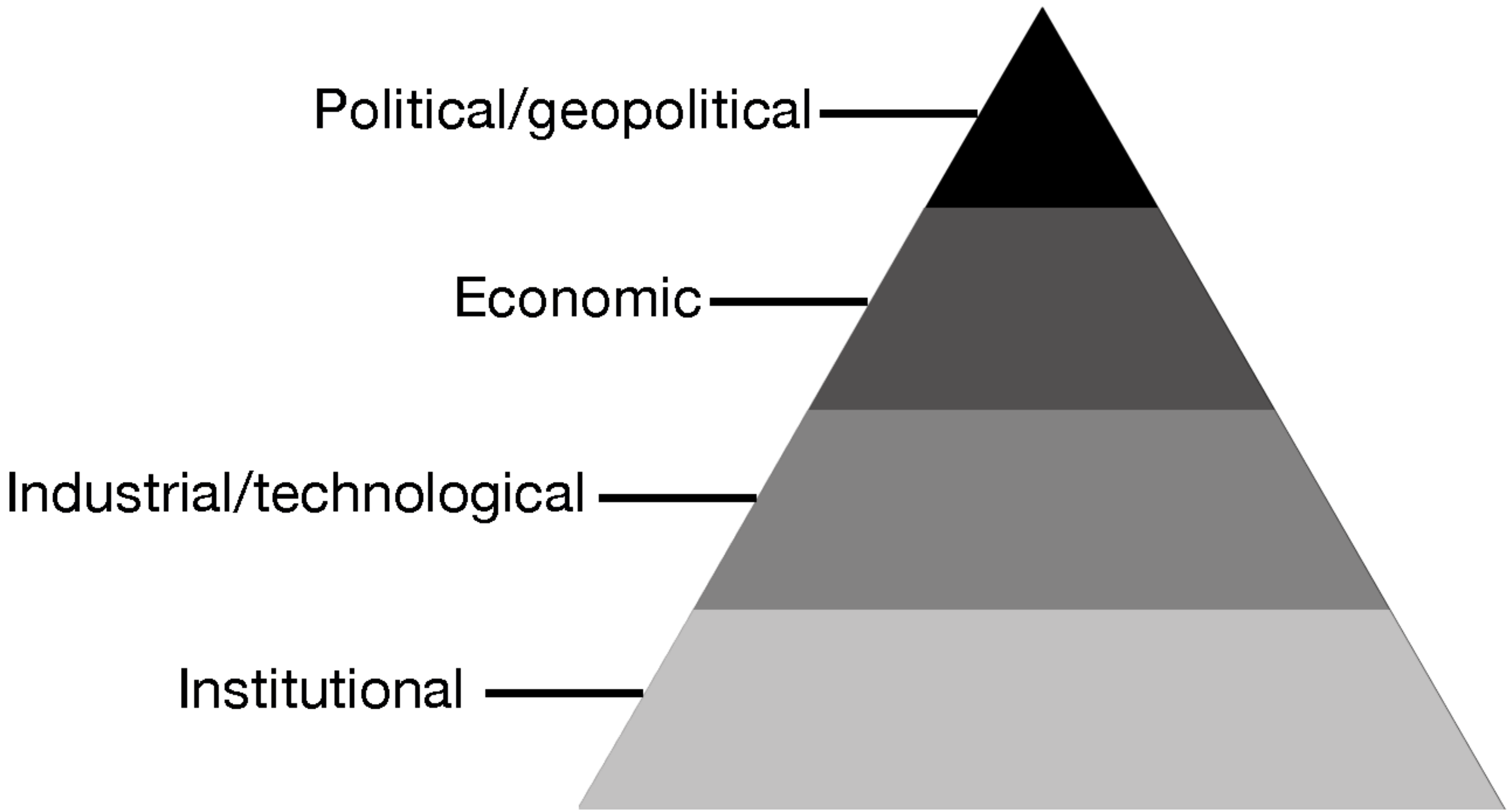
ASEAN: lapped

GDP per capita, *US$ PPP (constant 2011 prices)*

	1990	**2015**
US	37,062	52,704
Japan	30,447	37,872
Korea	12,087	34,387
China	1,526	13,572
Thailand	6,561	15,347
Philippines	4,010	6,938
Indonesia	4,625	10,385
Vietnam	1,501	5,667

Source: World Bank

Foundations of power



Strategic competition

- Institutional differences
- Major tech/industrial catchup effort by China
- Narrowing economic power gap
- Global contest over role and rules

Soviet-Japanese hybrid

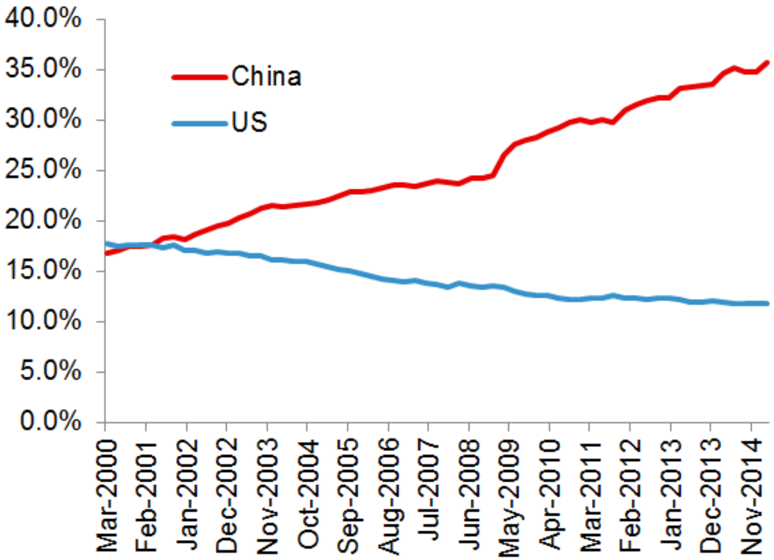
Subsidies + factor distortions = trade surplus

% of GDP

Source: Huang & Tao, ADB 279

Market financialization + repression = money creation

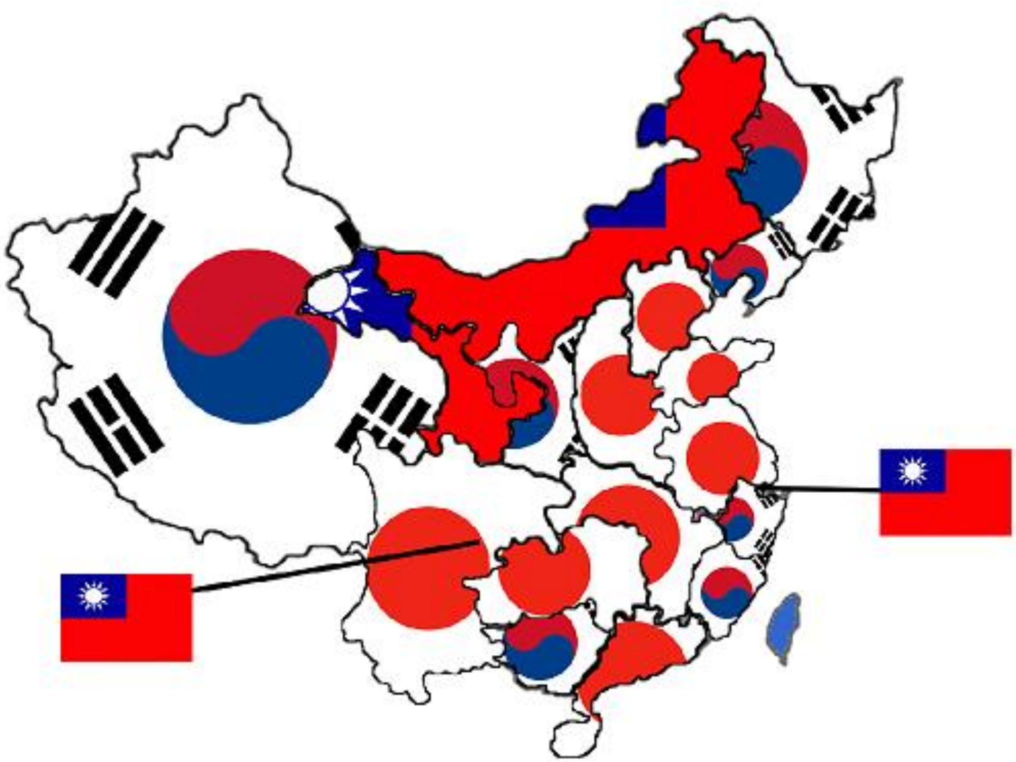
% of world's new money



Source: UBS; Incremental M2 % of world

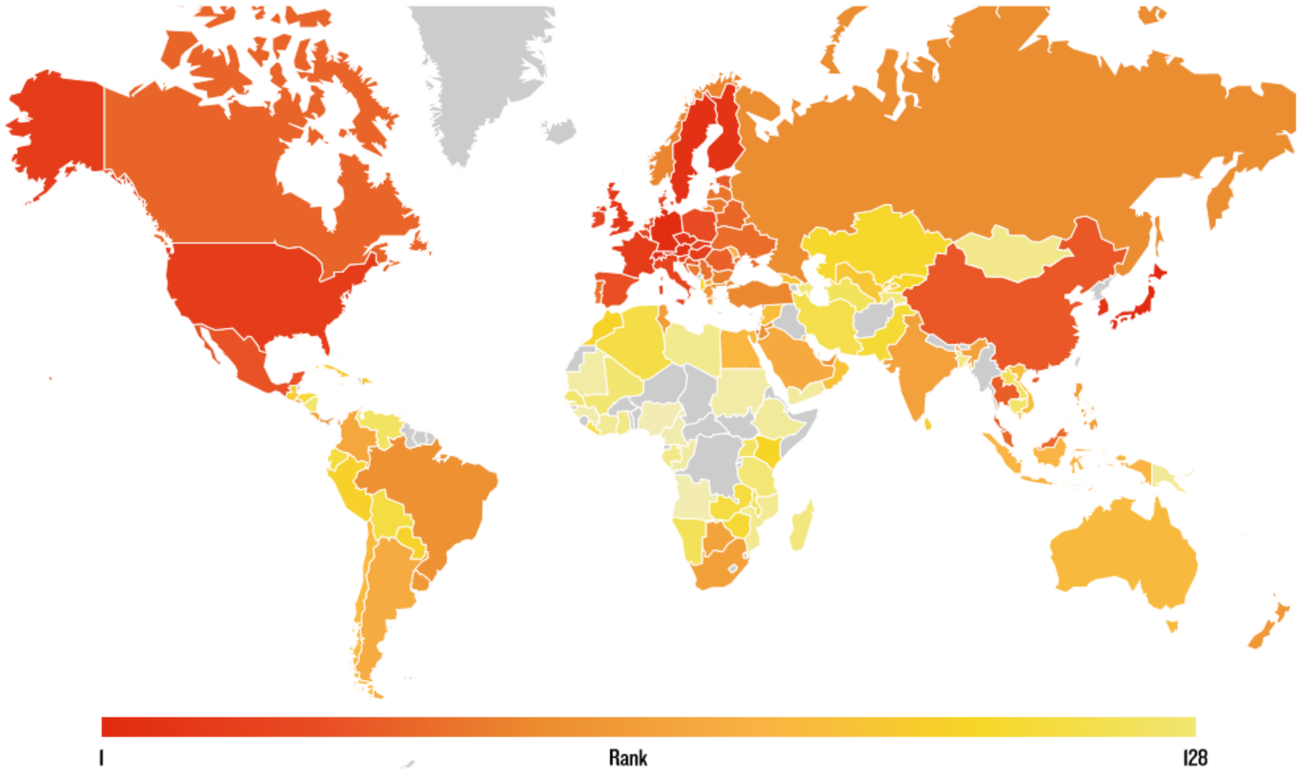
But 10x larger

What China looks like to East Asia…



Already a “complex” rival

Economic Complexity *(= diversity x nonubiquity)*



Source: Hidalgo & Hausmann

Different economic structures

China as % of world:

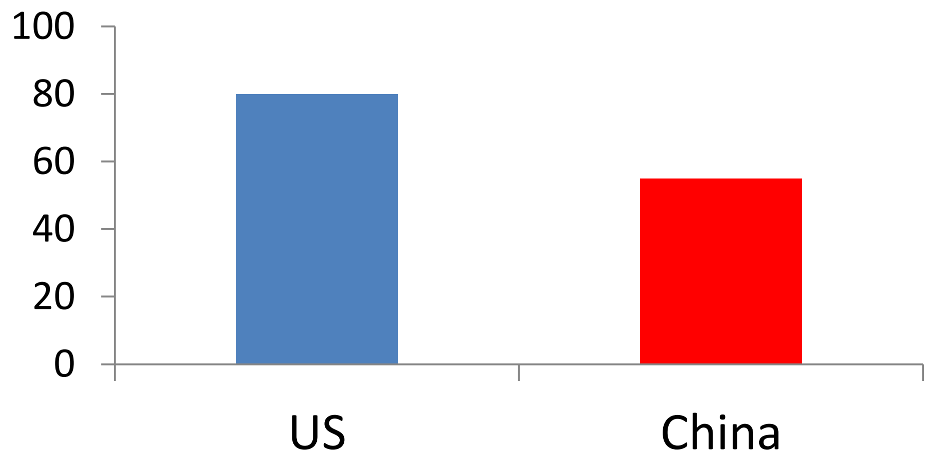
- 48% of steel output
- 50% of coal
- 57% of cement
- >40% of shipbuilding
- ~70% of electronics
- ~90% of new HSR
- 52% of antibiotics

US 'qualitative' edge

- IT budget 3x higher
- Rail track 2x longer
- 5x healthcare budget
- 100x GA aircraft
- Farms 300x avg size

National balance sheets

Net social assets *($ trillions)*



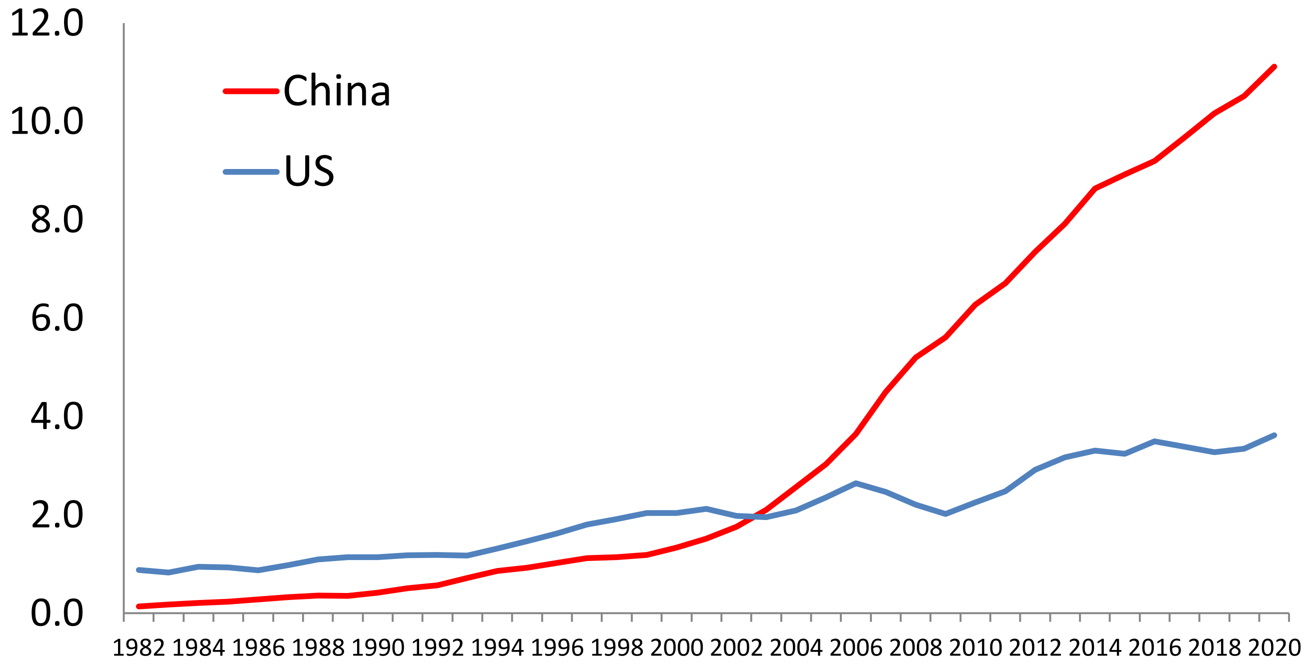
BUT…

- "Inclusive wealth" gap bigger
- Private sector >100% in US; 50% in China

Source: Federal Reserve Z.1, CASS

Never seen savings like this

Gross national savings at PPP *($ trillions)*

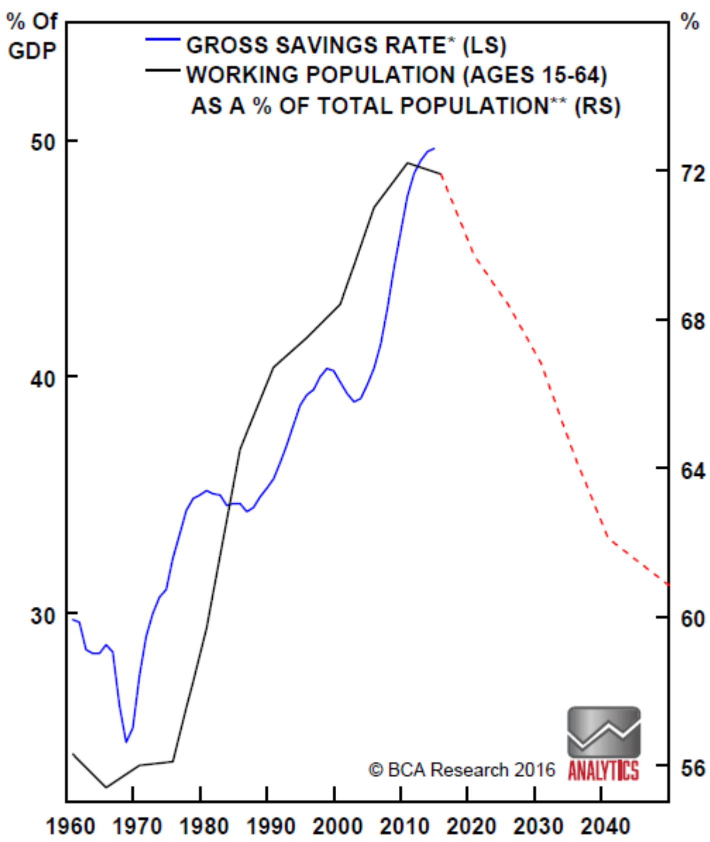


Why? *Demographics, welfare, financial repression*

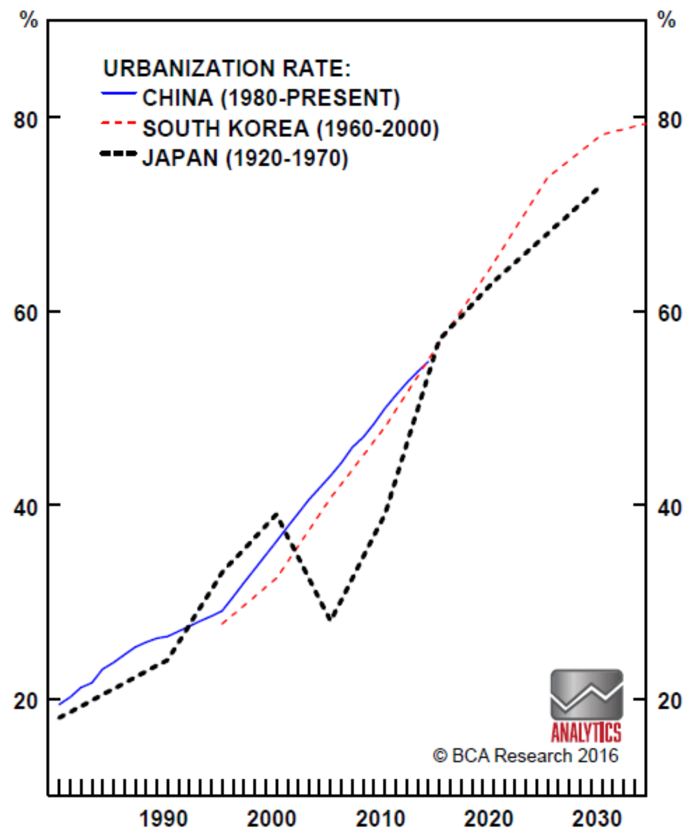
Source: IMF

Structurally-driven saving

Demographics

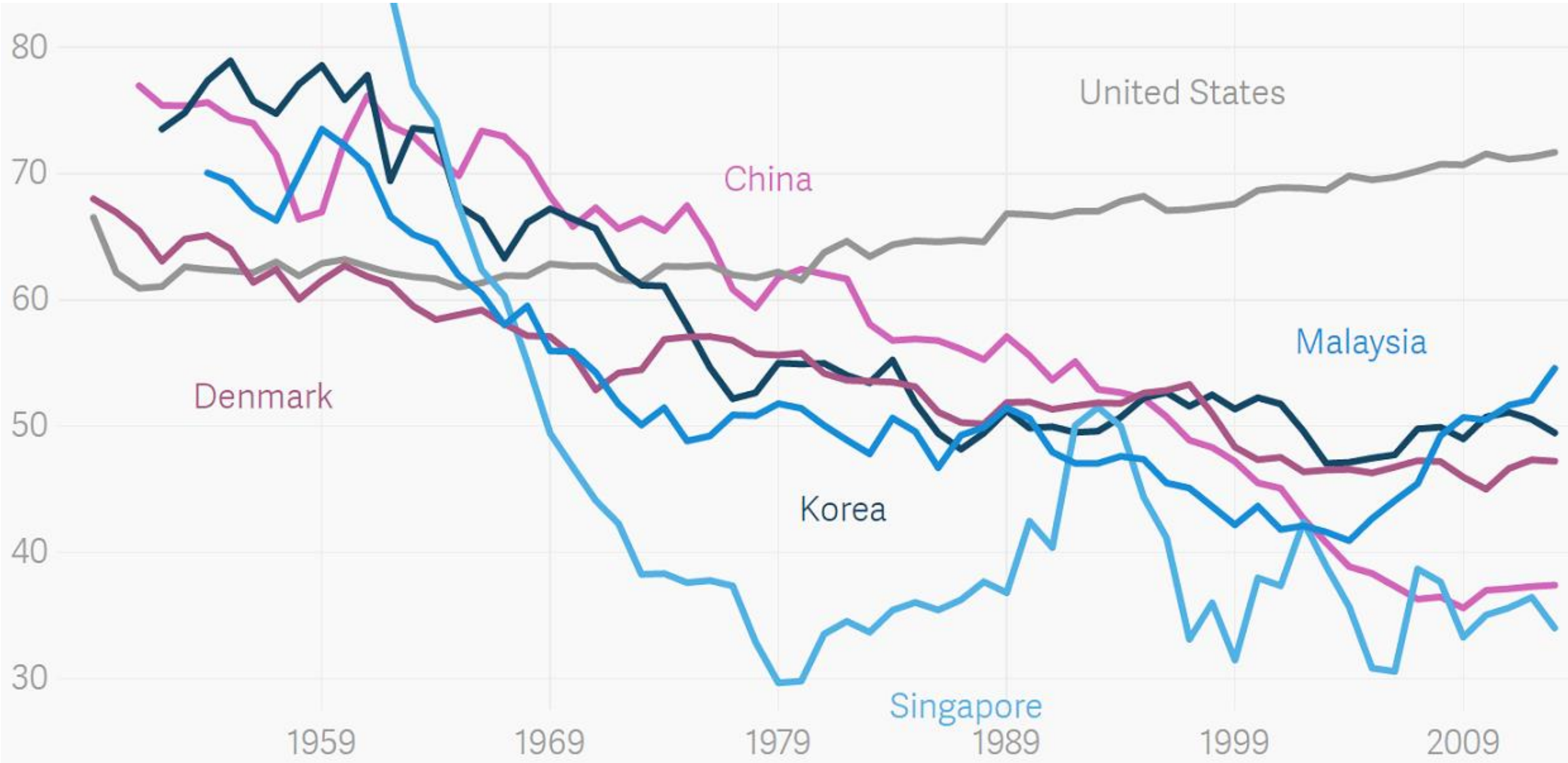


Urbanization



Super-saver in a sea of savings

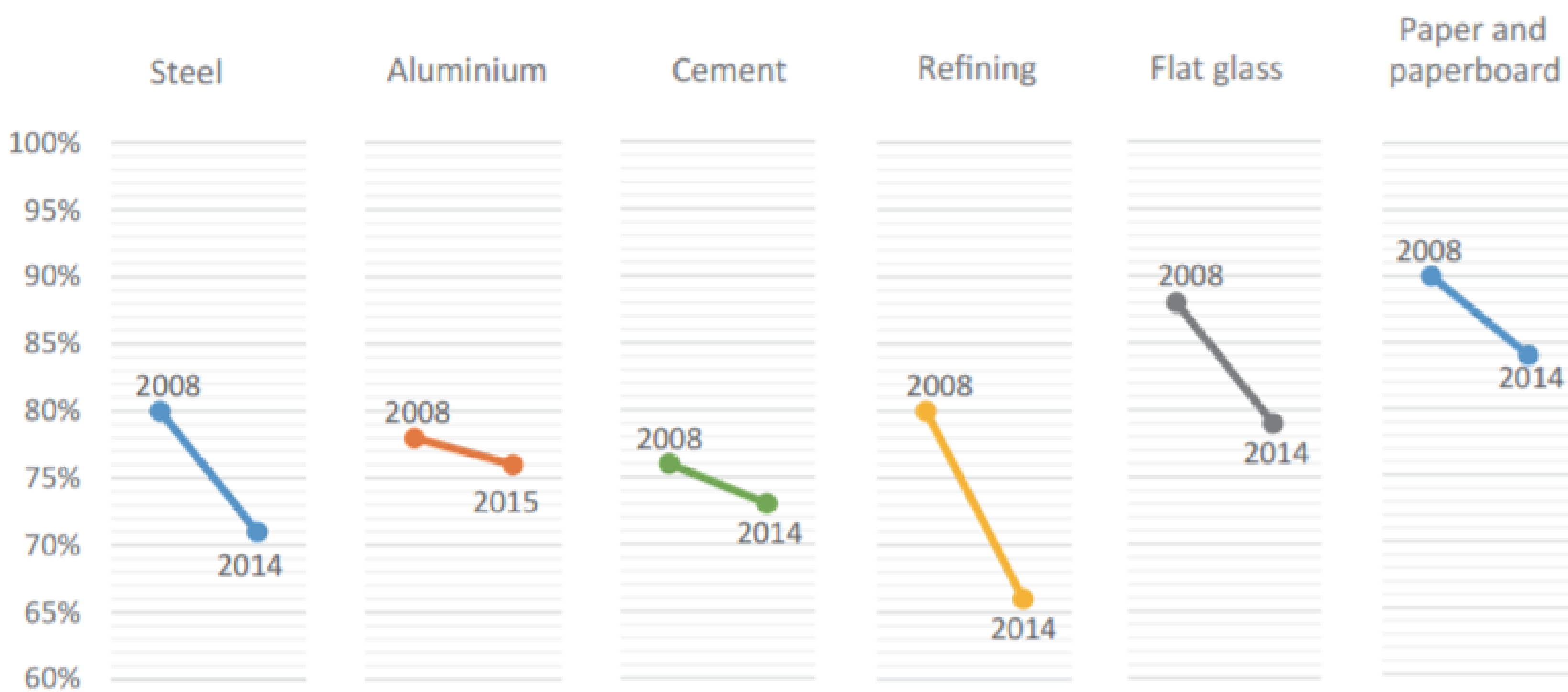
Consumption/GDP ratio, selected countries, *(%)*



Source: Feenstra, Inkler & Timmer (2015)

Capital misallocation

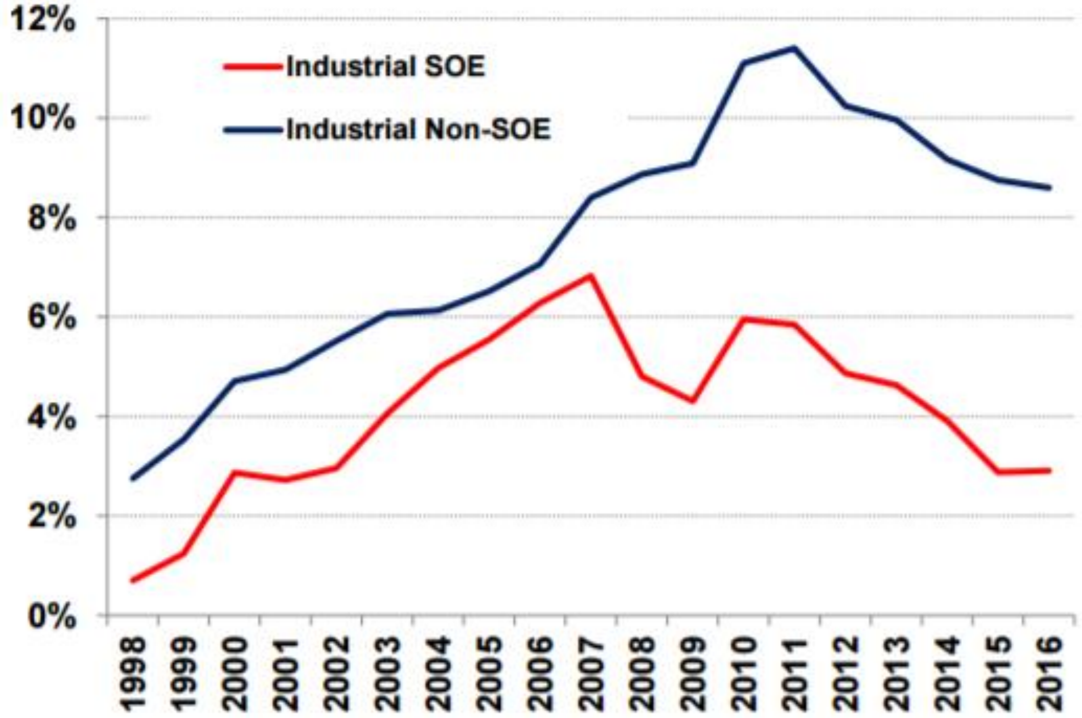
Utilization rate across six industries, *%*



Source: European Union Chamber of Commerce in China (2016)

Deterioration in returns

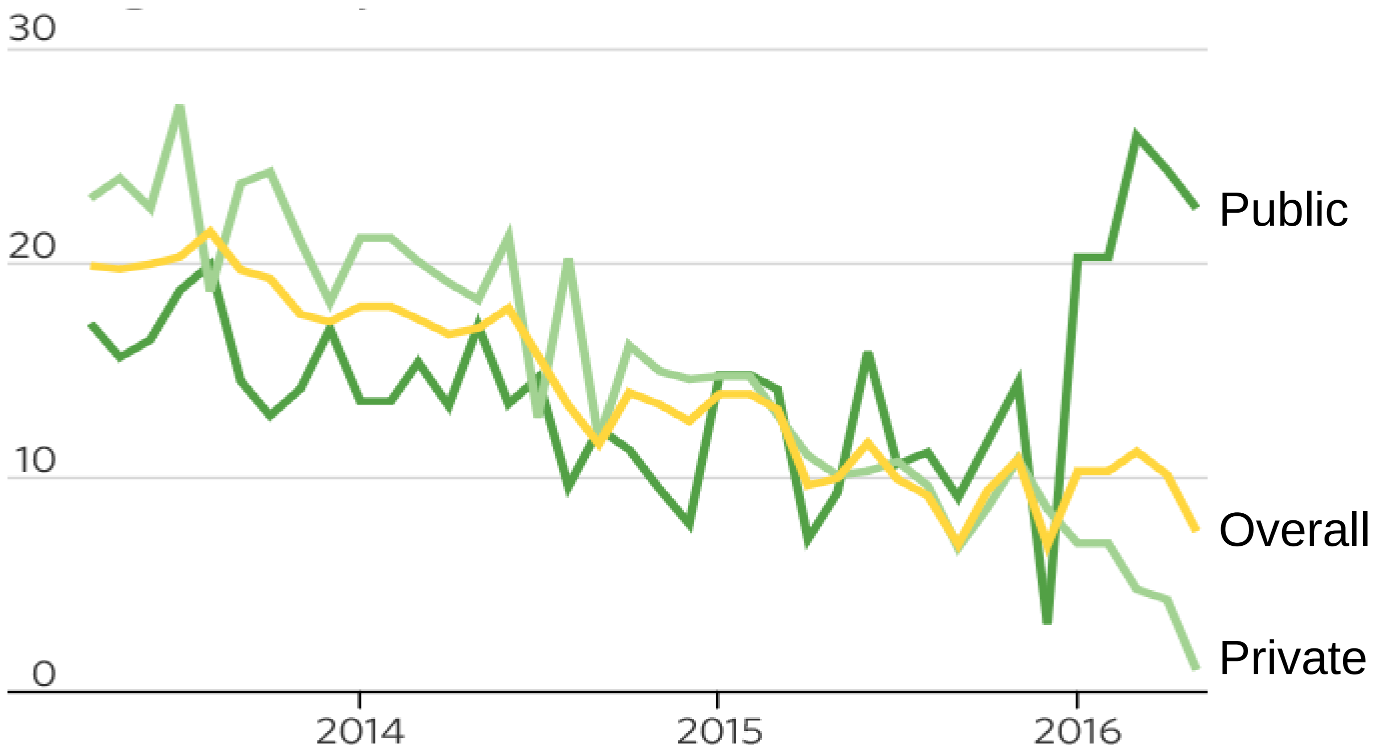
Return on assets, non-financial corporates, *% p.a.*



Source: Haver, Morgan Stanley

State activism rising

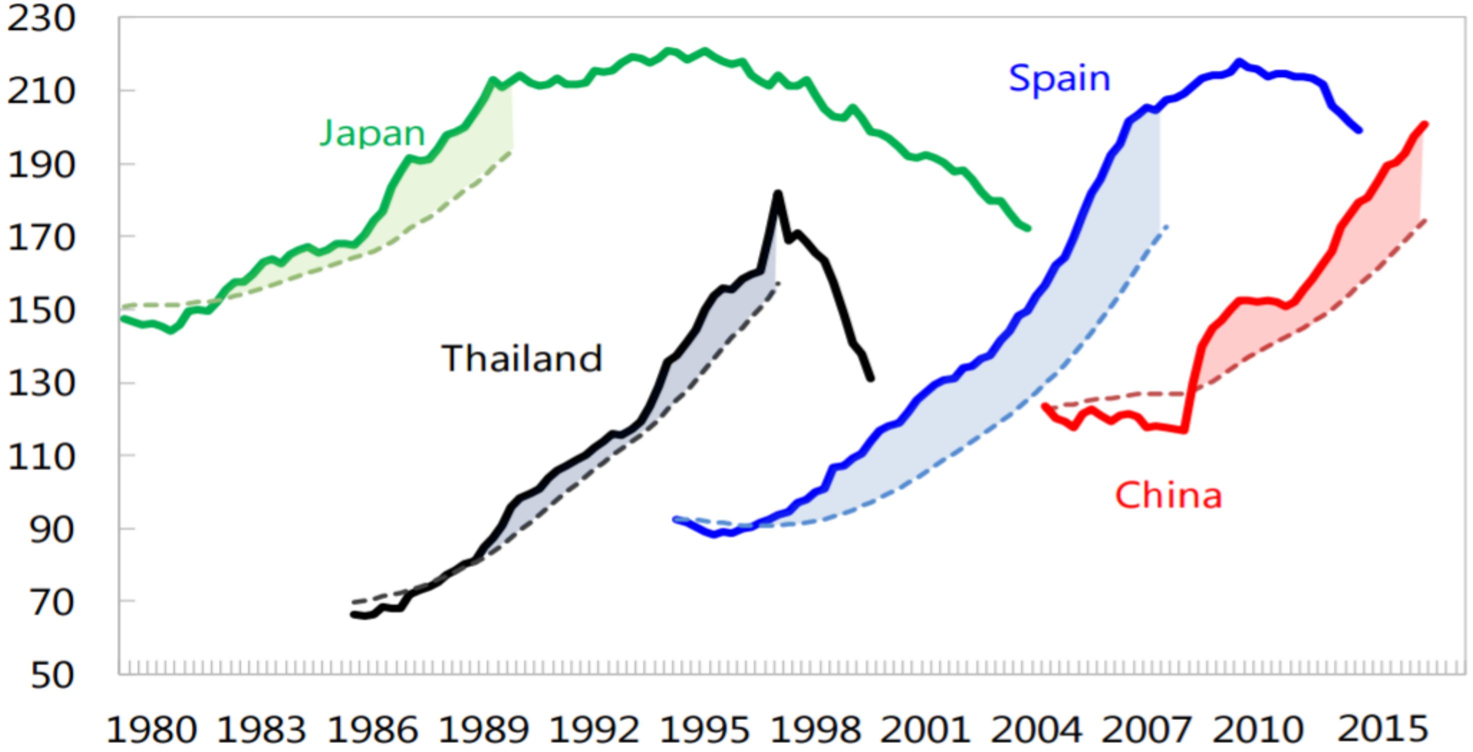
Private versus public investment, *% change YoY*



Source: NBS

Debt: a sign of trouble?

Corporate debt to GDP, *percent*



Source: IMF

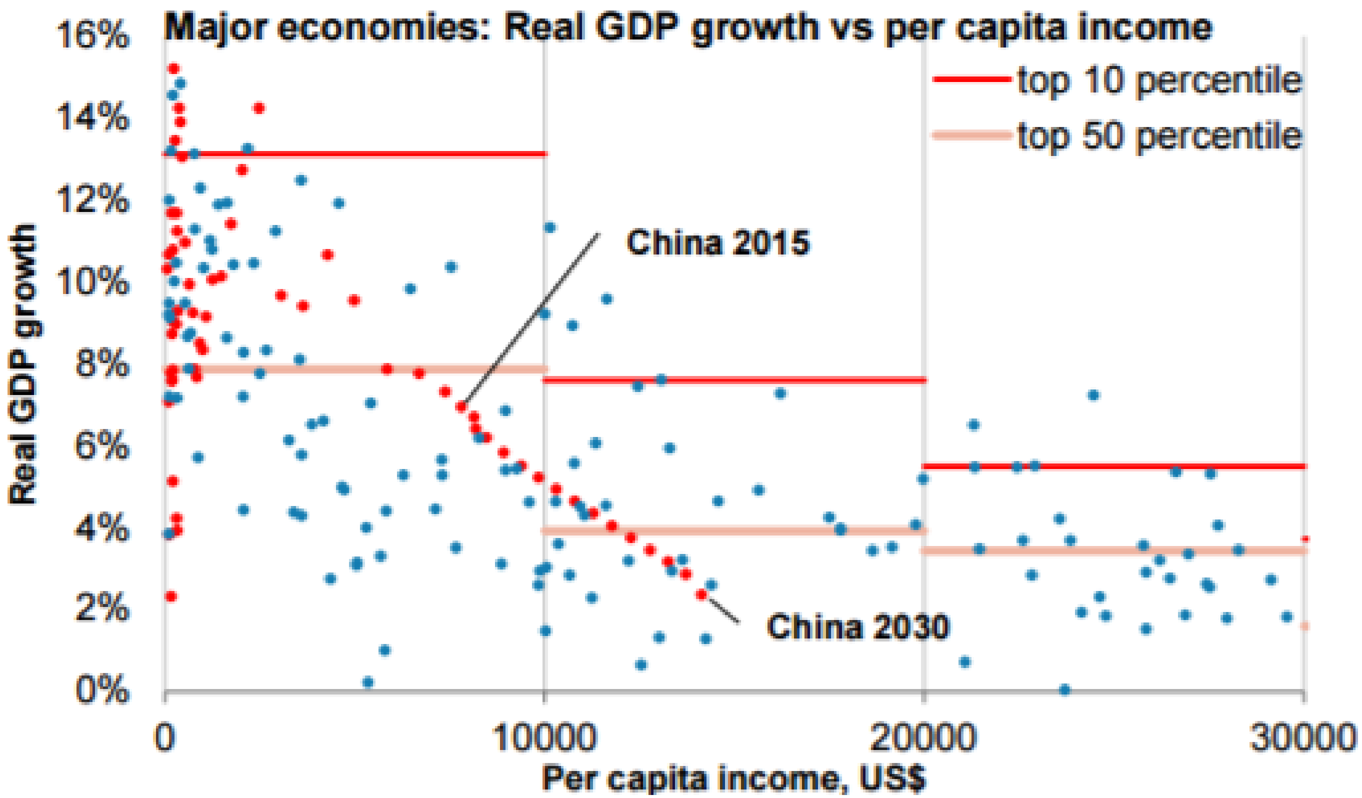
China productivity slowing

Annual change in GDP per worker, *(%)*

Source: Haver

Stable high growth now would be "top decile" performance

Historical economic performance of large nations



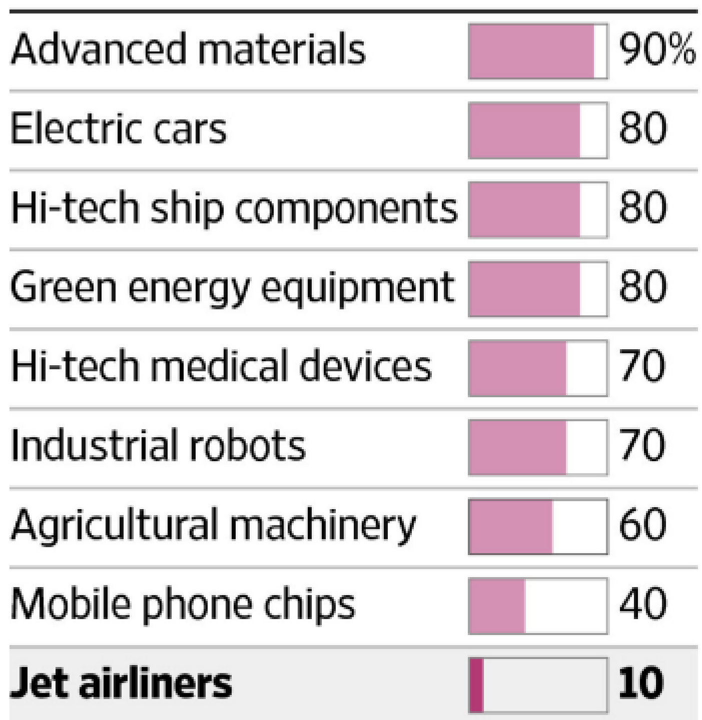
Source: Morgan Stanley, Haver

“Make in China 2025”

Leader	Challenger	Laggard
Railways	ICT	Semiconductors
Shipbuilding	NEVs	Airliners
Power eqpt	Automation	Agriculture
	Materials	Healthcare

“Import substitution” strategy

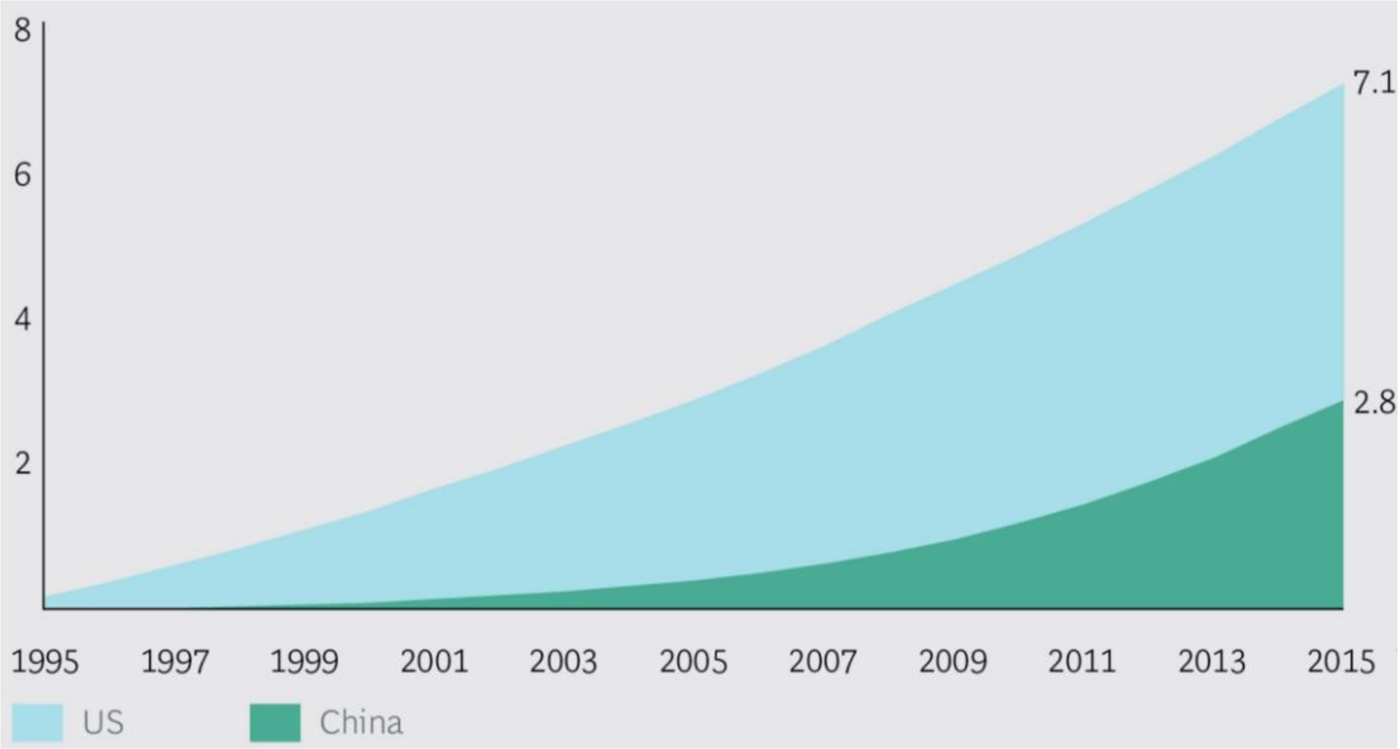
Target Chinese domestic market share by 2020, *%*



Source: China State Council Manufacturing Strategy Advisory Committee

US substantial tech lead

Cumulative R&D expenditure, *US$ trillion*

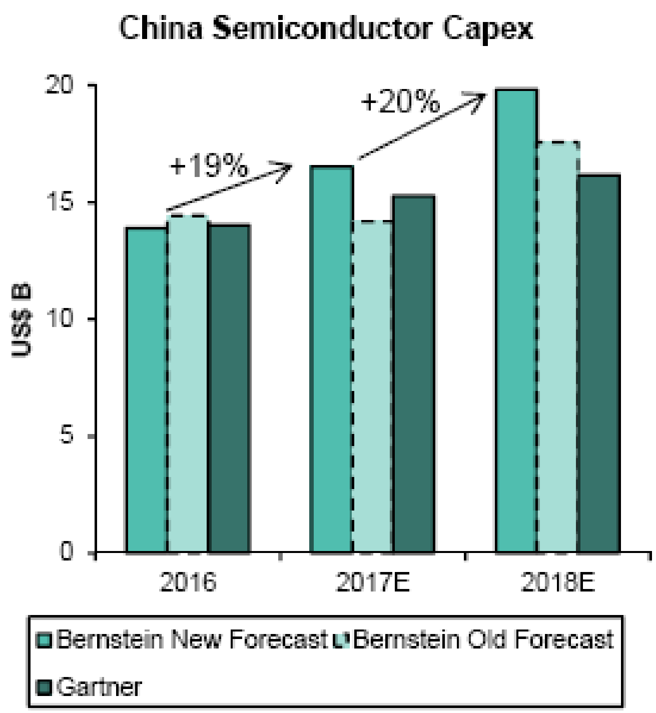


Source: NSB Science and Engineering Indicators 2016, OECD, BCG

Major spending underway

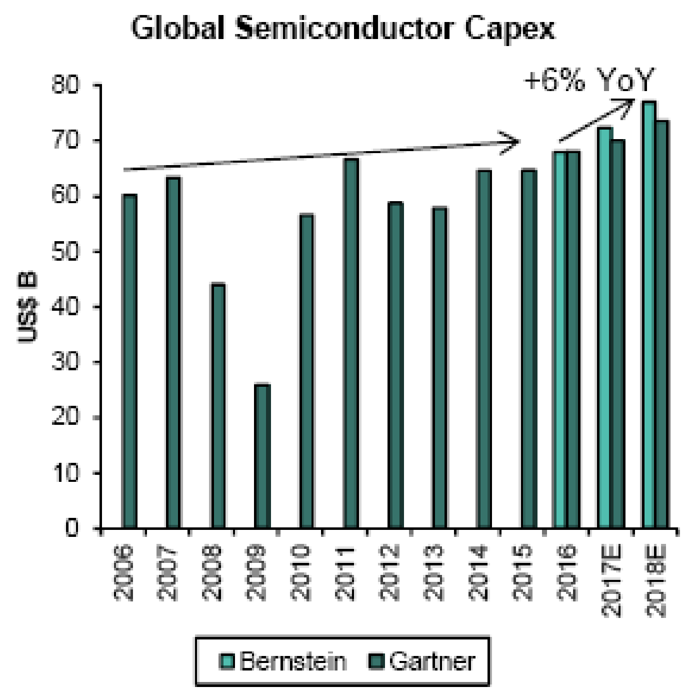
China semiconductor capex

EXHIBIT 1: **We forecast China's semiconductor capex to increase by ~20% per annum in the next two years.**



Source: Company data, Gartner, and Bernstein estimates and analysis.

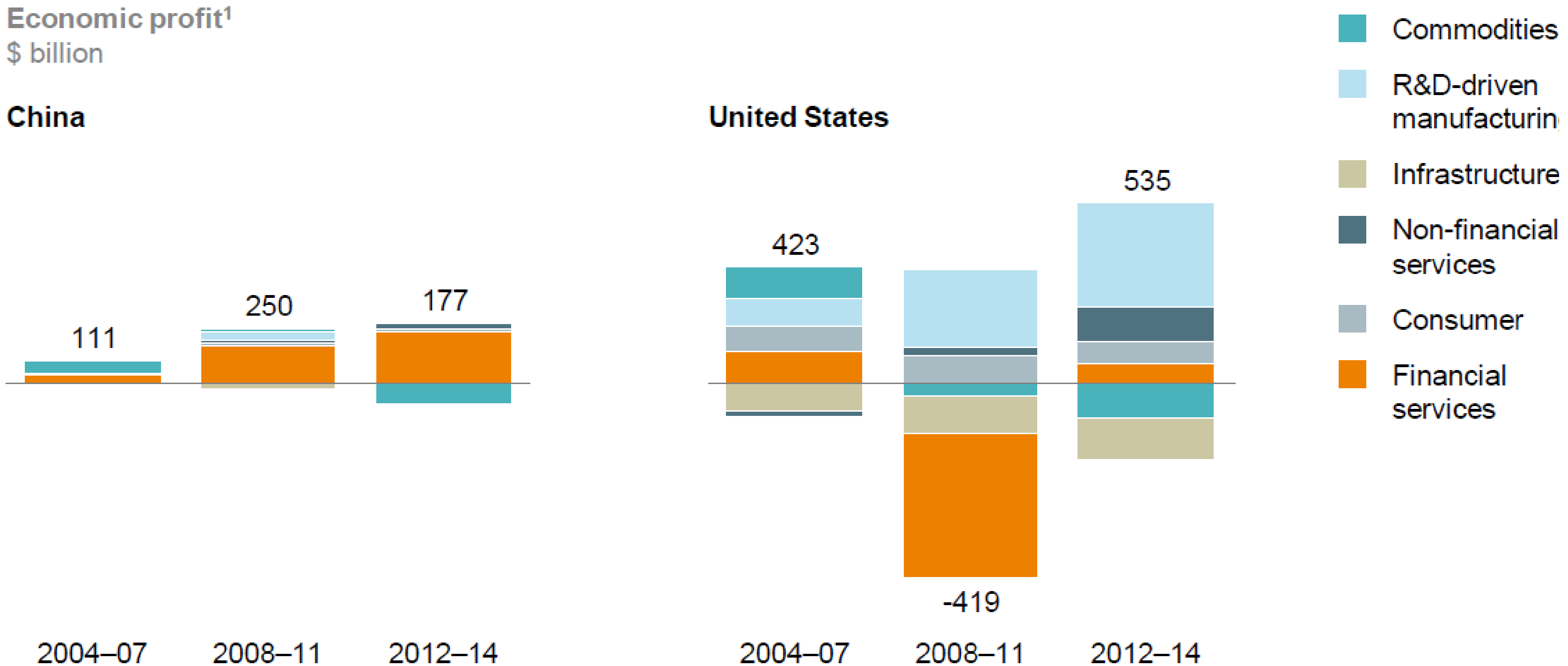
EXHIBIT 2: **We forecast the global semiconductor capex to grow 6% this year.**



Source: Company data, Gartner, and Bernstein estimates and analysis.

Advanced manufacturing

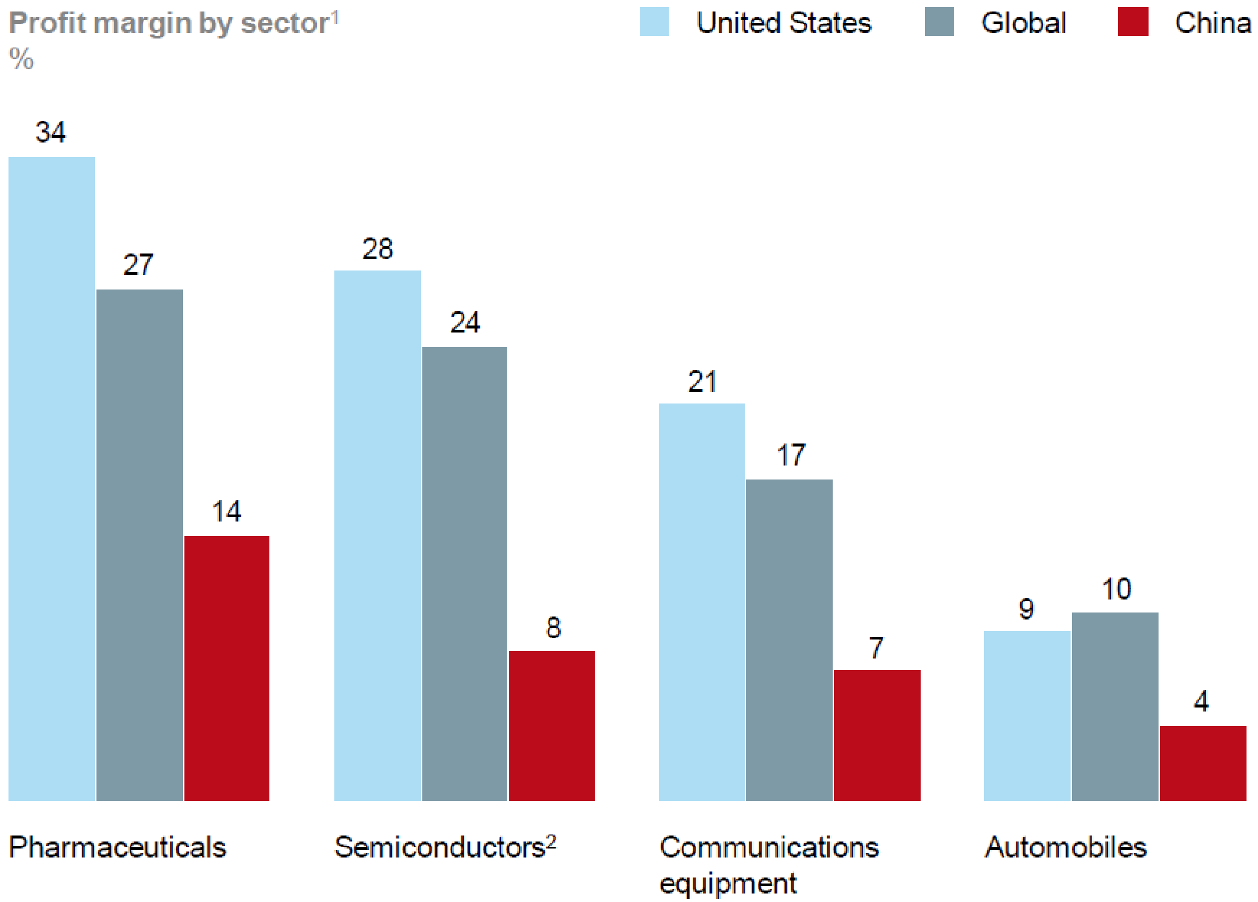
Distribution of profits by industry sector



Source: McKinsey

US firms more profitable

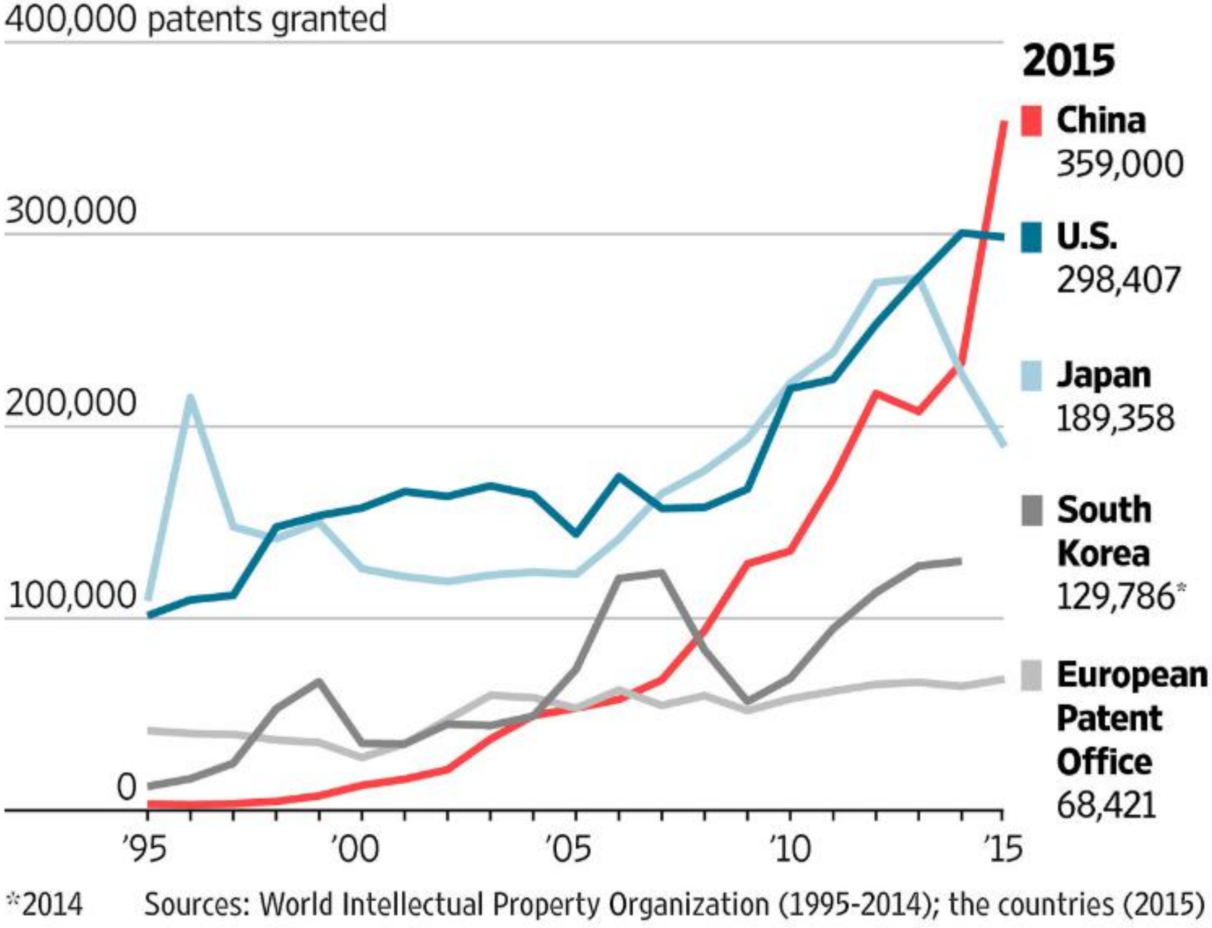
EBITDA margins in advanced mfg sectors, *%*



Source: McKinsey

An invention explosion?

Patents granted



High concentration in ICT

IP5 patents (since 2010, by top 2000 cos.)

	EU	US	Japan	South Korea	China	Rest of the world
Electrical machinery	9	6	11	13	4	12
Transport	8	5	5	4	1	1
Digital communication	7	7	4	9	52	6
Engines, pumps, turbines	7	6	3	1	0	1
Measurement	6	5	4	2	1	5
Computer technology	6	15	9	16	15	17
Medical technology	5	6	3	1	0	1
Mechanical elements	5	3	2	1	1	2
Semiconductors	3	5	8	15	1	9
Organic chemistry	3	2	1	1	1	2
Basic chemistry	3	3	2	1	0	1
Other special machines	3	2	2	1	0	1
Machine tools	3	2	2	0	1	2
Telecommunications	2	2	3	5	11	4
Audio-visual tech.	2	4	8	11	4	11
Polymers	2	2	2	1	0	1
Chemical engineering	2	2	1	1	1	1
Handling & logistics	2	2	2	0	1	2
Thermal devices	2	1	1	1	0	1
Control	2	2	1	1	0	2
Pharmaceuticals	2	2	1	0	0	2
Other consumer goods	2	1	1	1	0	1
Optics	2	2	9	6	1	5

Source: WIPO

A numbers problem

Global oligopolies
- Memory IC (3)
- Airliners (2)
- Comm eqpt (4)
- Crop science (4*)
- Civil aero engines (4)
- Ind gas turbines (3)
- High speed rail (5)
- Robotics (4)
- Medical imaging (4)

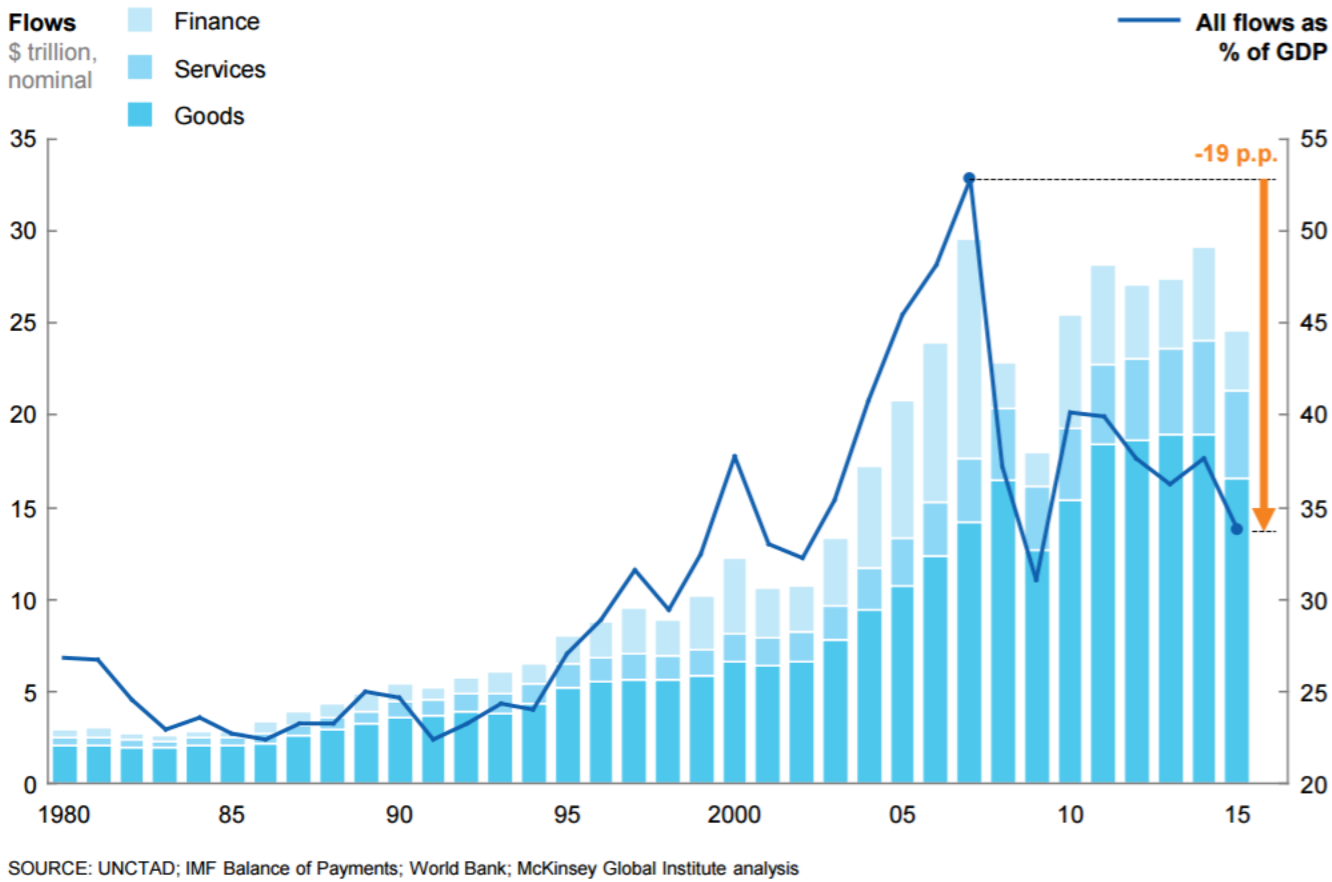
# of Chinese firms
- Airliners (1)
- Locomotives (1)
- Aero engines (1)

- Batteries (60)
- Electric vehicles (80)
- Autos (~100)
- Machinery (60)
- Robots (>800)

Source: Bernstein, 2016
* Syngenta acquired by ChemChina 2017

Has “globalization” peaked?

Worldwide flows of capital, goods and services



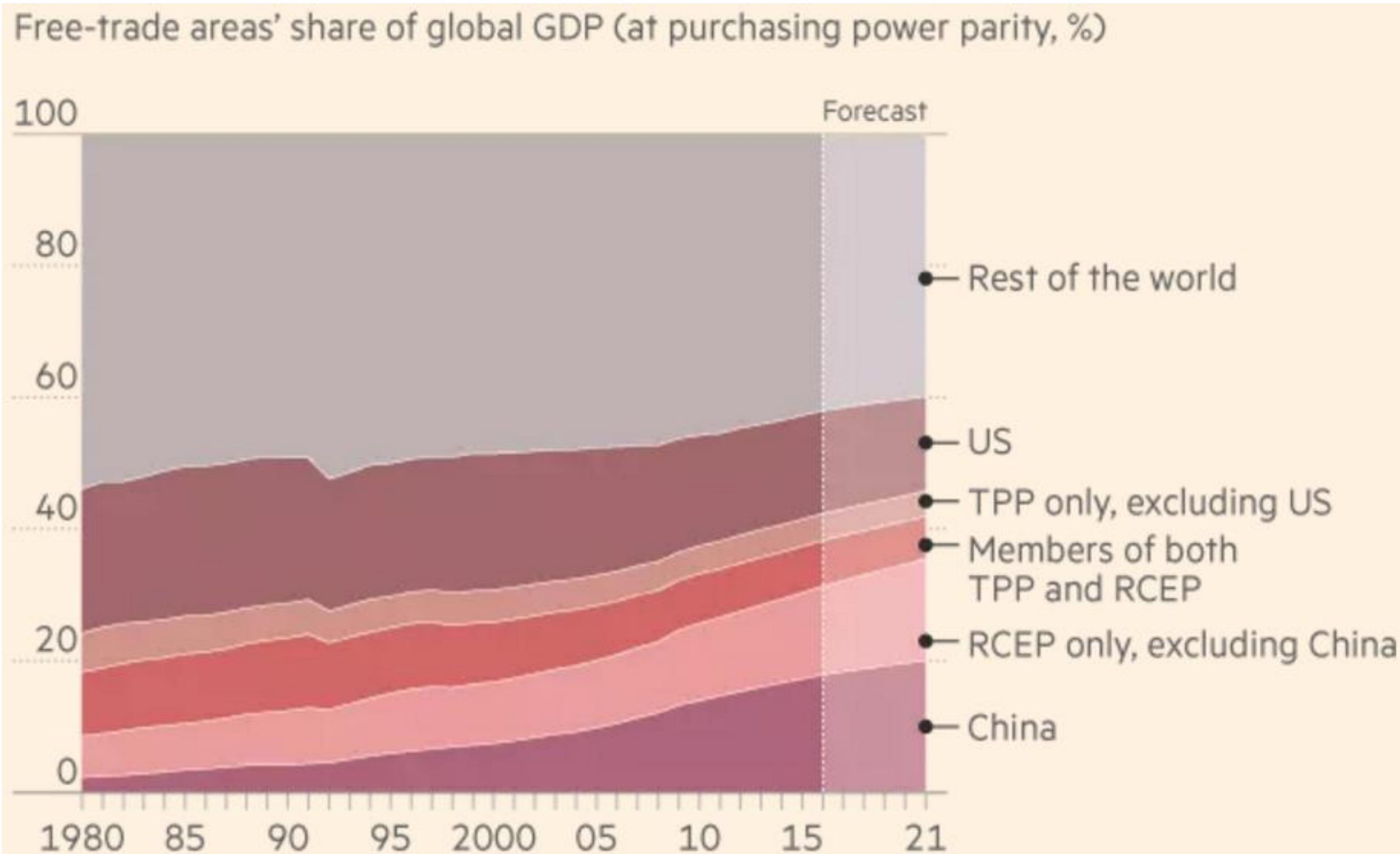
Geo-economic rival emerges

Major initiatives by China:

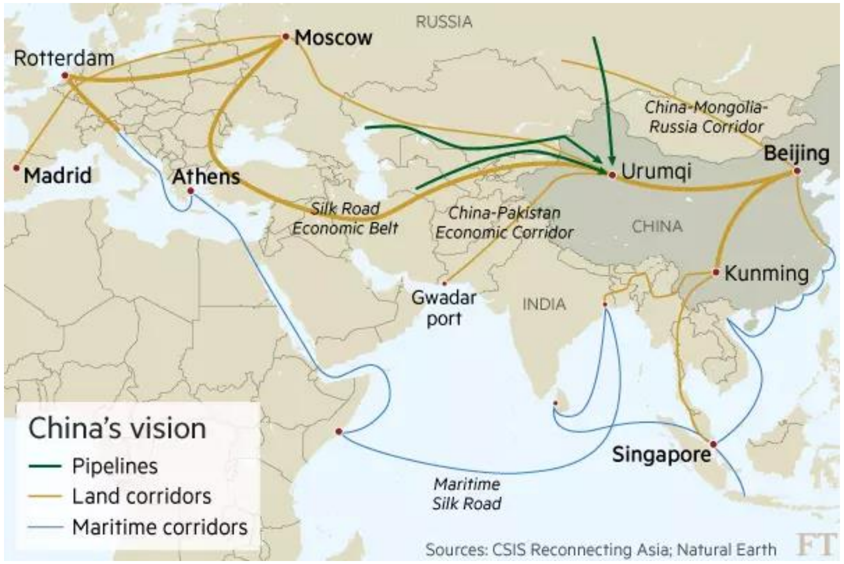
1. One Belt One Road
2. Policy lending (CDB, AIIB, etc.)
3. Overseas direct investment (“going out”)
4. RCEP vs TPP

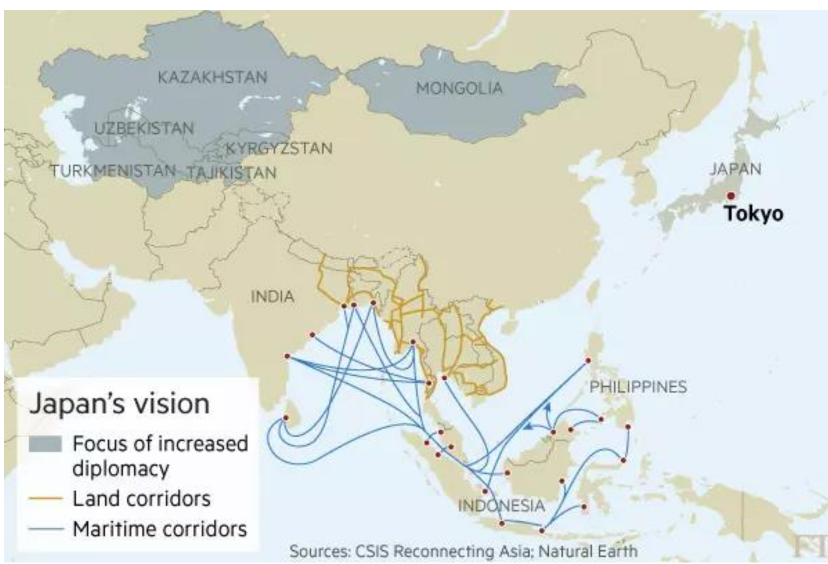
Regional trade blocs

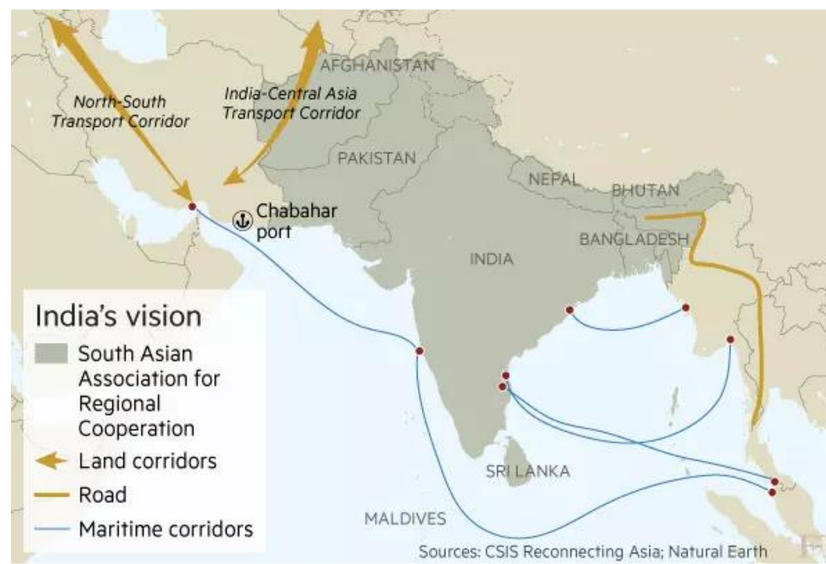
RCEP: 45% of world pop



Competing visions for Asia

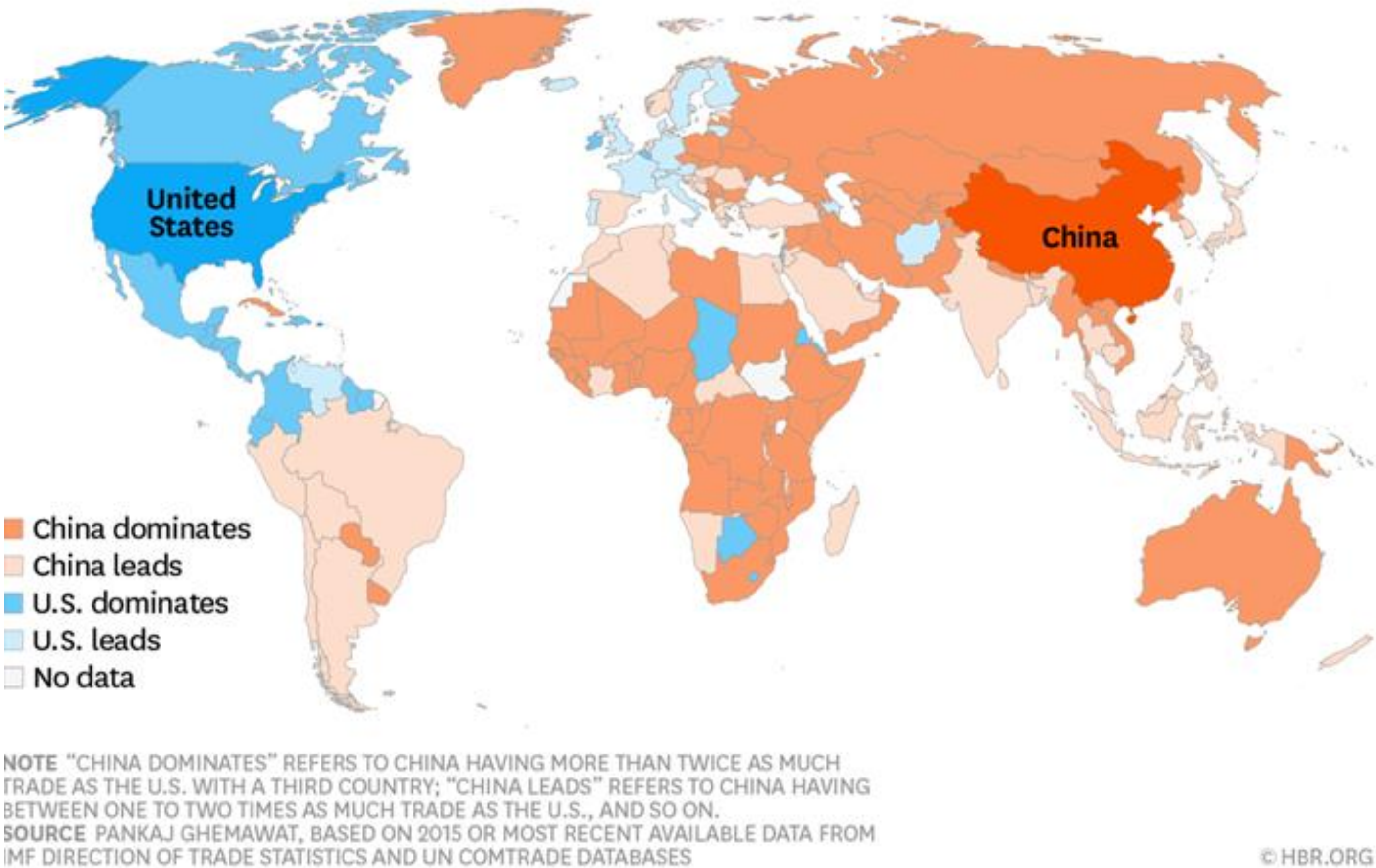






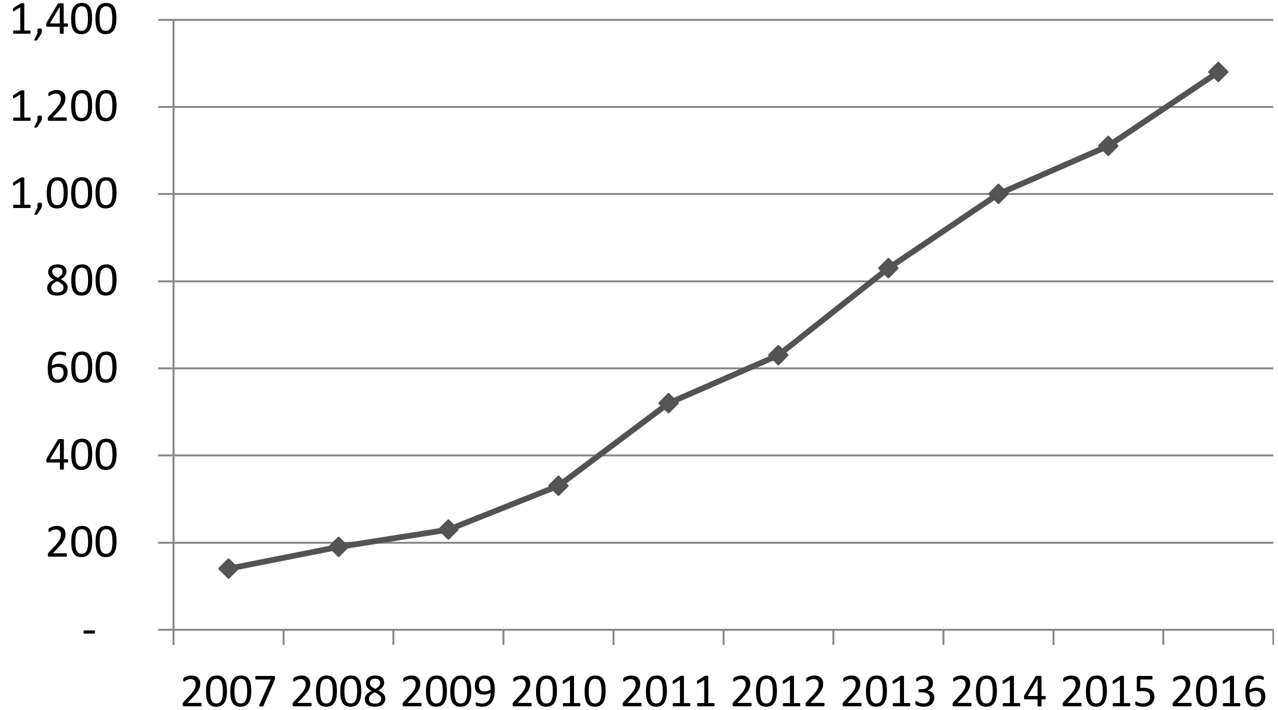
ChinaWorld?

Dominant trade partner (US or China), by country



Increasing foreign claims…

China bank overseas lending, *US$ million*



Source: Fitch Ratings, 26 January 2017

… but in dollars (*not* yuan)…

"*The allure of Chinese investment sets EU states competing for renminbi*." —*Pivot to China* (April 28, 2017)

Hard currency

Barter

China lends US$ to them…

…these US$ converted to useable €

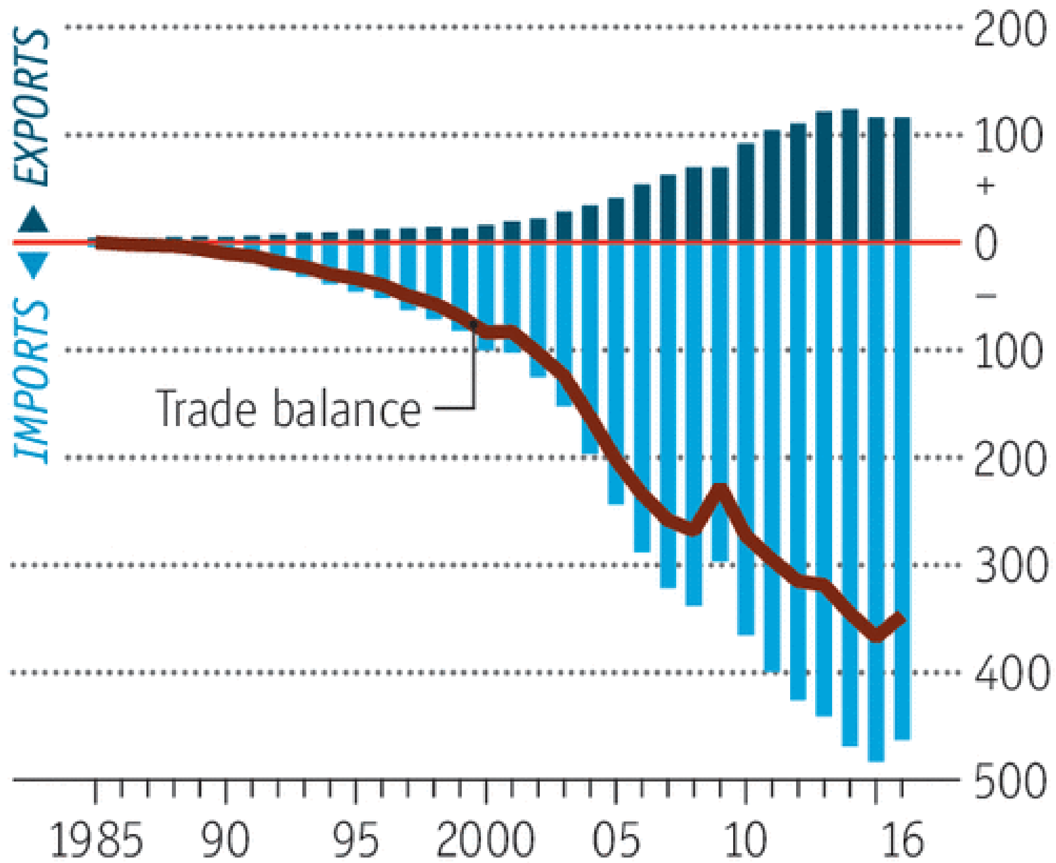
Renminbi as a "voucher" for Chinese stuff

Triffin’s dilemma

- Reserve money issuers must be large net debtors, supplying world with currency
  - Requires them to run large trade deficits and/or be open to foreign investment
- Triffin paradox is that “needy” nations get to set the rules for trade and capital flows
- In an era of *fiat* or paper money, reserve issuers have unusual discretion
  - a.k.a. “Our currency, but your problem”

US deficit funds China liquidity

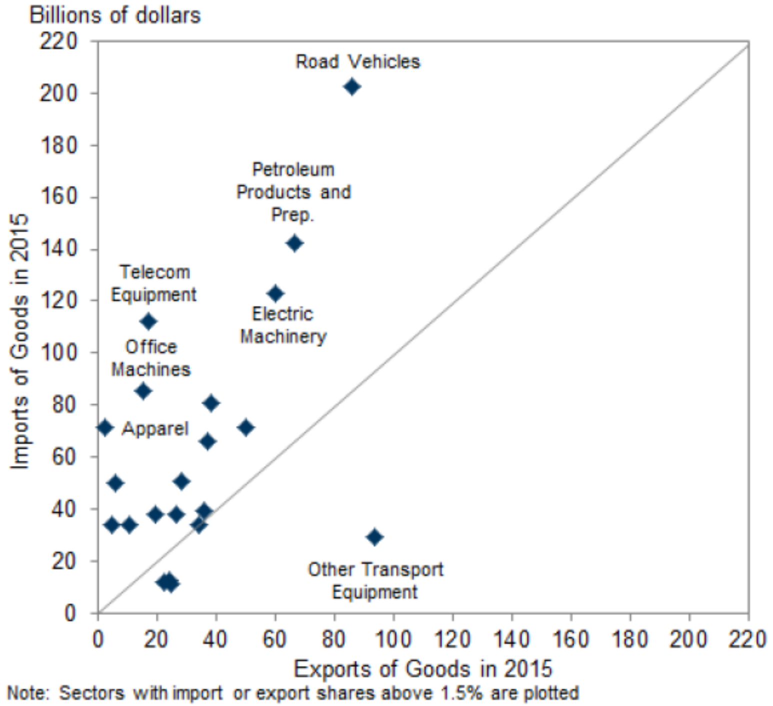
Sino-US bilateral trade balance, *US$bn*

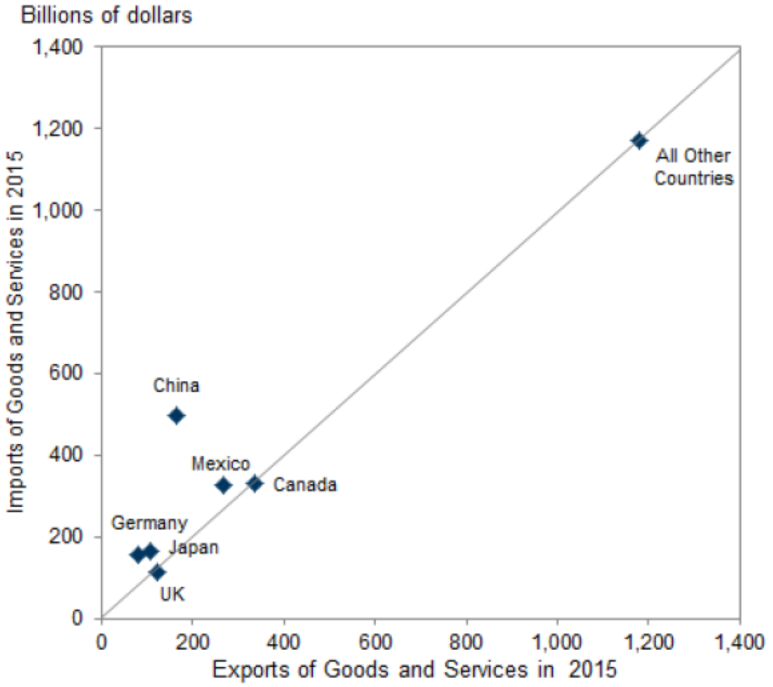


Source: Census

US trade (im)balance

Imports and exports, by product and by partner

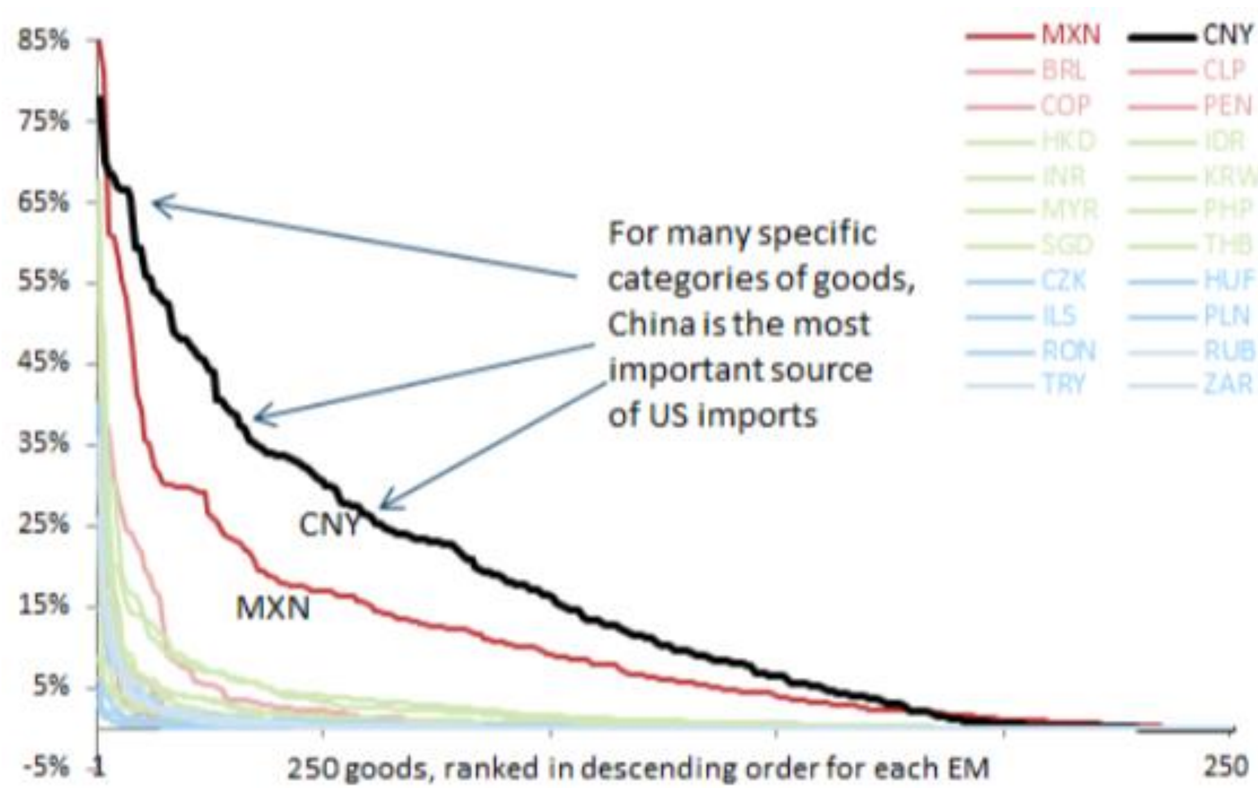




Source: Goldman Sachs, UNCTAD

“Trade war” a risky notion

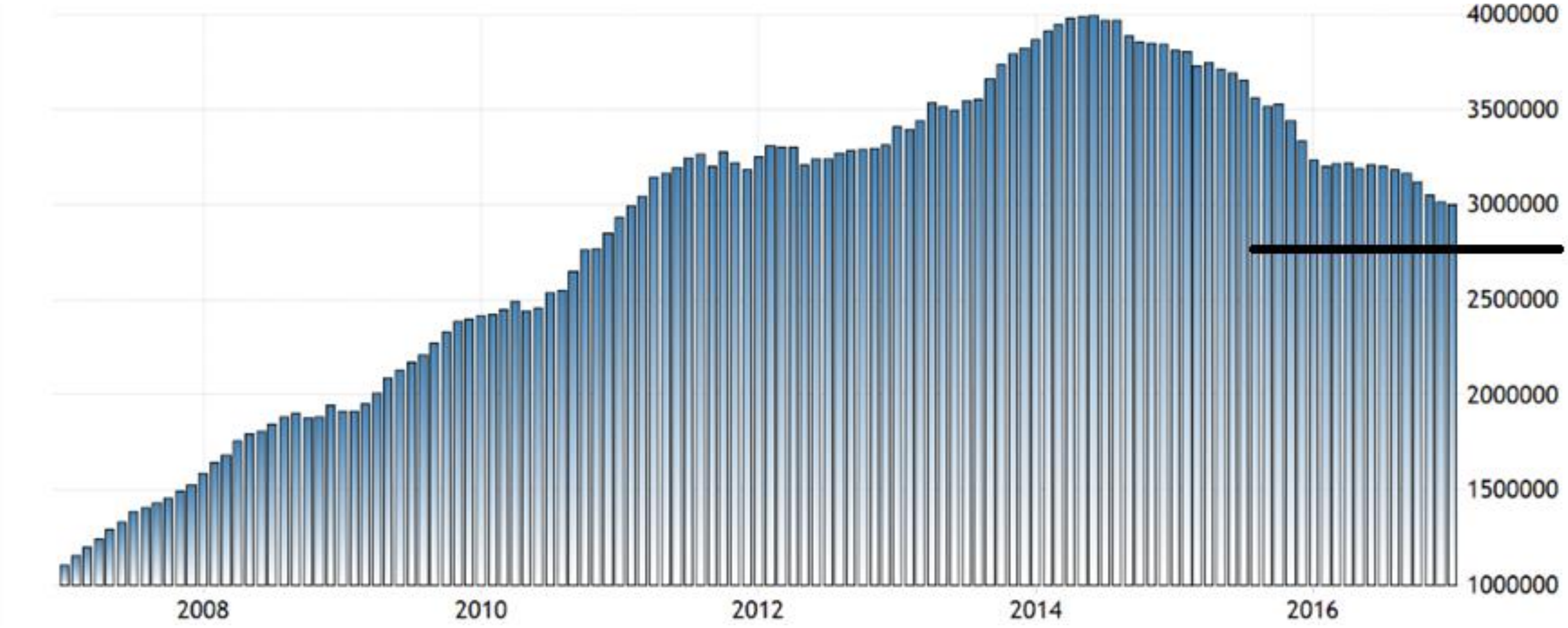
US dependence, top 250 imported goods



Source: Goldman Sachs, UNCTAD

But China also vulnerable

China official foreign exchange reserves, *US$bn*



Source: Trading Economics (2017), PBoC

Who sets the rules?

Model A	Model B
Liberal	Interventionist
Multinational	Corporatist
Predictable rule	Arbitrary rule
Consumer-first	Producer-mercantilist
Net importer (deficit)	Net exporter (surplus)
Hard/reserve currency	Controlled capital account
Open trade/investment	Restricted trade/investment

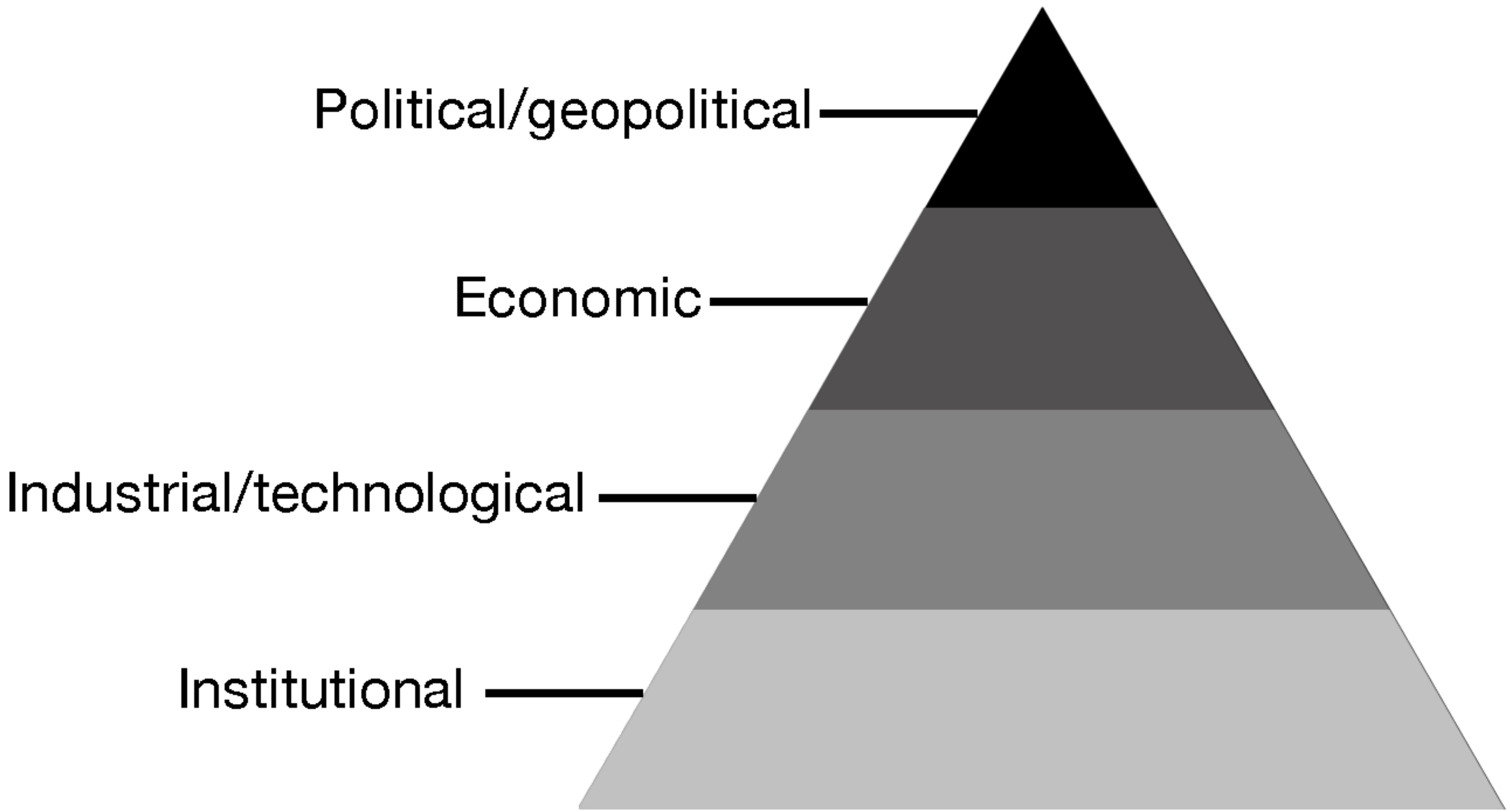
Sticks and carrots

China's *Policies on Asia-Pacific Security Cooperation* (11 January 2017)

1. *Alternative security architecture* (competing vision, rules, relationships, forums)
2. *Normalizing major power acceptance*
3. *Enforcement of Chinese leadership* (inducements and punishments)

Source: Heath (RAND)

Foundations of power



A final thought

“China today is seen as the primary challenger to US economic and military power. But we do not fear China because it is large, undemocratic, or culturally and historically distinct. Many countries fit that description… Rather, it is *China’s industrialization and modernization* that make its size, political ideology, and cultural distinctions so potentially threatening to Americans.” — Mark Zachary Taylor, ***The Politics of Innovation*** (2016)