

# China's Agri-Food Trends

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**Wendong Zhang**

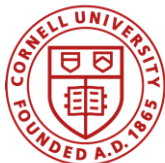
Assistant Professor, Dyson School of Applied Economics and Management, Cornell University;

[wendongz@cornell.edu](mailto:wendongz@cornell.edu)

(607) 254-3231

<https://wendongzhang.weebly.com/>

Iowa Corn Growers Association, March 5, 2024



Dyson  
Cornell  
SC Johnson College of Business



Cornell **CALS**  
College of Agriculture and Life Sciences

# A Quick Introduction: Dr. Wendong Zhang

- Grew up in a rural county in Shandong Province, China
- Attended college in Shanghai and Hong Kong
- Ph.D. in Ag Econ from Ohio State in 2015
- Worked at Iowa State for 7 years, leading the Iowa Land Value Survey 15-22
- Moved to Cornell University Dyson School of Applied Economics & Management in July 2022 (50% research 50% extension appointment)
- Research and extension interests:

Led land value/ownership surveys <https://www.card.iastate.edu/farmland>

**Co-founded ISU China Ag Center** <https://www.card.iastate.edu/china>

Cornell Atkinson Center for Sustainability: <https://atkinson.cornell.edu/>

**Cornell Institute for China Economic Research (CICER)**

<http://china.dyson.cornell.edu/>

Global Public Voices Fellow, Einaudi Center for International Studies

**The Backdrop:**  
**Frought US-China Relations**

# Set the stage

**U.S. NEWS**

## Black and white and adored all over. China pledges pair of pandas for San Diego Zoo



China plans to send a new pair of giant pandas to the San Diego Zoo, renewing its longstanding gesture of friendship toward the United States after nearly all the iconic animals on loan to U.S. zoos were [Read More](#)

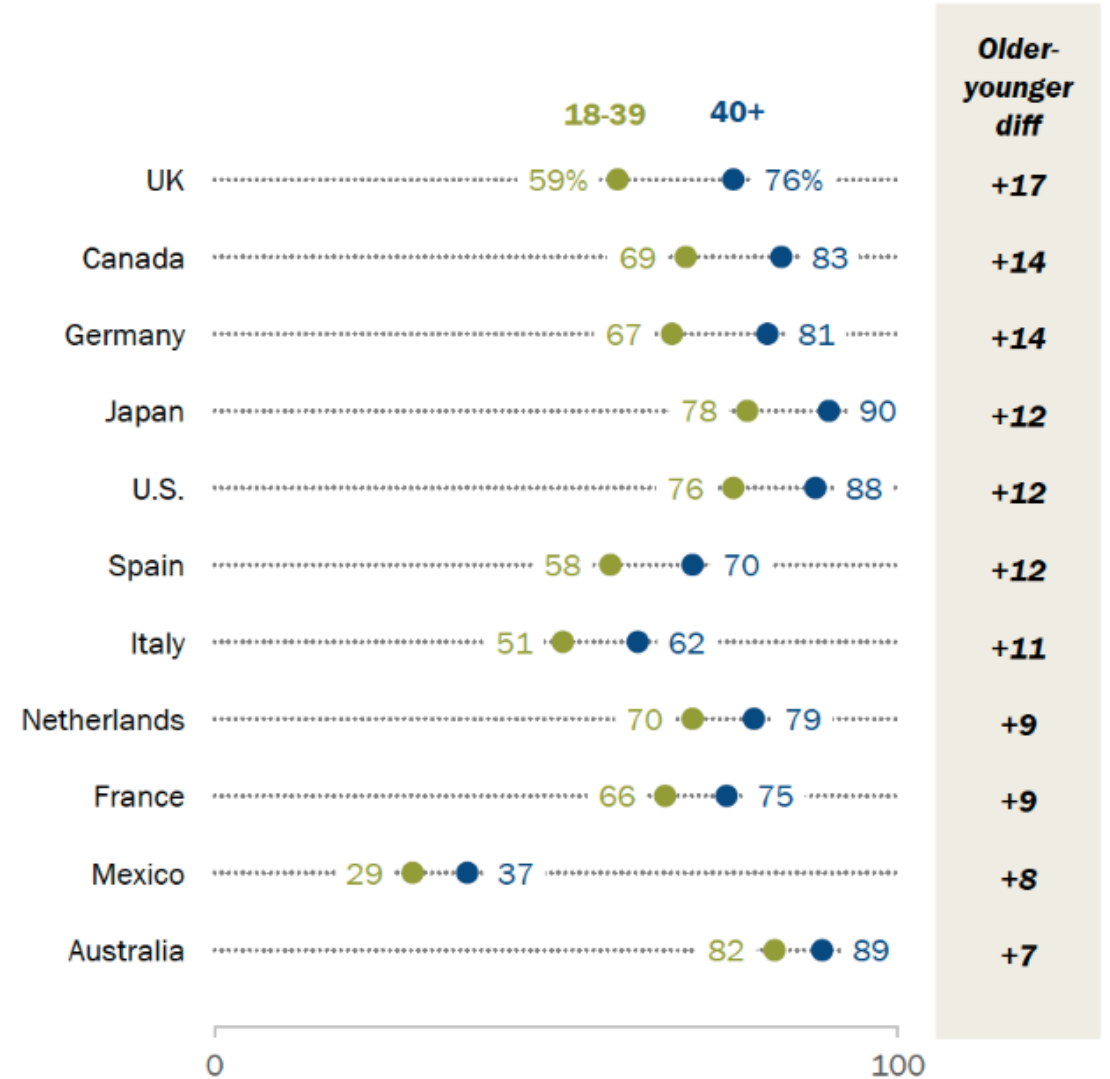
 Photos 3

BY JULIE WATSON

Updated 5:13 PM EST, February 22, 2024

## Older adults have more negative views of China than younger ones, especially in high-income countries

% who have an unfavorable opinion of China



Note: Only statistically significant differences shown.

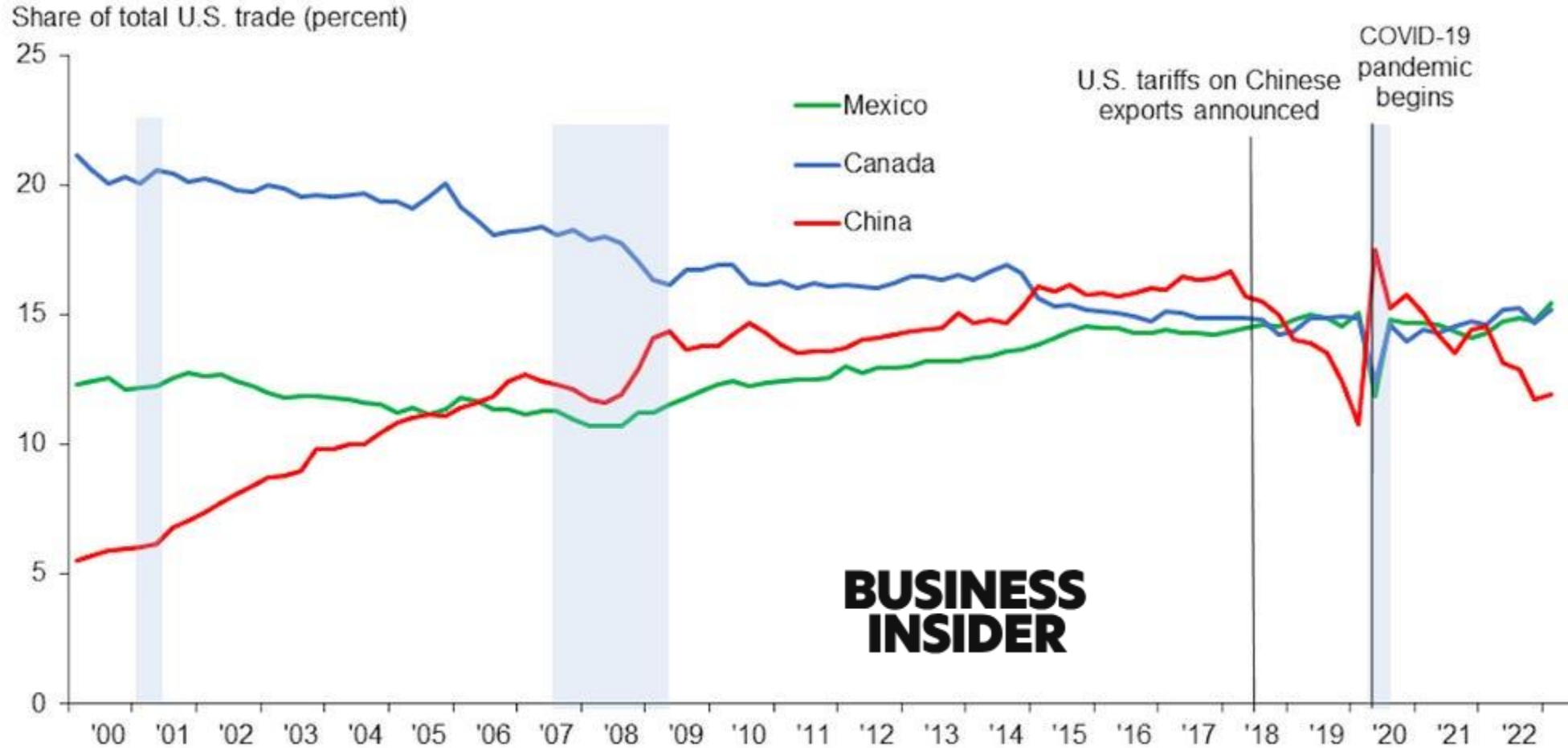
Source: Spring 2023 Global Attitudes Survey. Q3b.

"China's Approach to Foreign Policy Gets Largely Negative Reviews in 24-Country Survey"

PEW RESEARCH CENTER

# Set the Stage

# 2 charts that show how Mexico overtook China as America's top global trade buddy

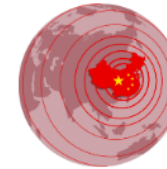


NOTES: Data are seasonally adjusted and quarterly. Figures also include April 2023. Shaded area denotes a recession. Total trade is the sum of exports and imports.

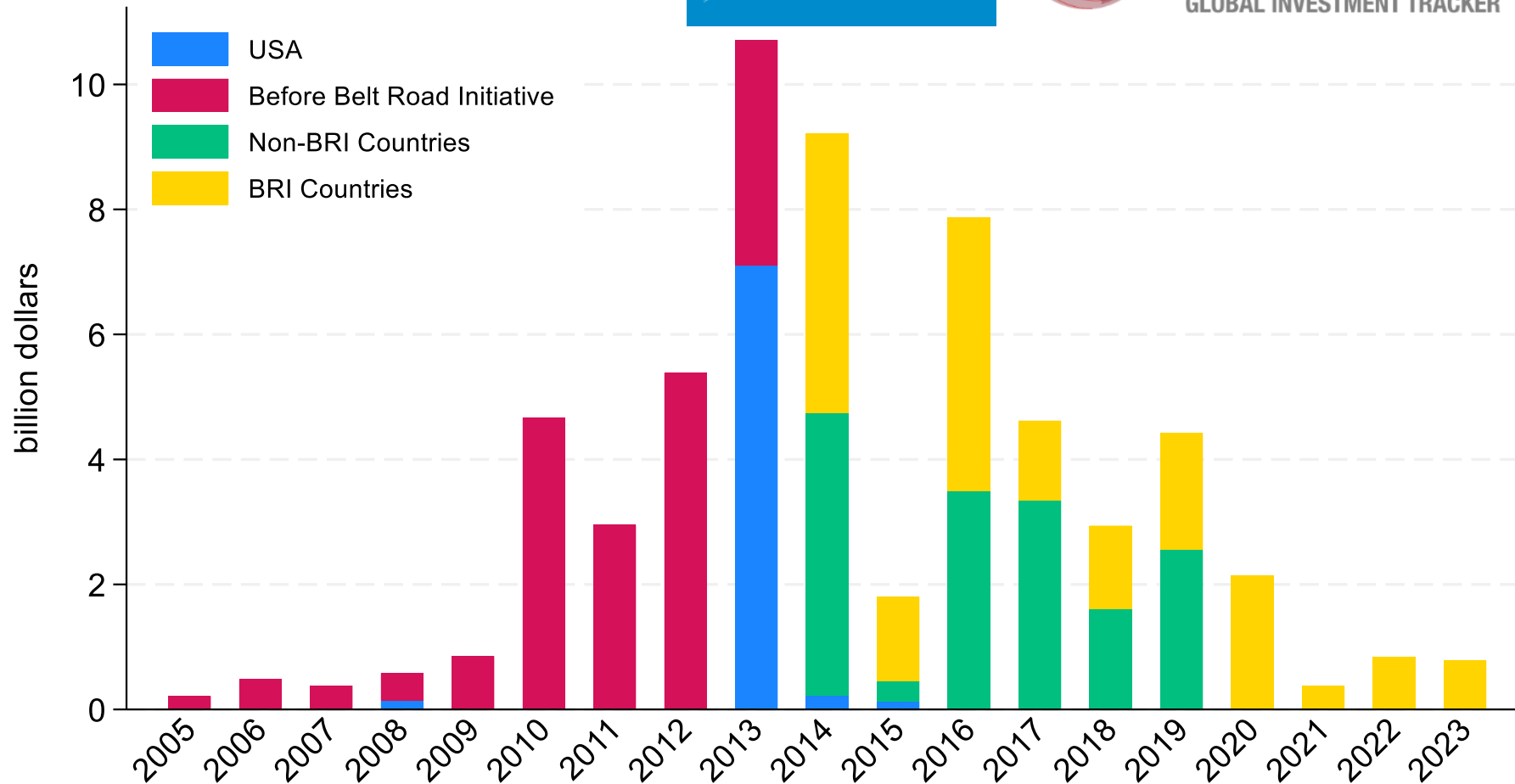
SOURCE: Census Bureau.

Federal Reserve Bank of Dallas

# China's Overseas Investments in Agriculture



**CHINA**  
GLOBAL INVESTMENT TRACKER



BRI countries include South Sudan, Israel, Zambia, Argentina, Uganda, Uzbekistan, New Zealand, Angola, Sri Lanka, Ethiopia, Russia, Oman, Mozambique, Nepal, Saudi Arabia, Singapore, Cambodia, Belarus, Thailand, Malaysia, Egypt, Nigeria, Bangladesh, Chile, Vietnam, Kazakhstan, Indonesia, Italy, Slovakia.  
This graph does not contain the Syngenta (headquartered in Switzerland) acquisition by ChinaChem in 2017.

## BELT AND ROAD

# China-Laos high-speed railway set to roll through COVID cloud

Southeast Asian country's rising infections reduce pomp of Friday's launch



The China-Laos bullet train will compress what is normally a two-day road trek through rugged mountain terrain into a brisk three hours or so. © CCTV/Reuters

MARWAAN MACAN-MARKAR, Asia regional correspondent  
November 30, 2021 18:11 JST

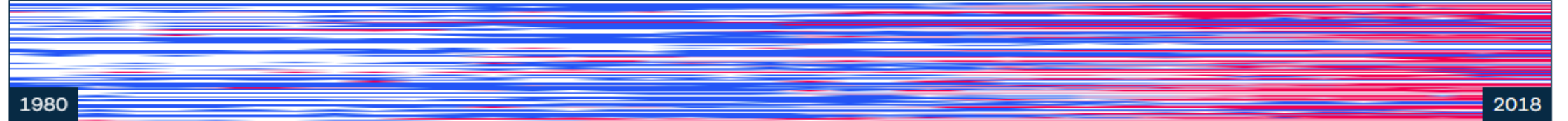
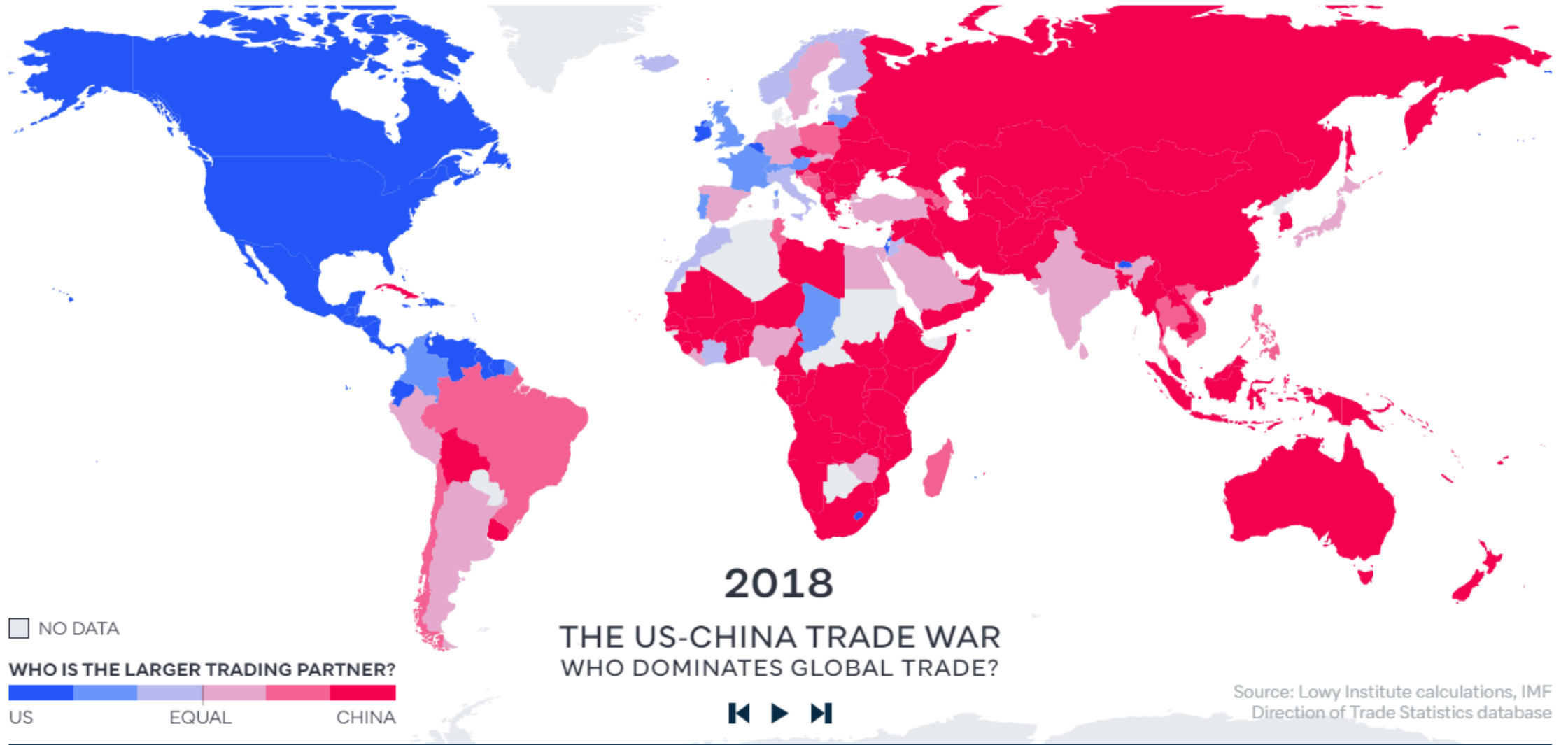
# Belt and Road Initiative Still Going

the \$6 billion project in the land-locked country.



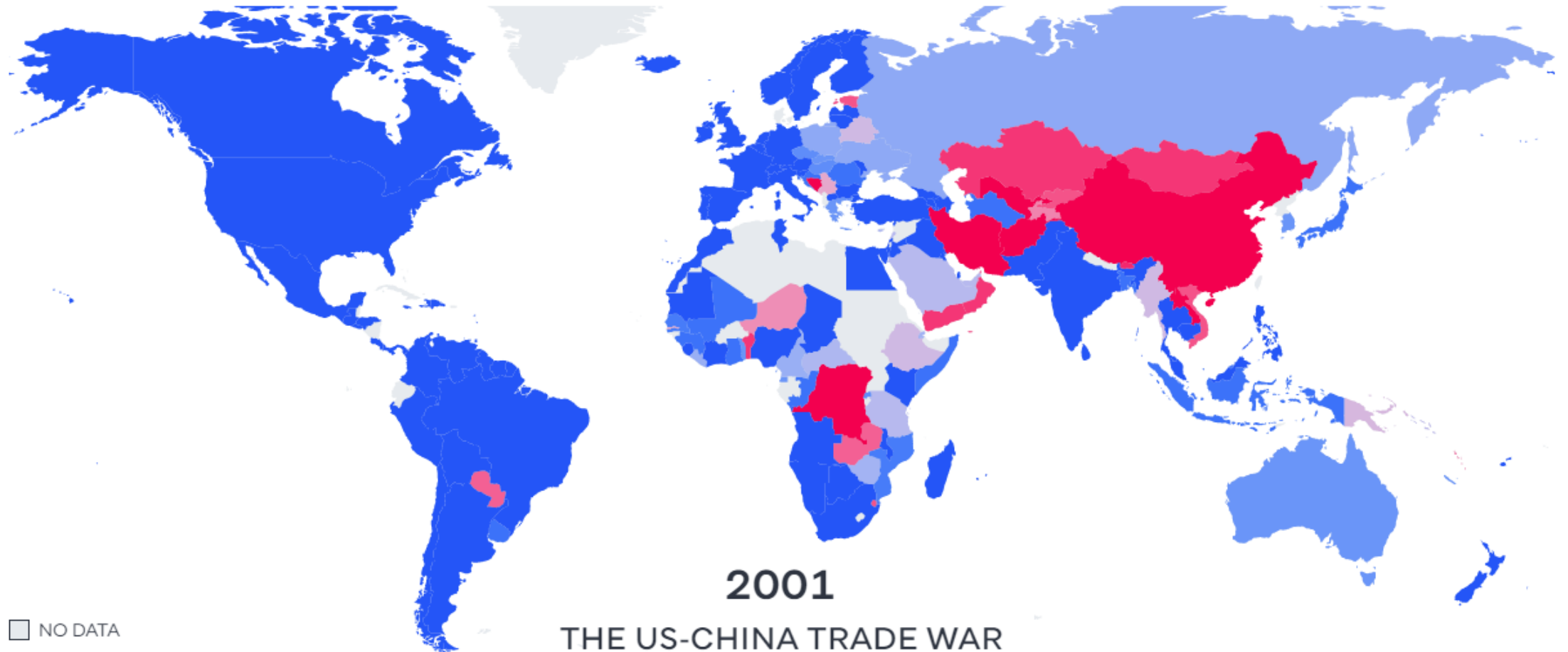
The track from Vientiane to Boten, a northern frontier town along the Laos-China border, will compress what is normally a two-day road trek through rugged mountain terrain into a brisk three hours or so. The Lane Xang, as the bullet train has been named after an ancient Laotian kingdom, will travel through 75 tunnels and across 167 bridges at a speed of up to 160 kph.

# China's Significance in Global Trade





# China's Significance in Global Trade



□ NO DATA

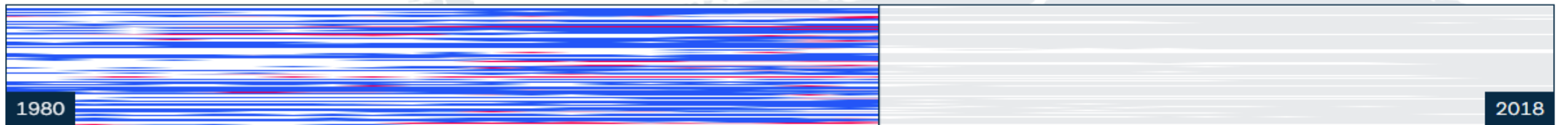
WHO IS THE LARGER TRADING PARTNER?



THE US-CHINA TRADE WAR  
WHO DOMINATES GLOBAL TRADE?

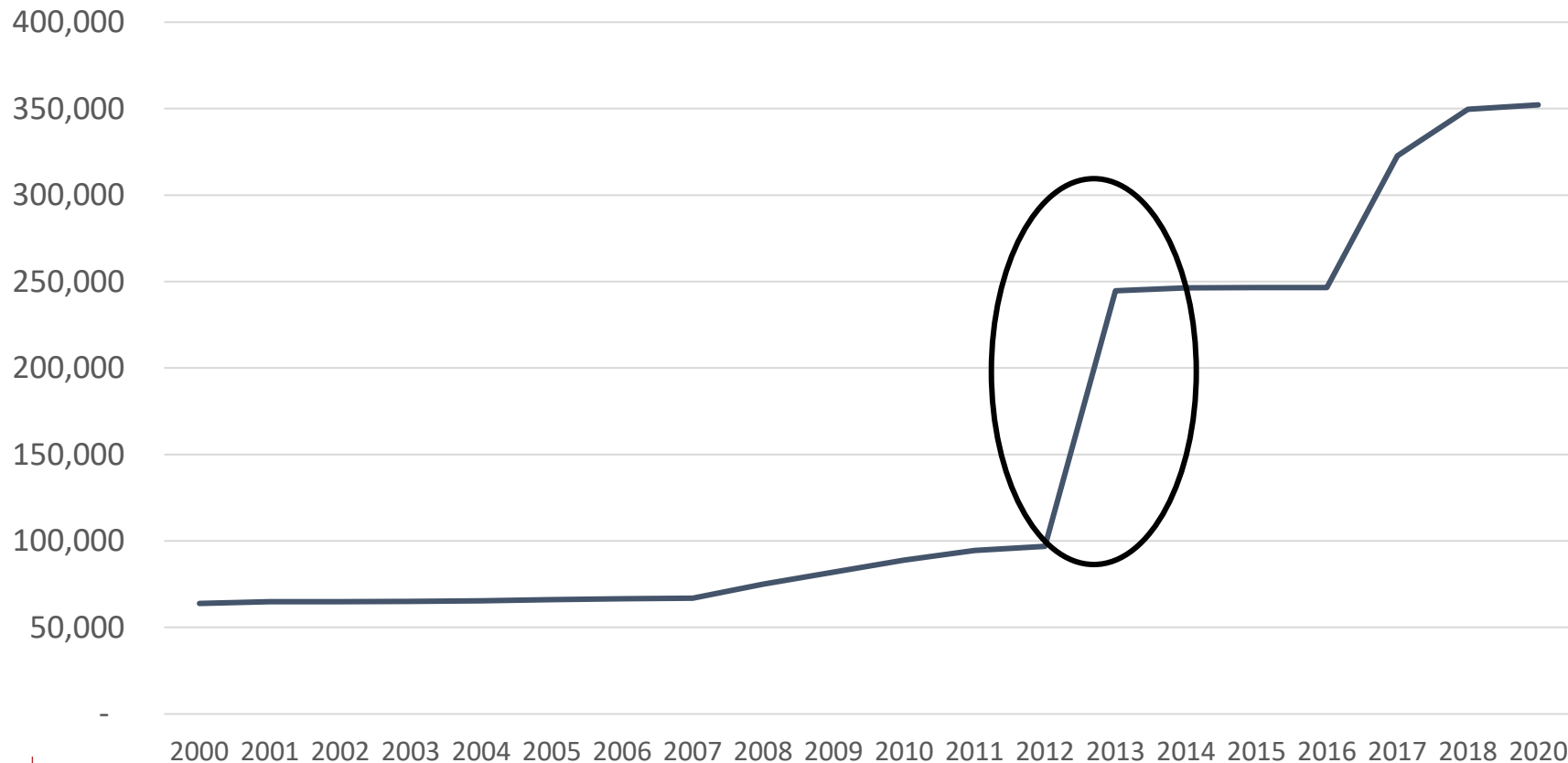


Source: Lowy Institute calculations, IMF  
Direction of Trade Statistics database



# Chinese Investment in U.S. Ag Land

China Holdings in U.S. (acres)



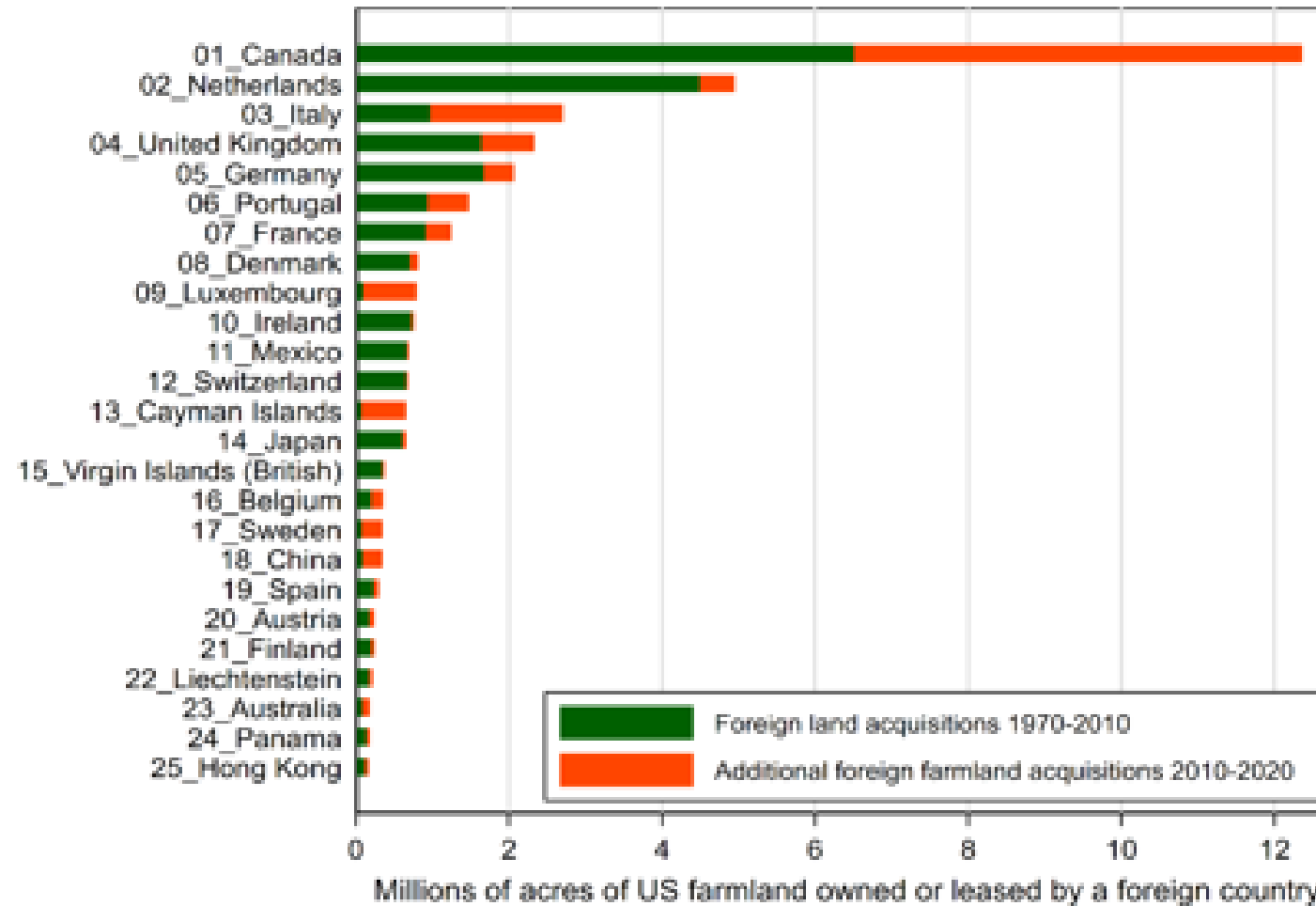
- Total holdings of 352,140 acres
- 2013 Purchase of Smithfield Foods by Chinese company
- Acquired subsidiary Murphy Brown and all their land holdings
- ~140,000 acres in Texas by Xinjiang-based billionaire SUN Guangxin



# Foreign Interests in U.S. Agricultural Lands: The Missing Conversations about Leasing

Mykel R. Taylor, Wendong Zhang, and Festus Attah

Figure 3: Top 25 foreign Countries by Total Owned or Leased US Farmland Acres, 2020

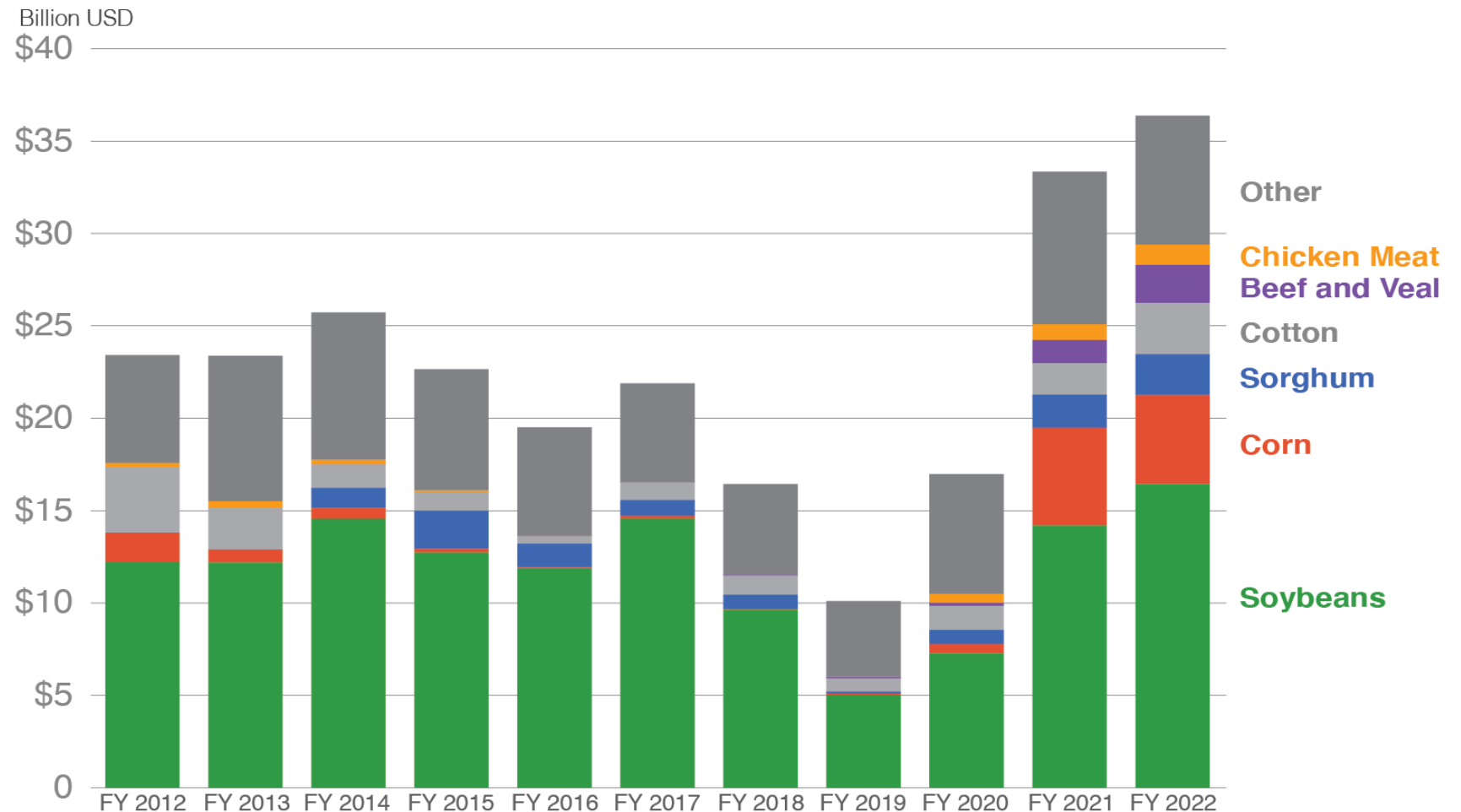


(a) Total Owned or Leased Acres

# **China Tries Hard to Reduce Reliance on United States**

# Chinese imports were concentrated on feed grains

## U.S. Agricultural Exports to China



Source: Trade Data Monitor, LLC

<https://www.fas.usda.gov/data/record-us-fy-2022-agricultural-exports-china>

APPLIED ECONOMIC  
PERSPECTIVES  
AND POLICY



Featured Article

The Case for Healthy U.S.-China Agricultural Trade Relations Despite Deglobalization Pressures†

Wendong Zhang

First published: 13 October 2020 | <https://doi.org/10.1002/aep.13115>



China

# China's embrace of GMO crops gains momentum with new import, planting approvals

By Mei Mei Chu

January 18, 2024 8:46 AM EST · Updated 2 months ago



The planting zones for most of the varieties were expanded from "ecologically suitable" areas to the whole country, according to the notice. Previously, some corn varieties were restricted to the Northern or Southern producing areas.

“the yield of the GMO crops would be about 5.6 percent to 11.6 percent higher than their conventional counterparts, a result of strong resistance to pesticides and destructive pests such as fall armyworm.”

# War in Ukraine Has China Cashing In

The New York Times

The country's trade with Russia this year has exceeded \$200 billion, and makers of cars and trucks are the big winners.

Chinese exports to Russia: \$100 Billion; with 50% growth

Chinese imports from Russia: \$118 Billion; with 12% growth


Economy / China Economy

## China, Russia agree to build huge grain hub at border to facilitate trade, enhance food security

- Fresh deals signed at Eastern Economic Forum in Russian city bordering China show how the neighbours continue to grow closer amid tensions with West
- Chinese imports of Russian agricultural products, such as soybeans and rapeseed oil, have rapidly increased as Beijing steps up efforts to guarantee food supplies

 [Listen to this article ▶](#)

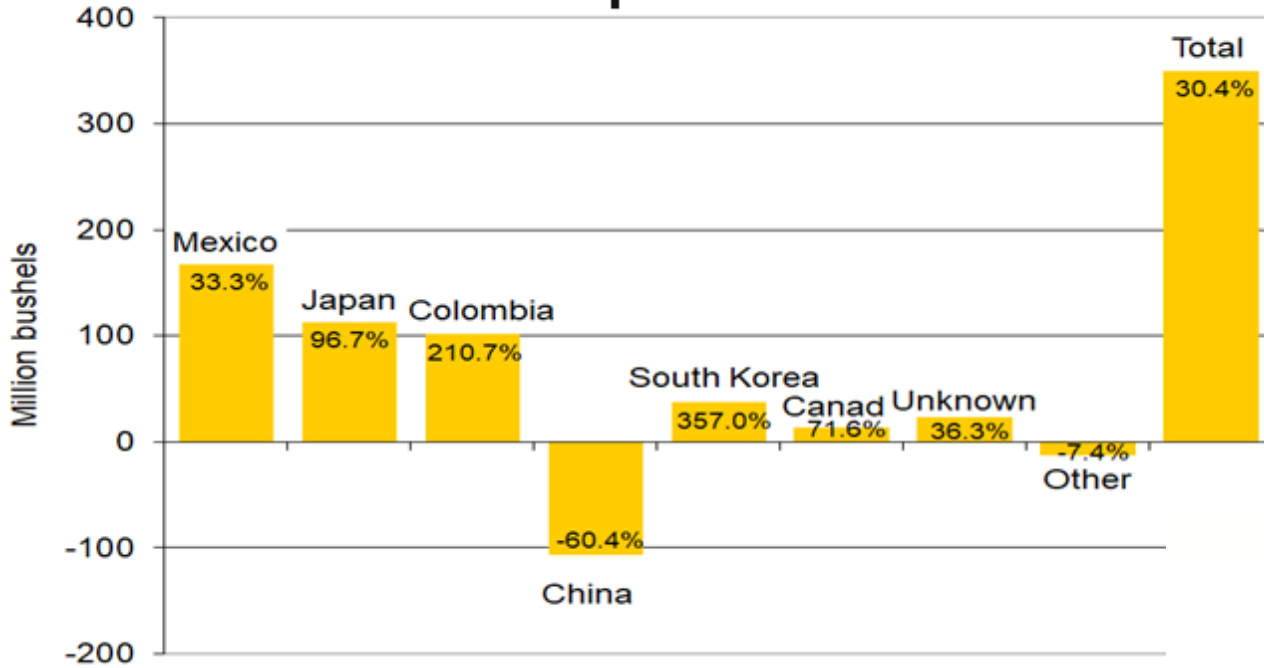


 Kandy Wong [+ FOLLOW](#)

Published: 6:32pm, 12 Sep, 2023

In October, Food Export Trade, a Russian grain exporting firm, signed a \$26 billion contract to supply China with 70 million tonnes of grain, legumes and oilseeds over the next 12 years.

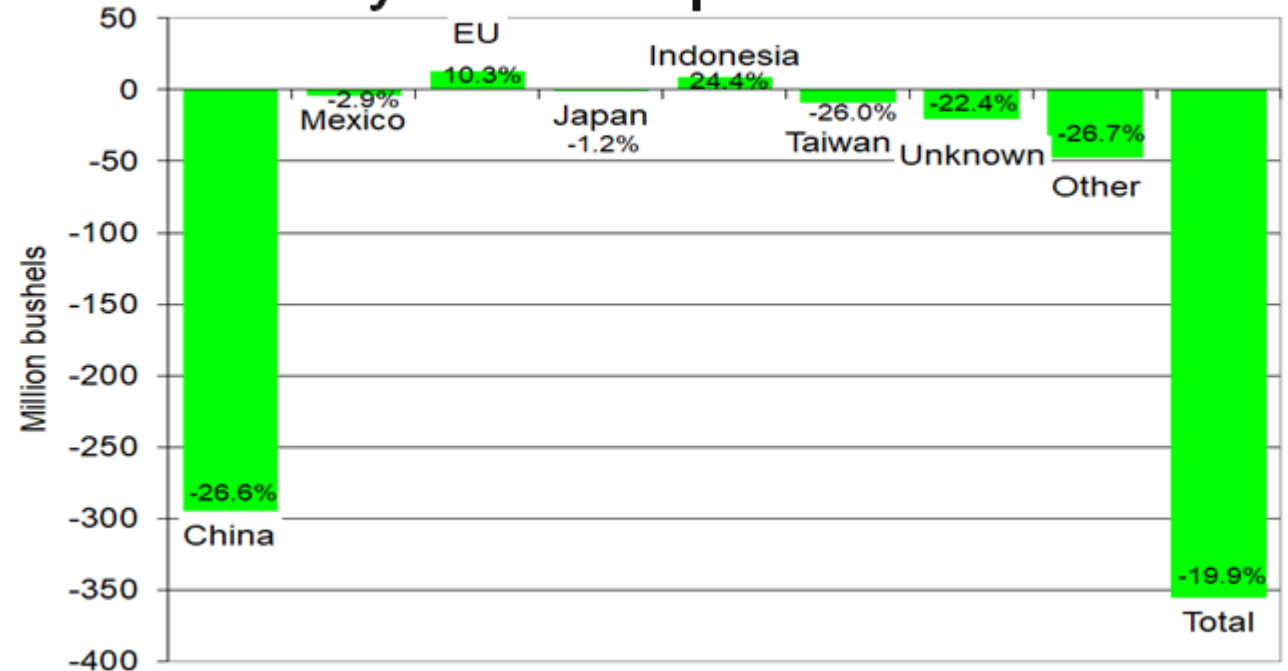
# Corn Export Shifts



# Soybean and Corn Export Shifts

& significant drops for Chinese demand

# Soybean Export Shifts



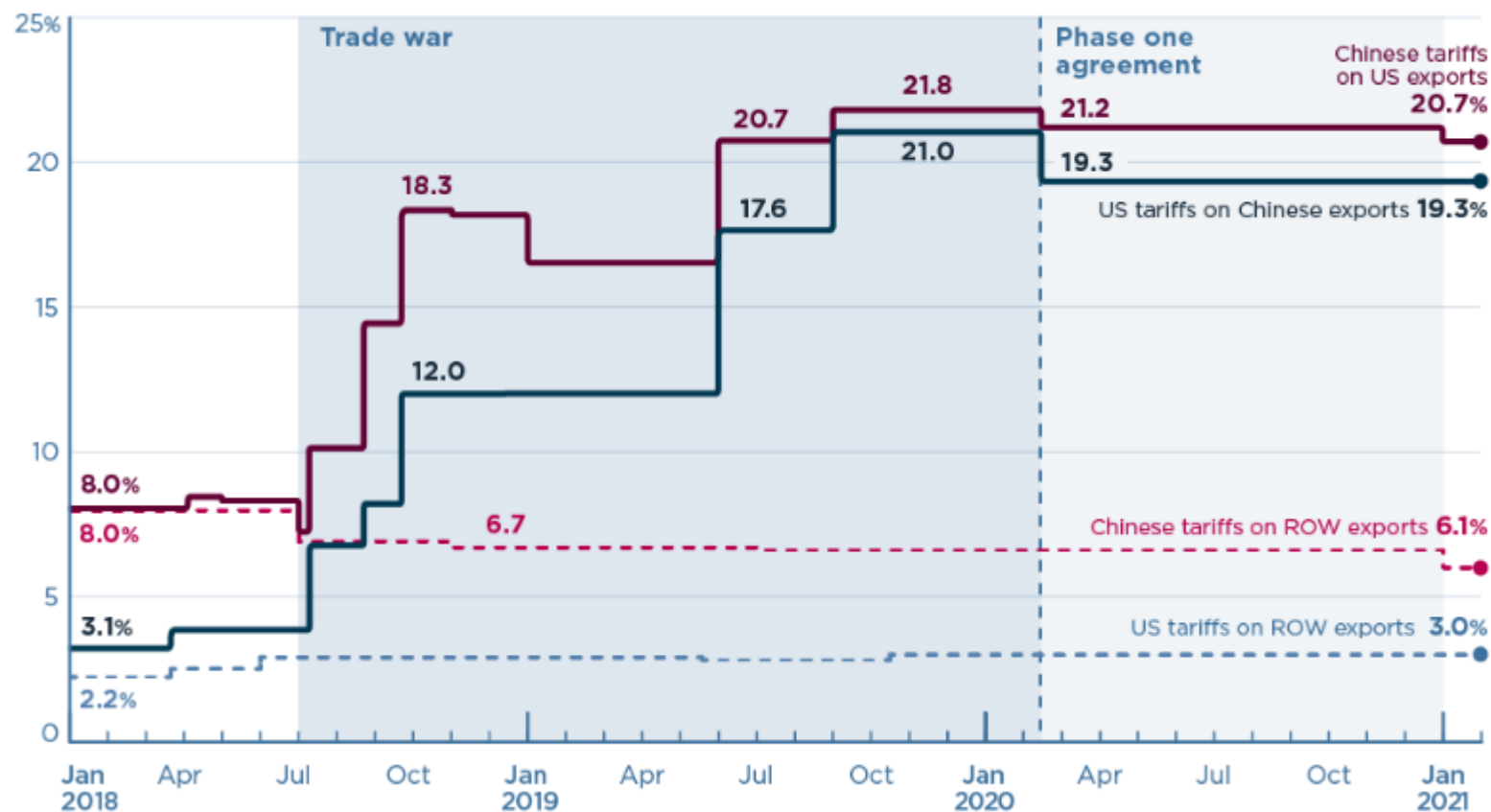
- Source: Chad Hart, Iowa State



# China's Strengthening Trade Ties with US Competitors

in response to US-China trade war & decoupling

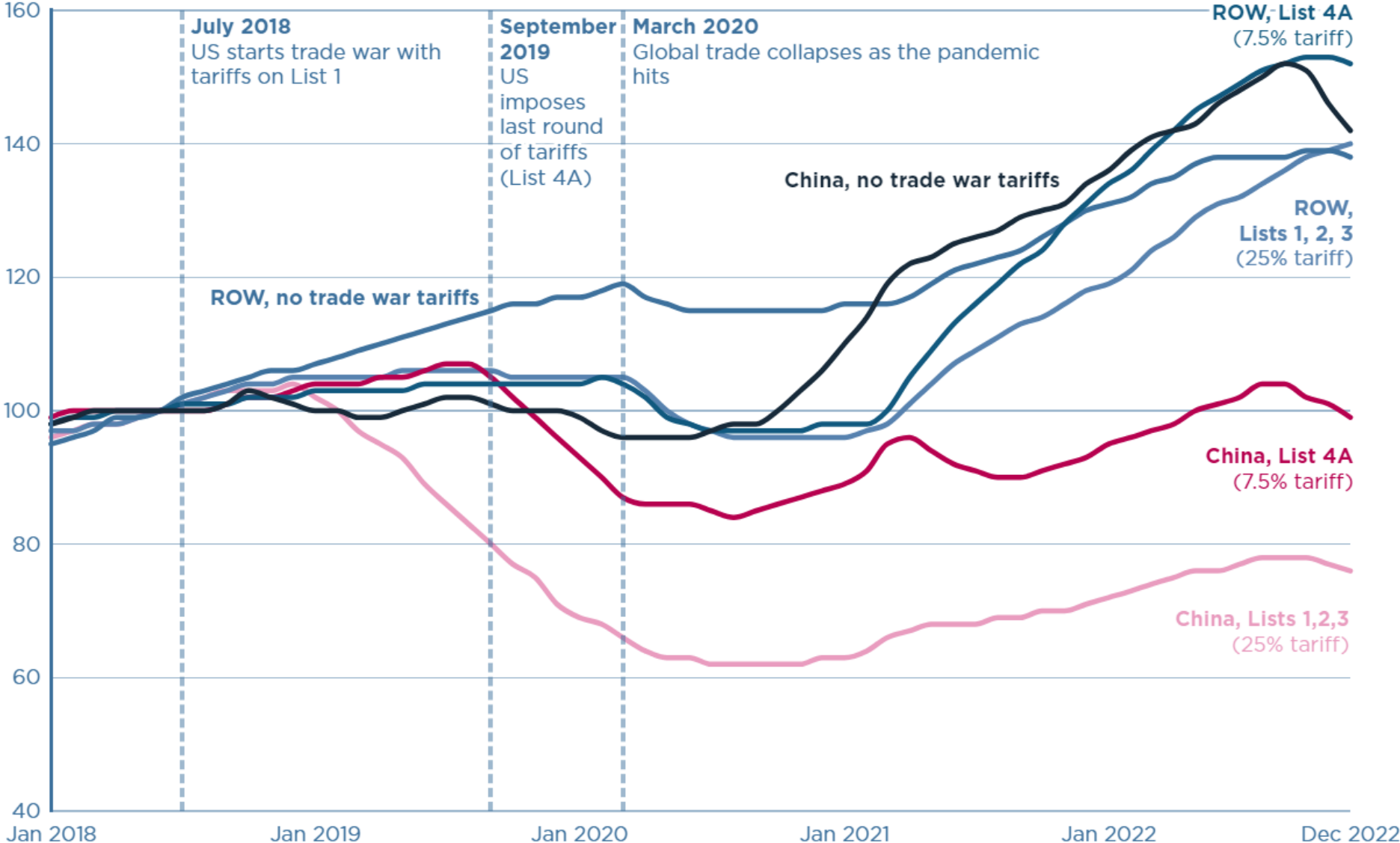
a. US-China tariff rates toward each other and rest of world (ROW)



Chinese tariffs on other countries dropped while the US-China trade war is still ongoing

# US imports from China are both decoupling and reaching new highs.

b. US monthly goods imports from China and rest of world by trade war tariff list (index, June 2018=100)



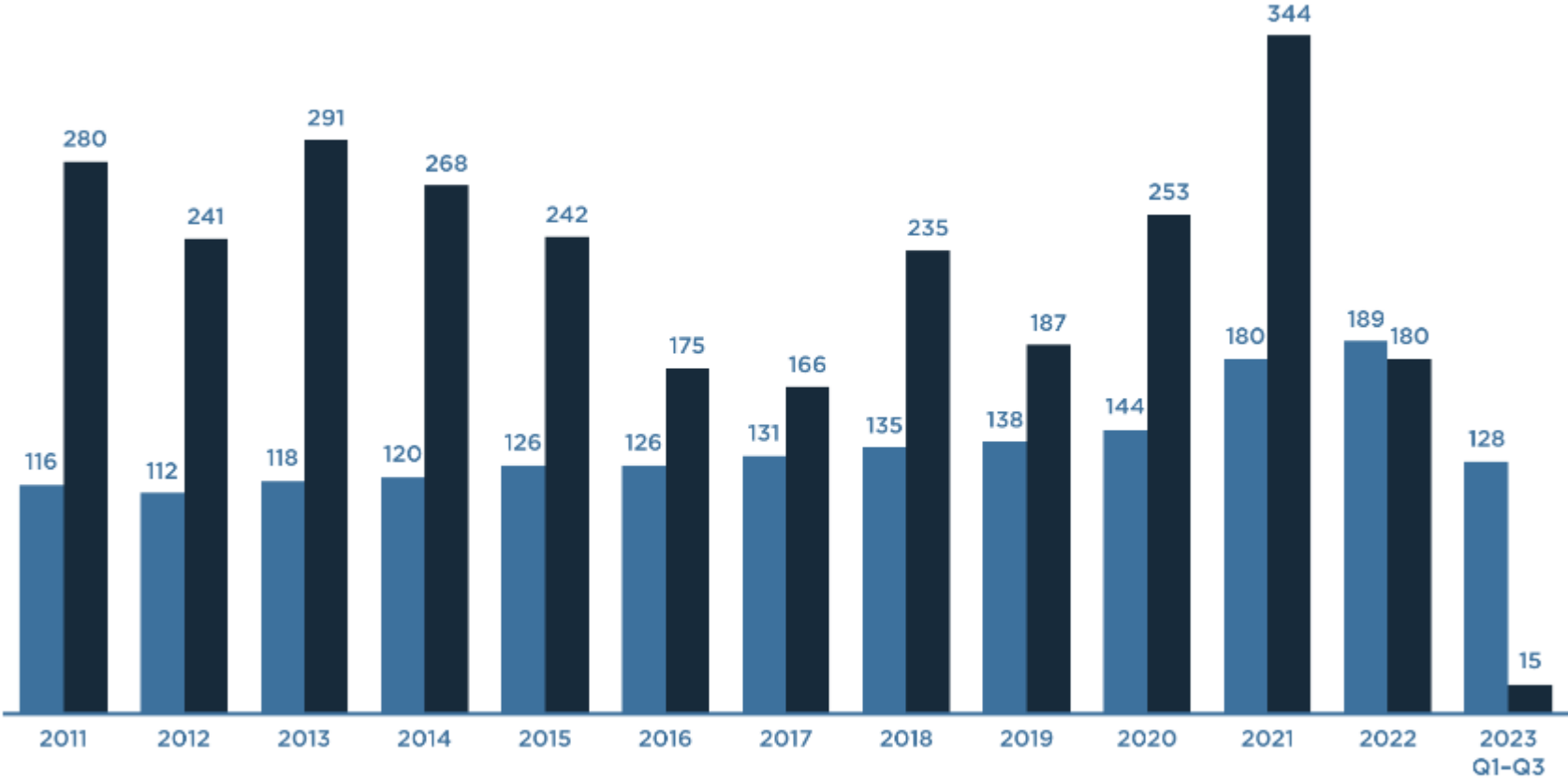
**China's Economy & Demand Is  
Slowing, But Still Significant**

**but maybe different stuff**

# Foreign investments in China have declined in recent years

Chinese foreign direct investment inflows by measuring agency, billions USD, 2011-2023 Q3

MOFCOM SAFE



MOFCOM = Ministry of Commerce; SAFE = State Administration of Foreign Exchange  
**Source:** Ministry of Commerce of China and State Administration of Foreign Exchange of China.

Nicholas R. Lardy (PIIE)  
November 17, 2023 10:00 AM  
Photo Credit: REUTERS/Carlos Barria

# Chinese Travelers Hit the Road but Pinch Their Pennies

A record number of trips over the Lunar New Year holiday was offset by a drop in per-person spending

By [Stella Yifan Xie](#) [Follow](#)

Updated Feb. 19, 2024 2:03 am ET

THE WALL STREET JOURNAL.

## World Economic Outlook Growth Projections

(Real GDP, annual percent change)	ESTIMATE	PROJECTIONS	
	2023	2024	2025
<b>World Output</b>	<b>3.1</b>	<b>3.1</b>	<b>3.2</b>
<b>Advanced Economies</b>	<b>1.6</b>	<b>1.5</b>	<b>1.8</b>
United States	2.5	2.1	1.7
China	5.2	4.6	4.1
India	6.7	6.5	6.5

# Chinese provinces as US states by GDP PPP

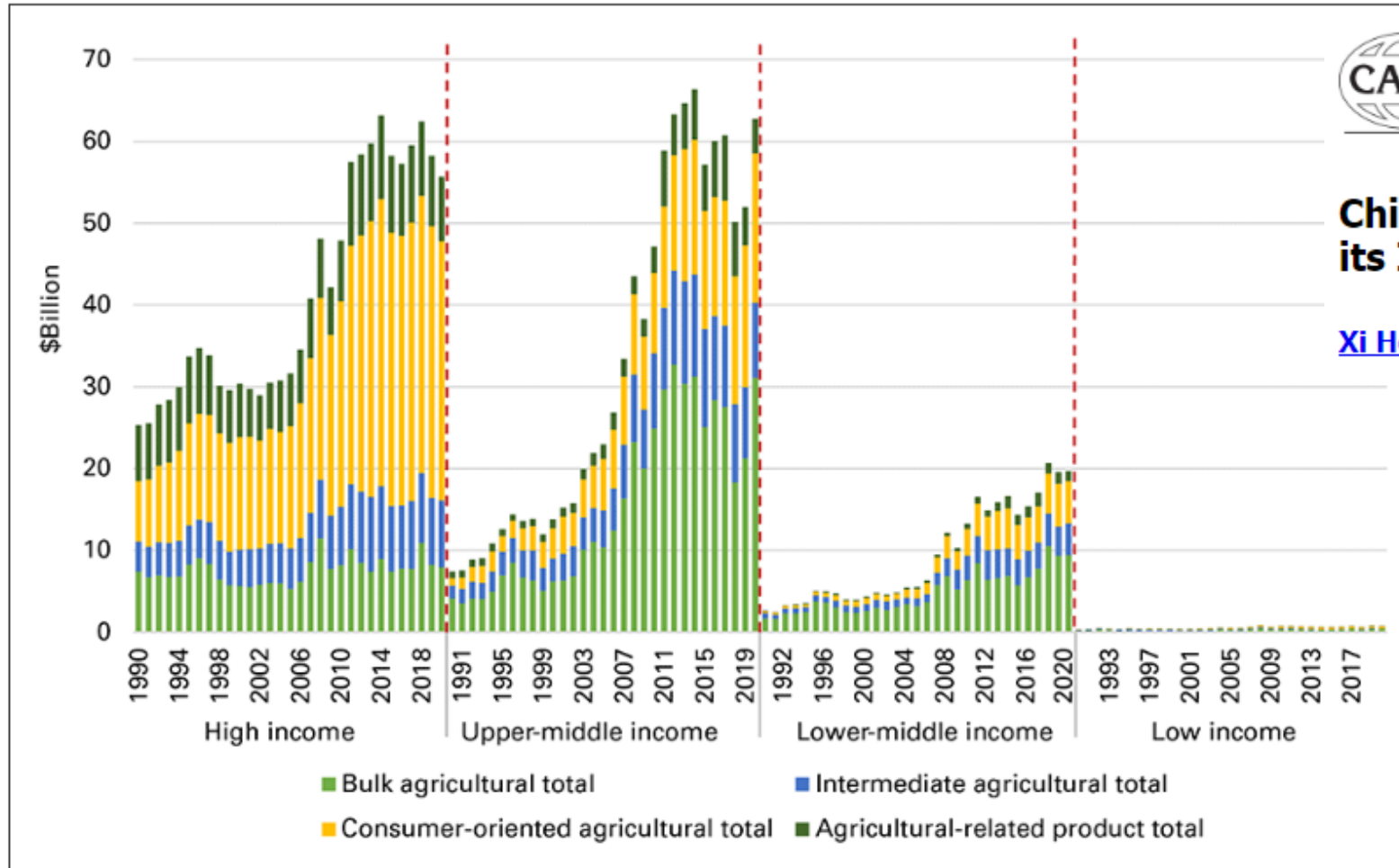


**Chinese Economy Is Already Sizeable**

Chinese provinces as US states by 2020 GDP at purchasing power parity

<https://vividmaps.com/chinese-provinces-as-countries-of-equa/>

States. Figure 2 illustrates US exports of four agricultural categories—bulk (e.g., corn, soybeans, wheat), intermediate (e.g., soybean meal and soybean oil), consumer-oriented (e.g., pork and beef products), and agriculture-related products (e.g., seafood and forestry products)—to high-income, upper-middle-income, lower-middle-income, and low-income countries from 1990 to 2020.



## China's Changing Population Structure and its Implications for US Agricultural Exports

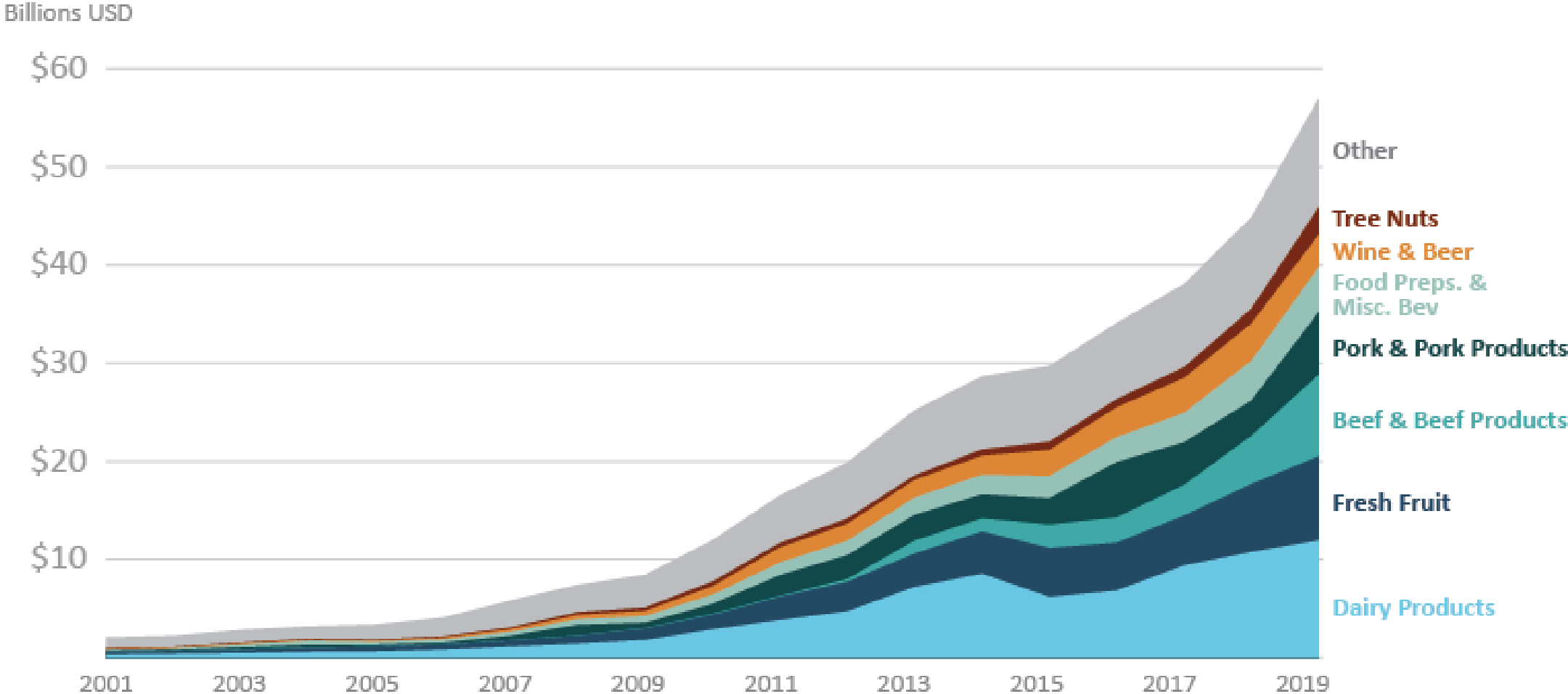
Xi He and Wendong Zhang

[https://www.card.iastate.edu/ag\\_policy\\_review/article/?a=122](https://www.card.iastate.edu/ag_policy_review/article/?a=122)

**Figure 2. US exports of agricultural commodities to countries with different income levels.**

*Note:* Based on data from USDA GATS (2021). We use World Bank's classification to classify countries into different income groups and use USDA's definition of agricultural products and classification of agricultural product categories.

# China's Global Consumer-Oriented Product Imports, 2001-2019



Source: Trade Data Monitor

<https://www.fas.usda.gov/data/china-evolving-demand-world-s-largest-agricultural-import-market>



# Chilean cherry exports to China hit new high

By Chu Daye

Published: Jan 19, 2023 12:46 AM

**GLOBAL**  
TIMES  
DISCOVER CHINA. DISCOVER THE WORLD.



Fresh cherry exports from Chile to global markets in the 2022/23 season are expected to top 80 million boxes, or around **400,000 tons**

89% of Chilean cherry exports go to China

# Conspicuous Consumption

- Thorstein Veblen (1857-1929) introduced the term “conspicuous consumption” (referring to consumption undertaken to **make a statement to others about one’s class or accomplishments**). This term, more than any other, is what Veblen is known for.
- Veblen grew up in a Norwegian immigrant farming community in Wisconsin.



# Mighty Beef!

Countries with market access to China:

2017 South Africa, Ireland, Ukraine, Lithuania, USA, Belarus

2018 Argentina, Kazakhstan, France, Netherlands, Iceland, Russia, Uruguay, Panama

2019 Bolivia, UK

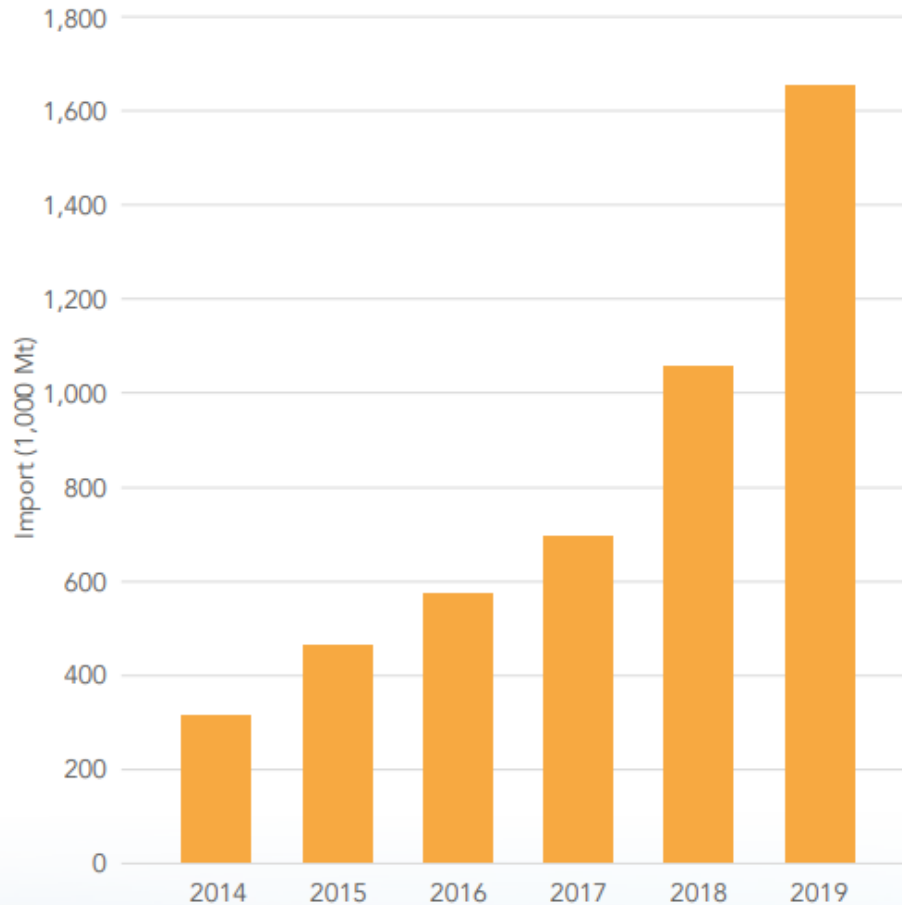


Figure 3. China beef imports

Source: National Bureau of Statistics

world. Brazil, Uruguay, Argentina and Australia are the top four suppliers to China, followed by New Zealand and Canada.

## Importing countries

Country	2017	2018	2019
	Quantity (t)		
Brazil	197,565	322,693	399,642
Argentina	86,334	180,377	375,581
Australia	115,779	173,088	307,216
Uruguay	195,874	218,553	285,826
New Zealand	79,485	110,805	214,400
Chile	4,113	5,599	14,659
Costa Rica	3,754	5,410	11,749
Canada	8,977	8,178	9,997
USA	2,205	6,916	9,851
Ireland	0	738	6,991
Other	1,029	7,031	23,979
<b>Total</b>	<b>695,115</b>	<b>1,039,388</b>	<b>1,659,891</b>

Source: IHS Maritime & Trade – Global Trade Atlas®/China Customs

Further publication of the trade data is prohibited, unless expressly permitted by IHS Maritime & Trade

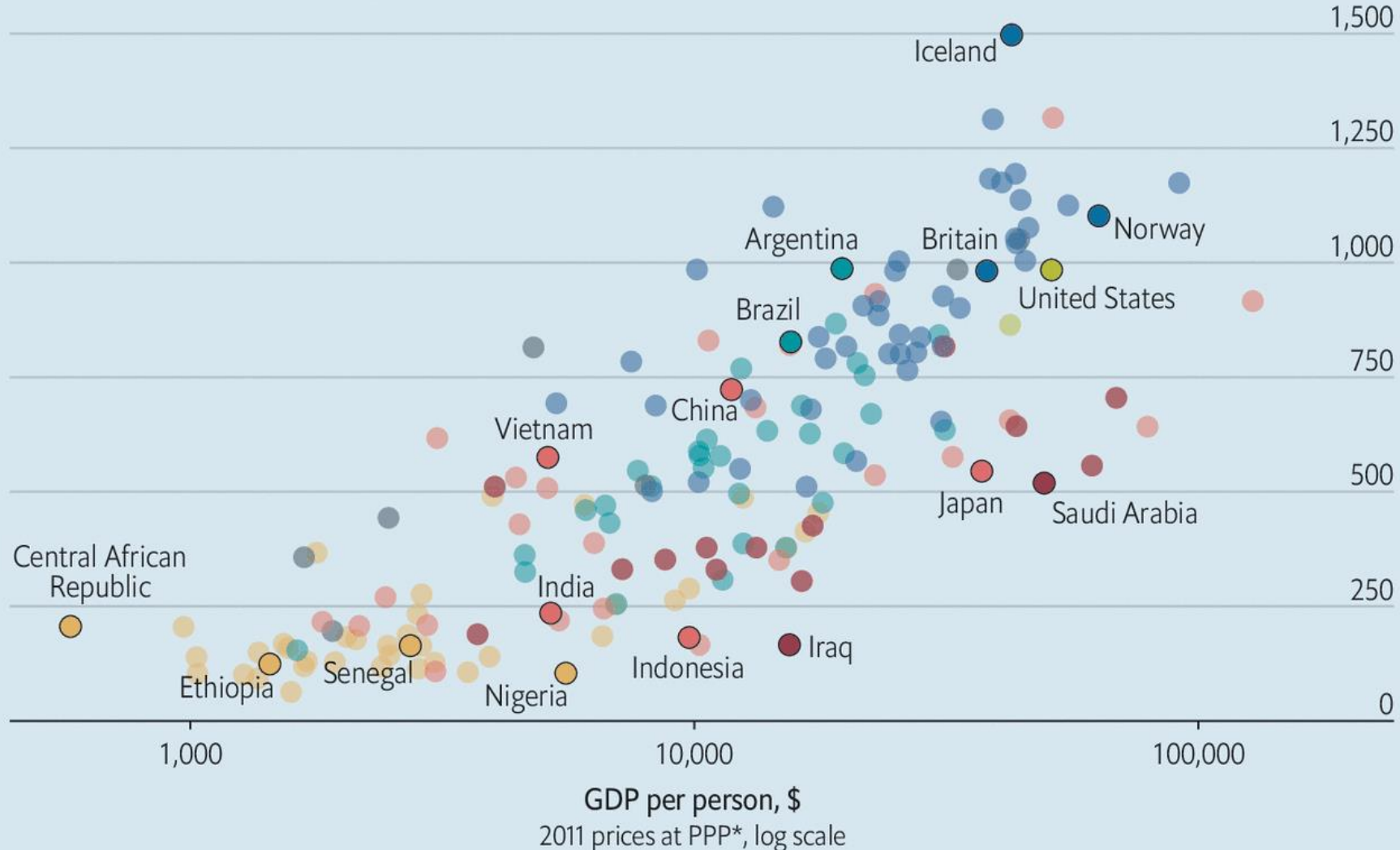
# Meat Economics

## Economic carnivores

GDP per person and food supply, 2013

- Asia
- Europe
- Latin America
- Middle East & north Africa
- Oceania
- North America
- Sub-Saharan Africa

Daily food supply from animal products, kilocalories per person

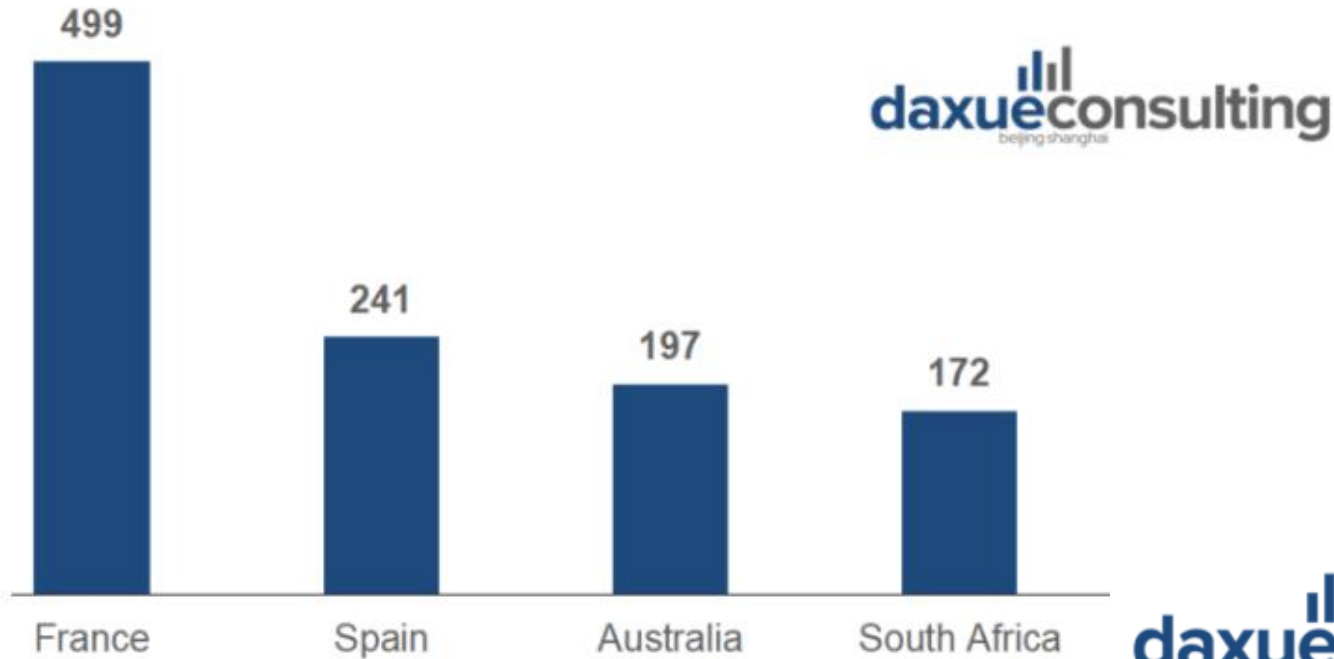


Sources: IMF; FAO

\*Purchasing-power parity

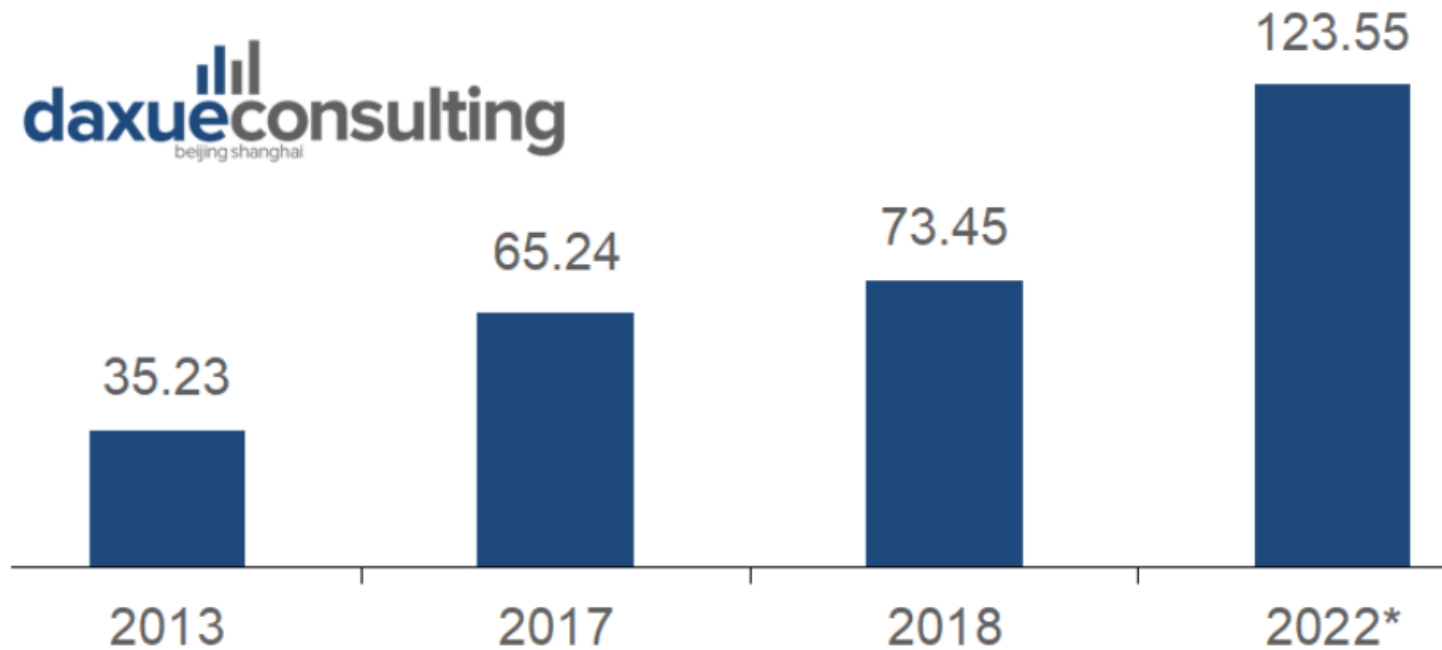
## Baidu searches for wine from certain countries

\*Number is for comparison and does not represent actual search volume



# Another example: wine

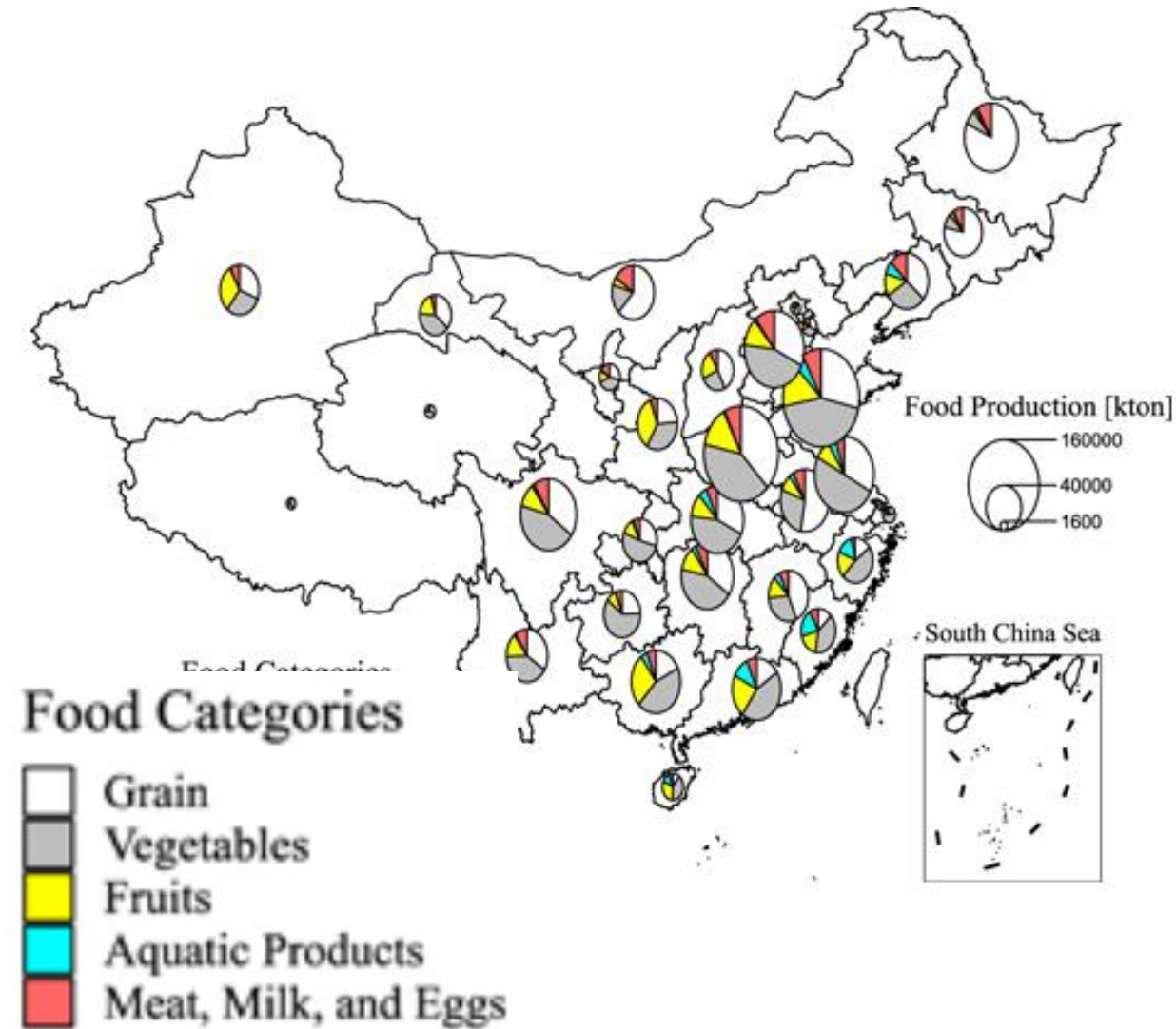
### Sales value of wine in China (billion USD)



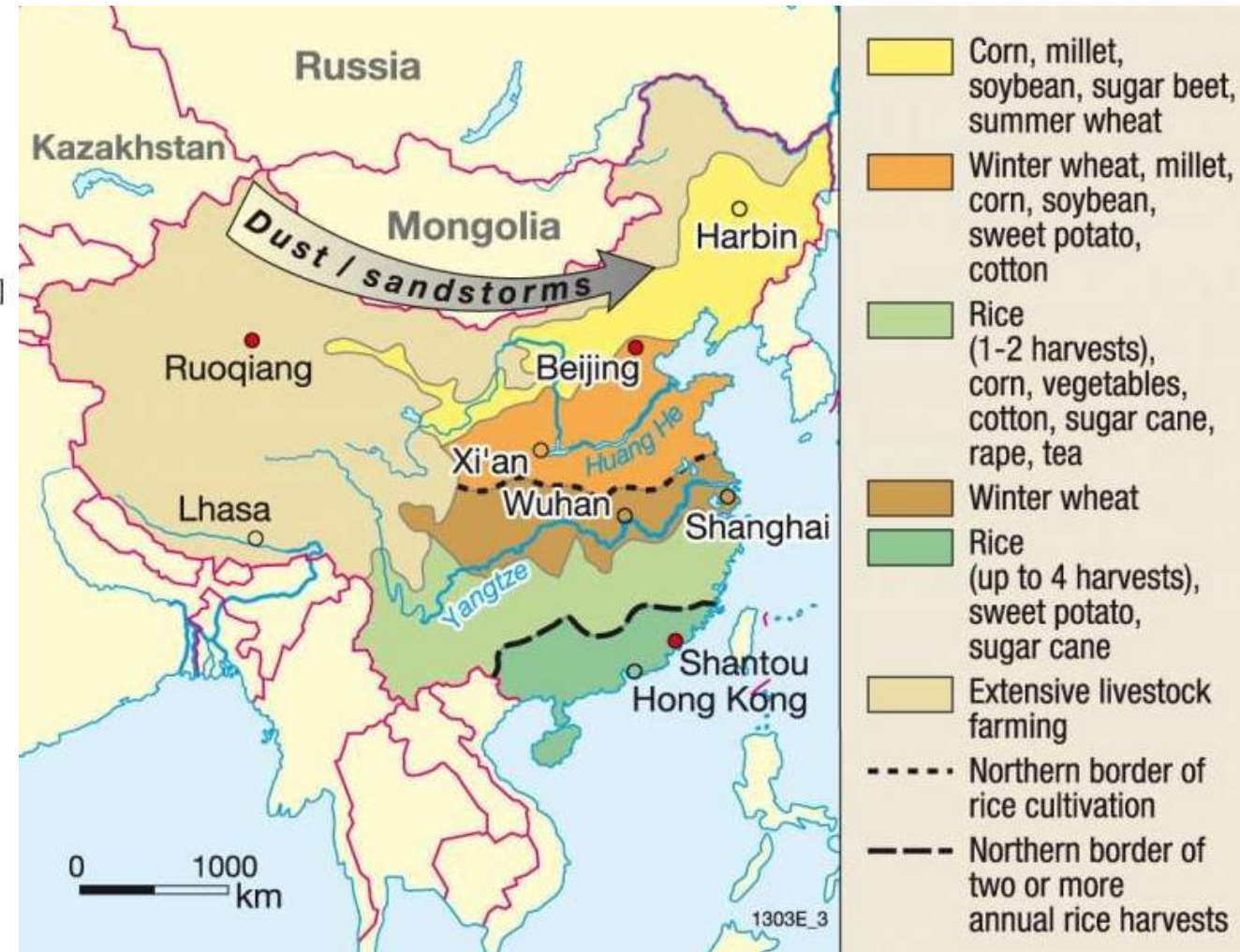


**China's dairy market: How a population known for lactose intolerance became the world's largest dairy importer**

# Food Production in China, 2018



# China's Major Crops



# Agricultural transformation in my hometown

Greenhouse – plastic film - Shandong Province





# Now the high-tunnel production system has been upgraded



**It is important to have open  
communication lines when China's  
becoming more opaque**

**Leverage the special Iowa-Xi relation!**



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Investigations

China

# China ends 30-year tradition: premier's annual press conference

By **Liz Lee**, **Albee Zhang** and **Yew Lun Tian**

March 4, 2024 10:36 AM EST · Updated 14 hours ago



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Investigations

China

# China suspends youth jobless data after record high readings

By **Laurie Chen** and **Albee Zhang**

August 15, 2023 3:19 AM EDT · Updated 7 months ago



• Home / China / Top News

# Xi says China ready to invite 50,000 young Americans in 5 yrs to boost exchanges

Xinhua | Updated: 2023-11-16 13:26



The Des Moines Register

## Iowa students get free trip to China on president Xi Jinping's invitation

A letter from Muscatine's Sarah Lande to the Chinese president resulted in a trip to China for some high school students there.



2024 - 4TH ANNUAL

# U.S. - CHINA AGRICULTURE ROUNDTABLE

2024 (第四届)

## 中美农业圆桌论坛

### GLOBAL FOOD SECURITY & AGRICULTURAL COOPERATION

*JUNE 2024, CHINA*

*2024年6月·中国*



President Biden and President Xi - Nov. 15,  
2023



Secretary Vilsack and Minister Tang - Jan.  
18, 2024

# Learn more about Food and China

## THE LANGUAGE OF FOOD

A LINGUIST  
READS THE MENU

DAN  
JURAFSKY

## SHARK'S FIN AND SICHUAN PEPPER A SWEET-SOUR MEMOIR OF EATING IN CHINA FUCHSIA DUNLOP

"Not just a smart  
memoir about  
cross-cultural  
eating but one of  
the most engaging  
books of any kind  
I've read in years."  
—Celia Barbour,  
*O, The Oprah Magazine*

author of  
REVOLUTIONARY  
CHINESE COOKBOOK

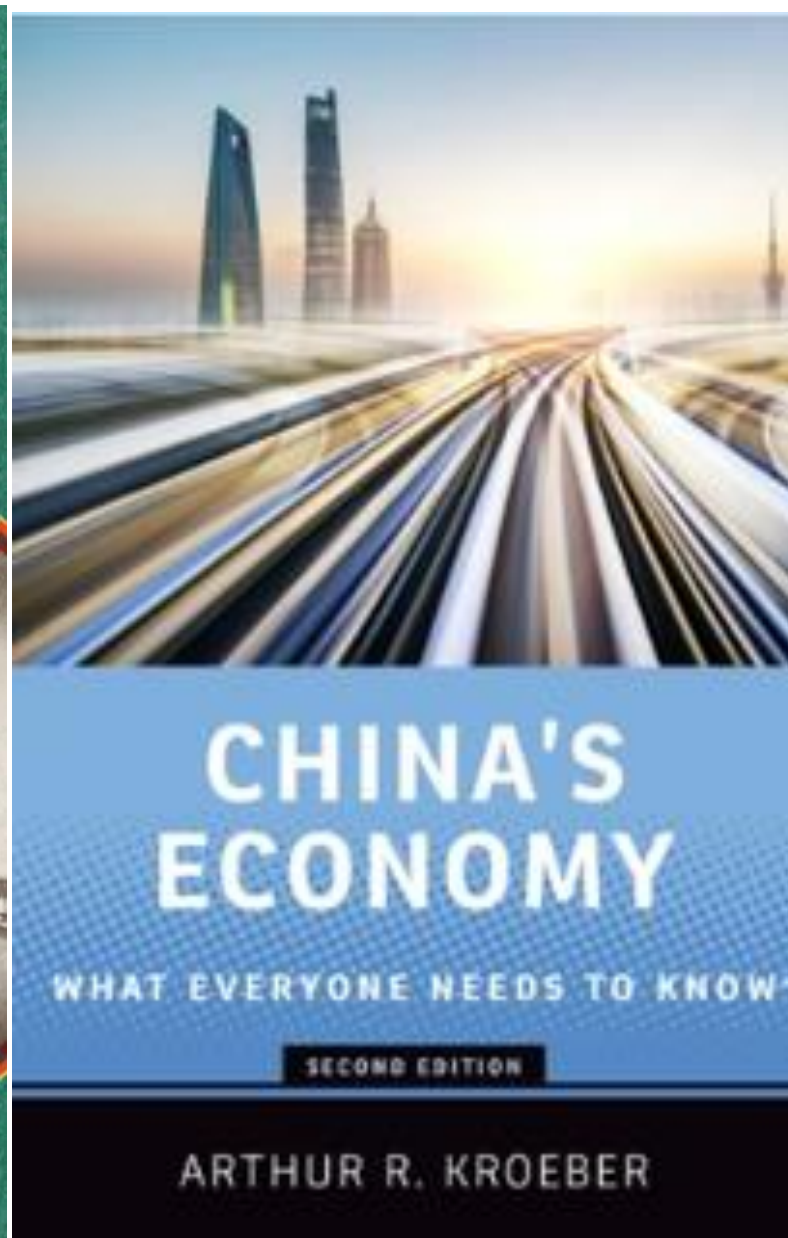
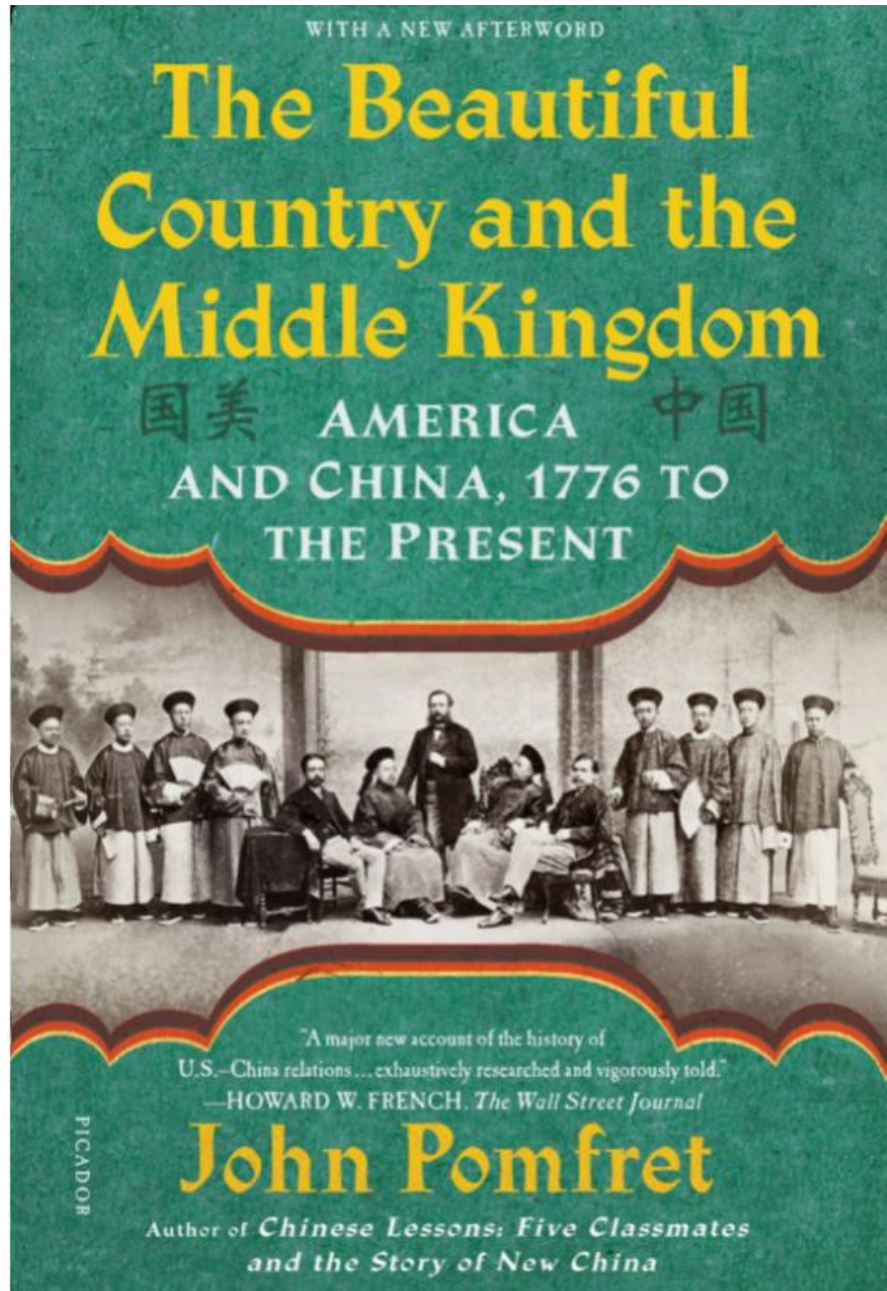


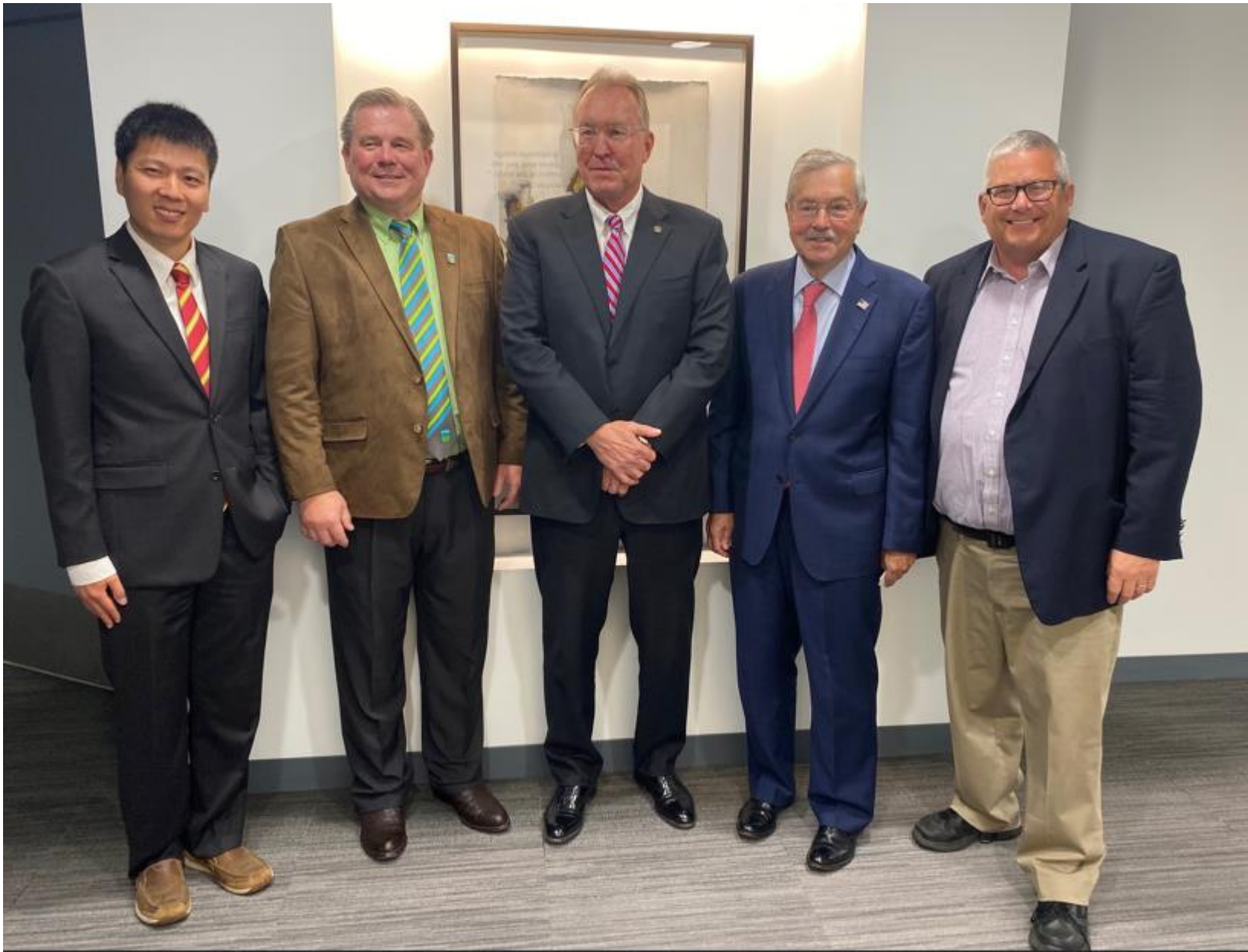
## LAND OF FISH AND RICE

RECIPES FROM THE CULINARY HEART OF CHINA

FUCHSIA DUNLOP

Learn more about contemporary Chinese economy





**RIP Bill Northey**

2021 ASFMRA Leadership Institute, Johnston, IA



# Thank you!

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Wendong Zhang  
wendongz@cornell.edu

<https://wendongzhang.weebly.com/>

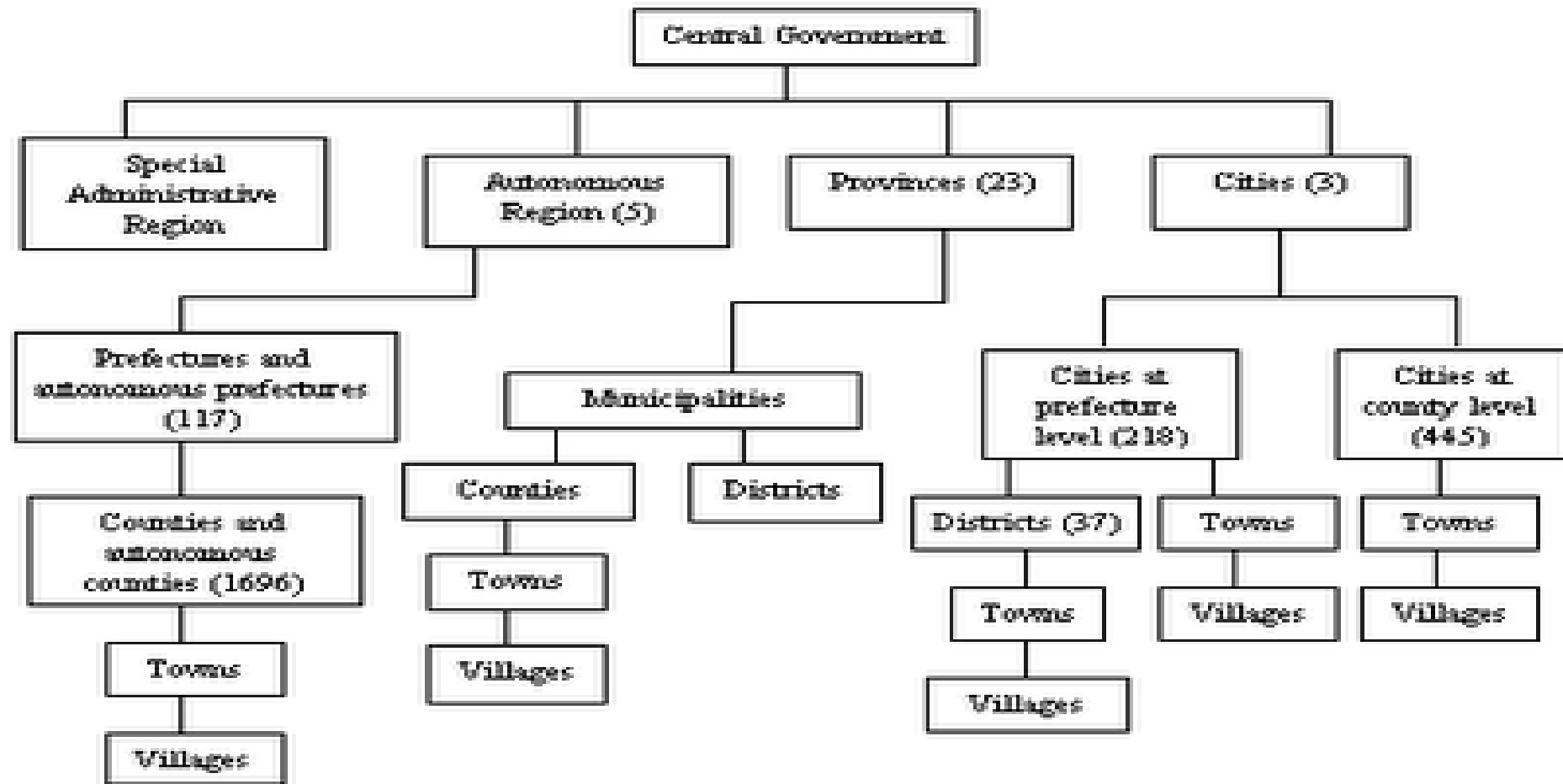


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# China's Governance Hierarchy



# 2000 yrs of imperial history

- huge legacies on governance structure

**the only exception: emperor replaced by central government**

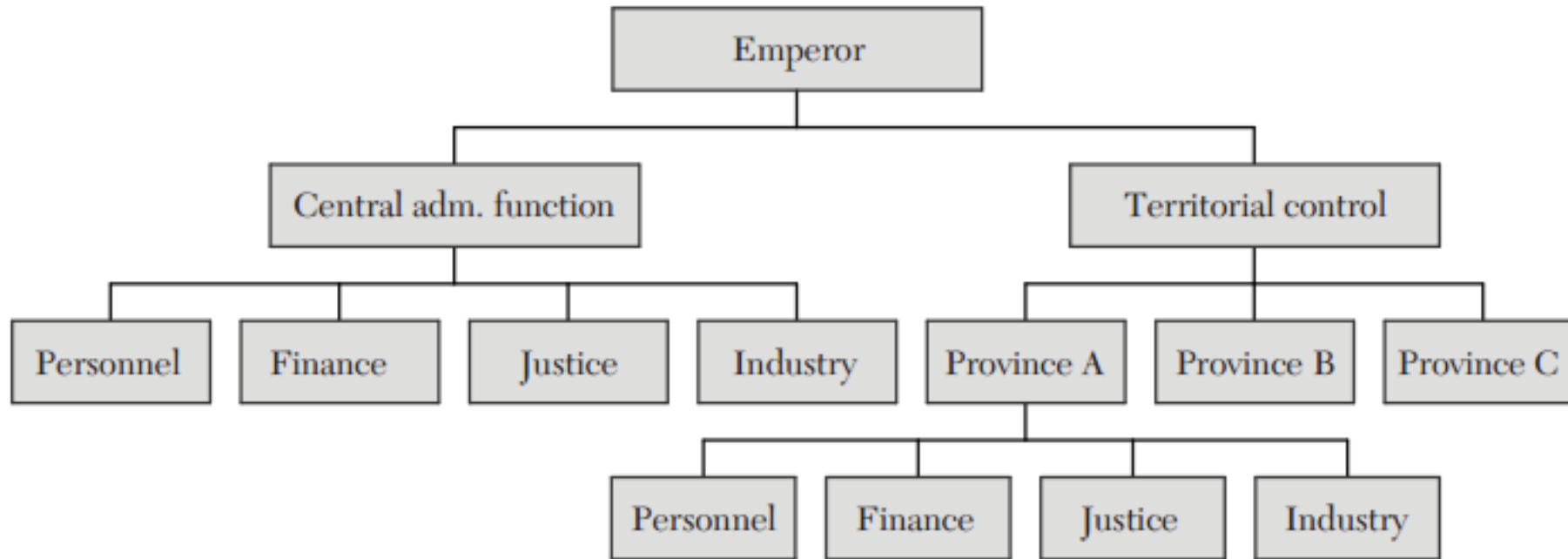
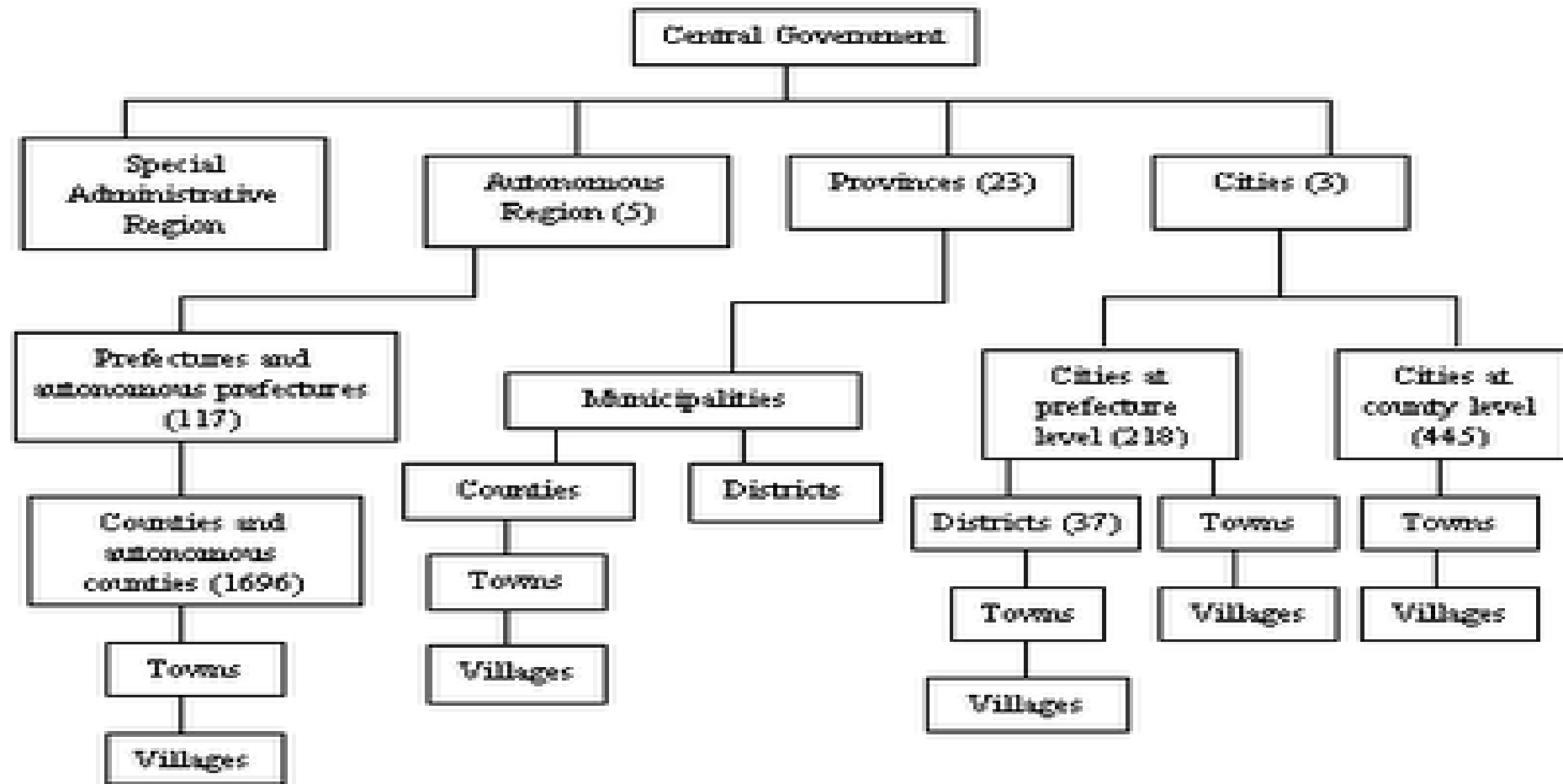


Figure 3. Stylized Governance Structure of Imperial China

New additions: VA, ICE (following US governance structure)

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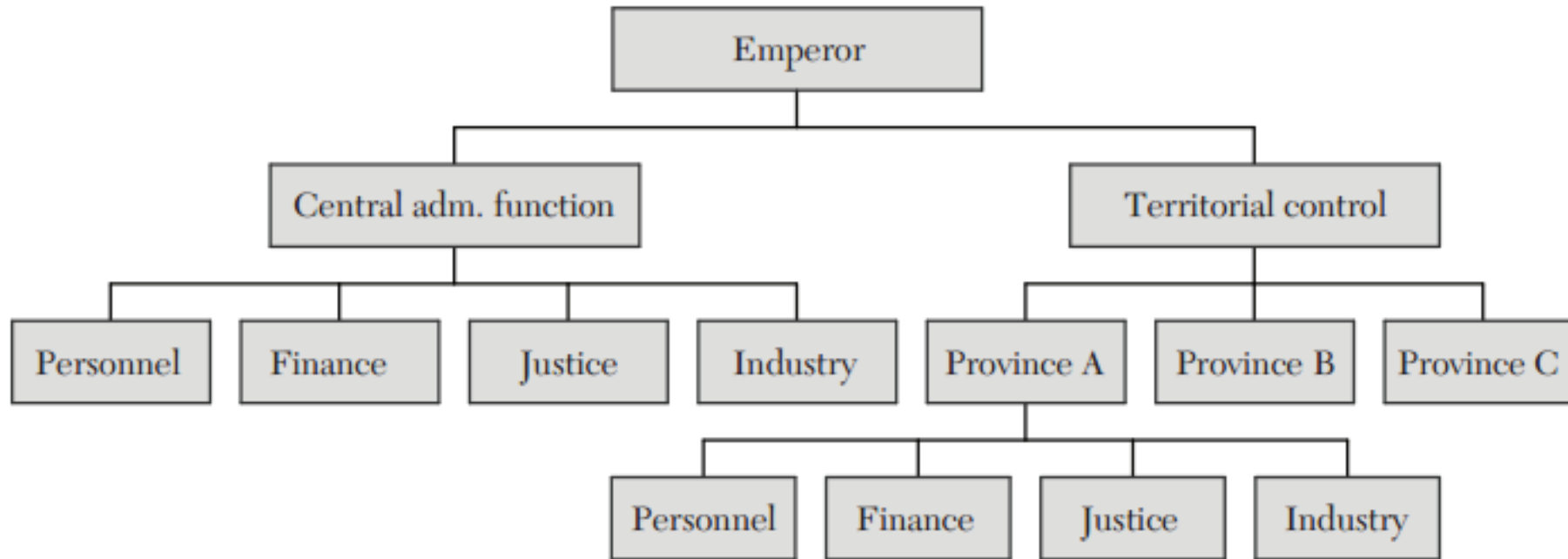


Figure 3. Stylized Governance Structure of Imperial China

New additions: VA, ICE (following US governance structure)

# China's Regional Decentralized Authoritarian (RDA) Regime

CHINA'S POLITICAL-ECONOMIC  
INSTITUTIONS AND DEVELOPMENT  
*Chenggang Xu*

the CATO  
JOURNAL

CHARACTERISTICS OF CHINA'S RDA REGIME COMPARED WITH OTHER REGIMES

	China's RDA regime	Soviet system	Federal State
Composition of national decision-making body	Central, regional and ministerial officials	Central and ministerial officials	Federal legislature representing regional constituencies
Decision-making process	Central-regional bargaining; consensus building; local experiments as a strategy	Top-down; SOE-Ministry bargaining	Voting in legislation; federal-state bargaining
Subnational officials' incentives	Promotion: absolute and relative performance; accountable to superiors; personnel control	Promotion: absolute performance; accountable to superiors; personnel control	To be elected; independent from the federal government; accountable to local constituencies
Regional competition	Tournament-like competition; competition affects governor's promotion	Not important	Fiscal (Tiebout) competition; competition affects governor's re-election
Regional experiment	Local experiments as part of central decision-making; experimental results may become national policy	Not important	States are "laboratories" for policy; voluntary adoption of experiments by states

THE EFFECT OF ECONOMIC PERFORMANCE ON THE TURNOVER OF PROVINCIAL LEADERS

(Ordered probit regressions)

	Dependent variable: turnover (0 = termination, 1 = same level, 2 = promotion)					
	(1)	(2)	(3)	(4)	(5)	(6)
Provincial annual GDP growth rate	1.615** (2.05)	1.581* (1.87)				
Provincial average GDP growth rate			4.727*** (4.34)	4.540*** (3.90)		
Provincial average per capita GDP growth rate (A)					3.001** (2.10)	
Provincial average per capita GDP growth rate of the immediate (B) predecessor (B)					-3.584** (2.36)	
(A)-(B)						3.309*** (3.41)
Age		-0.026* (-1.91)		-0.023* (-1.68)	-0.071*** (6.81)	-0.070*** (6.77)
Age 65		-0.974*** (-5.27)		-0.976*** (-5.25)	-0.303** (2.07)	-0.303** (2.07)
Education		0.154 (0.96)		0.187 (1.17)	0.183 (1.48)	0.184 (1.50)
Central connection		0.384*** (2.79)		0.404*** (2.89)	0.082 (0.74)	0.085 (0.77)

Who get promoted as Governor?