

China's Agri-Food Trends

Wendong Zhang

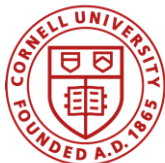
Assistant Professor, Dyson School of Applied Economics and Management, Cornell University;

wendongz@cornell.edu

(607) 254-3231

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

AEM2310, May 4, 2023



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>

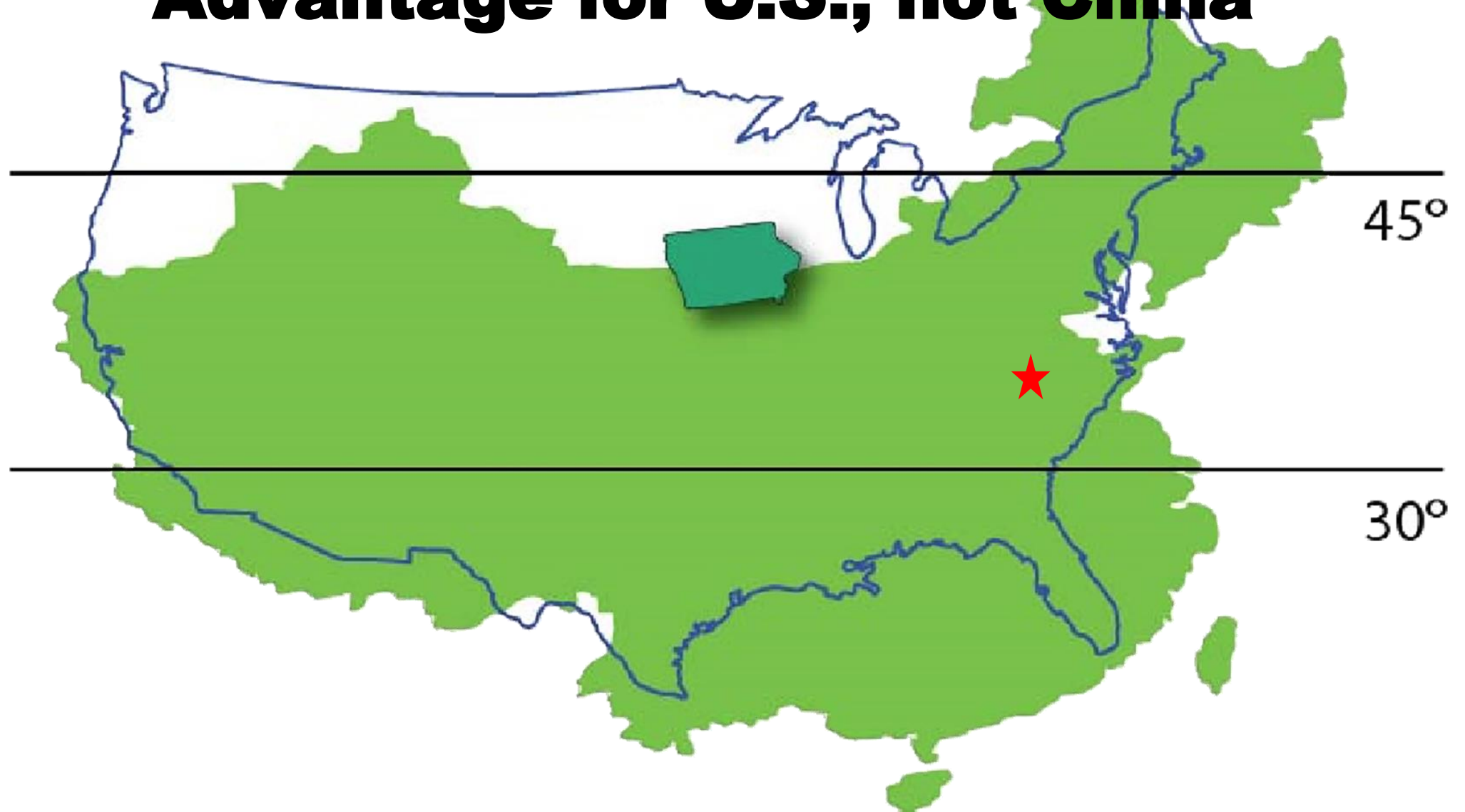
Cornell Atkinson Center for Sustainability: <https://atkinson.cornell.edu/>

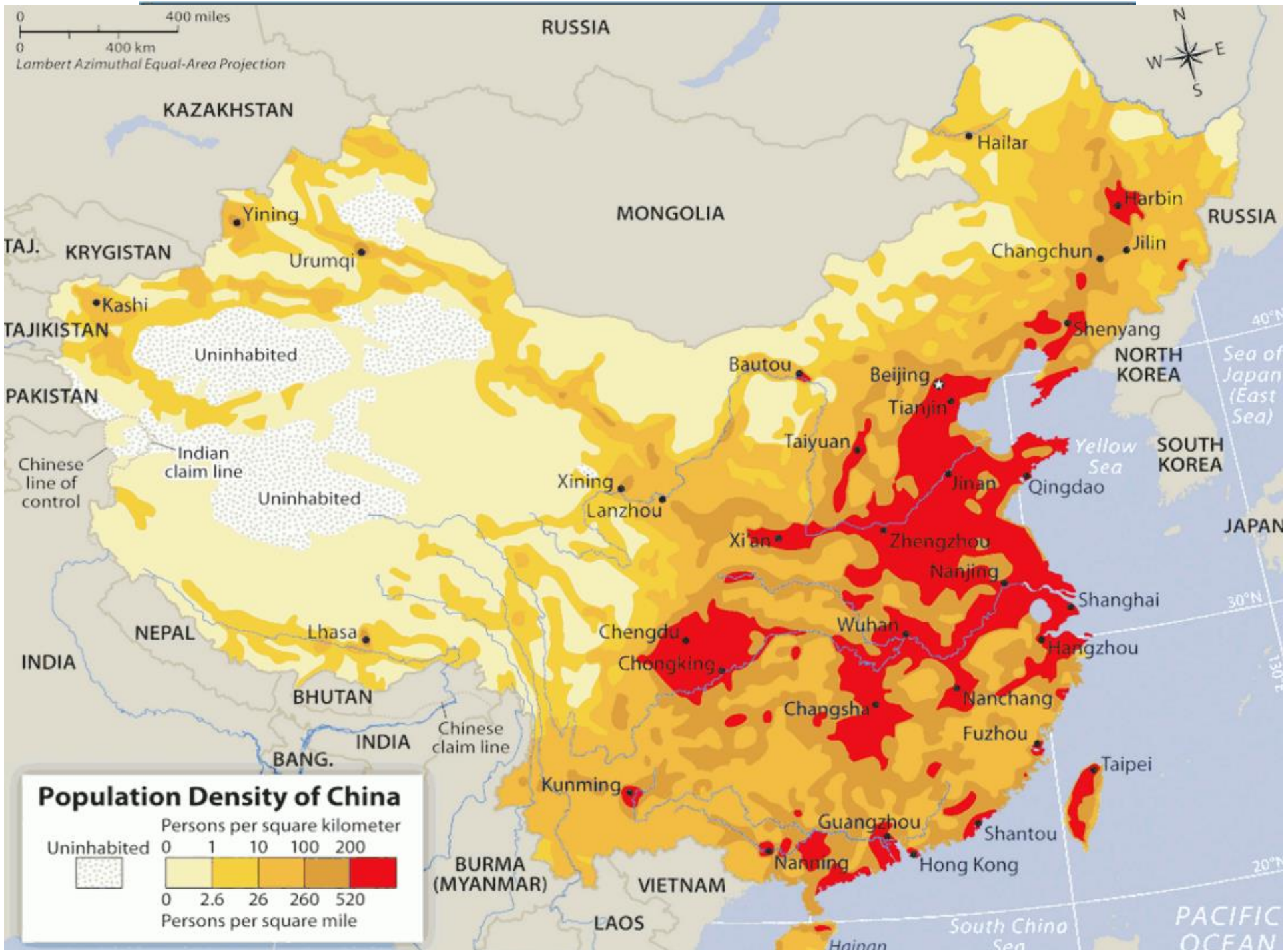
Cornell Institute for China Economic Research (CICER)

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

Global Public Voices Fellow, Einaudi Center for International Studies

Commodity Agriculture is Comparative Advantage for U.S., not China





0 400 miles
0 400 km
Lambert Azimuthal Equal-Area Projection



RUSSIA

KAZAKHSTAN

MONGOLIA

TAJ. KRYGISTAN

TAJIKISTAN

PAKISTAN

INDIA

NEPAL

BHUTAN

INDIA

BANG.

BURMA (MYANMAR)

VIETNAM

LAOS

RUSSIA

Hailar

Harbin

Jilin

Changchun

Shenyang

NORTH KOREA

Sea of Japan (East Sea)

SOUTH KOREA

JAPAN

Yellow Sea

Beijing

Tianjin

Taiyuan

Xining

Lanzhou

Xi'an

Zhengzhou

Nanjing

Shanghai

Hangzhou

Wuhan

Chengdu

Chongking

Changsha

Nanchang

Fuzhou

Taipei

Guangzhou

Shantou

Nanning

Hong Kong

South China Sea

PACIFIC OCEAN

Hainan

Uninhabited

Uninhabited

Chinese line of control

Indian claim line

Chinese claim line

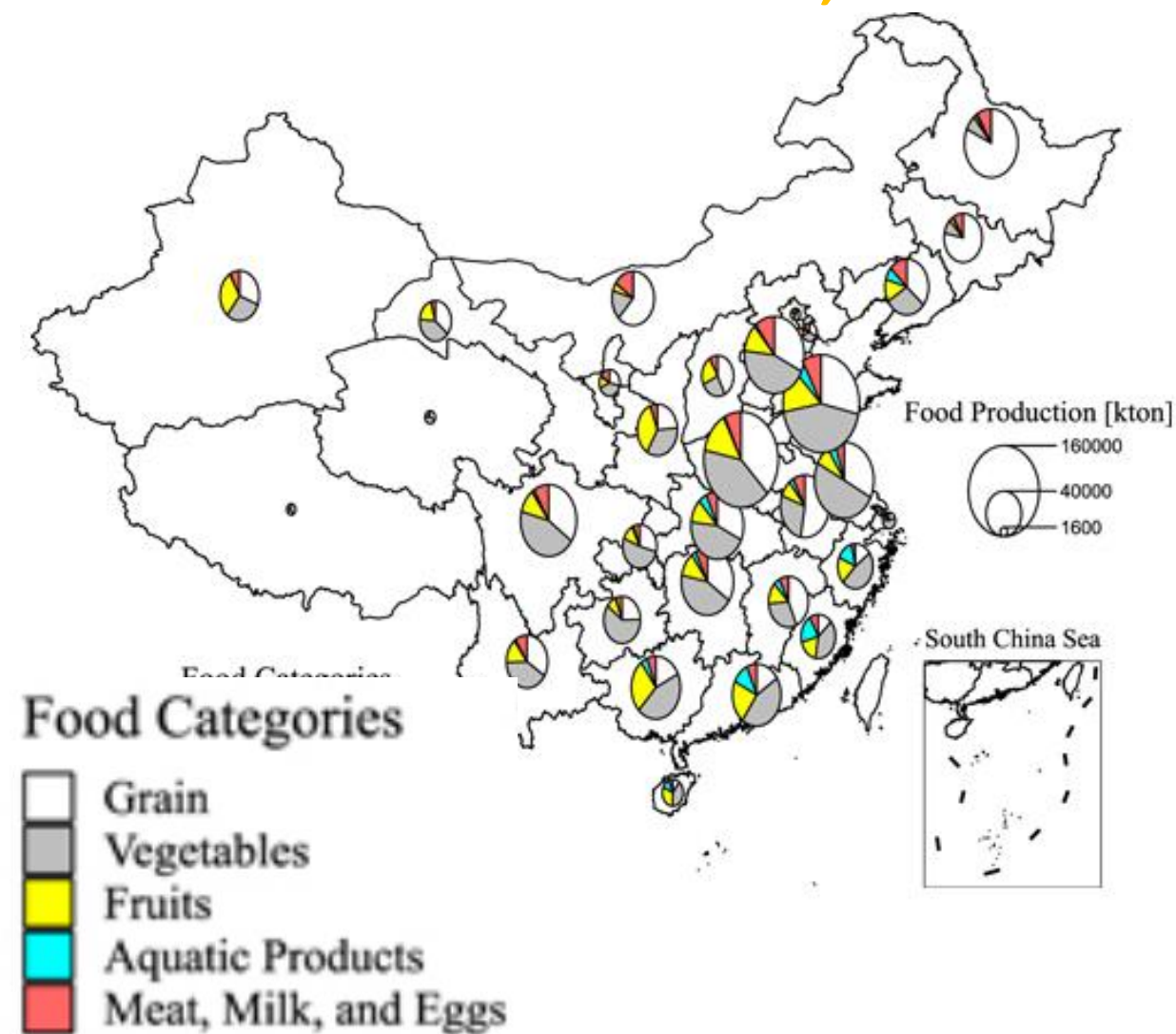
40°N

30°N

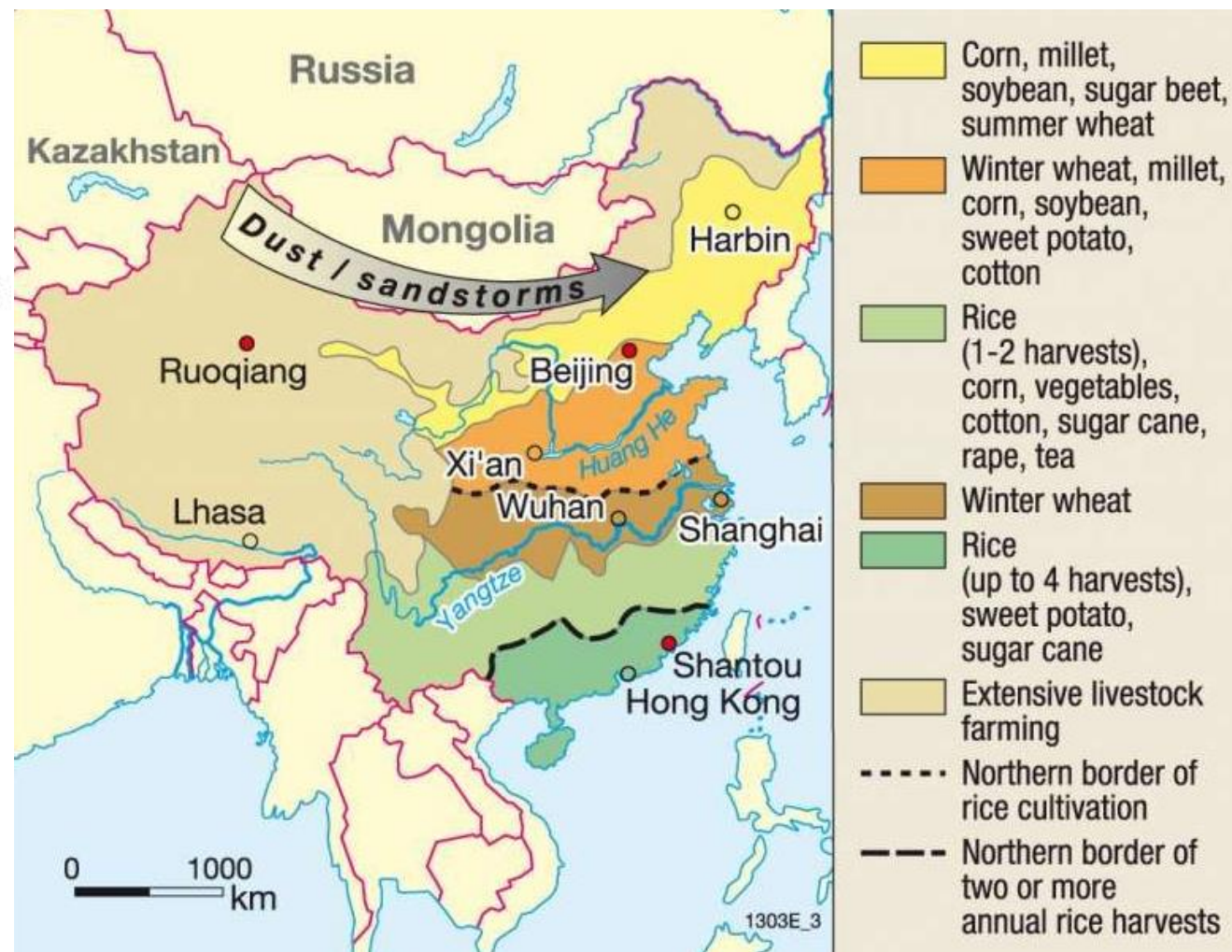
20°N

130°E

Food Production in China, 2018

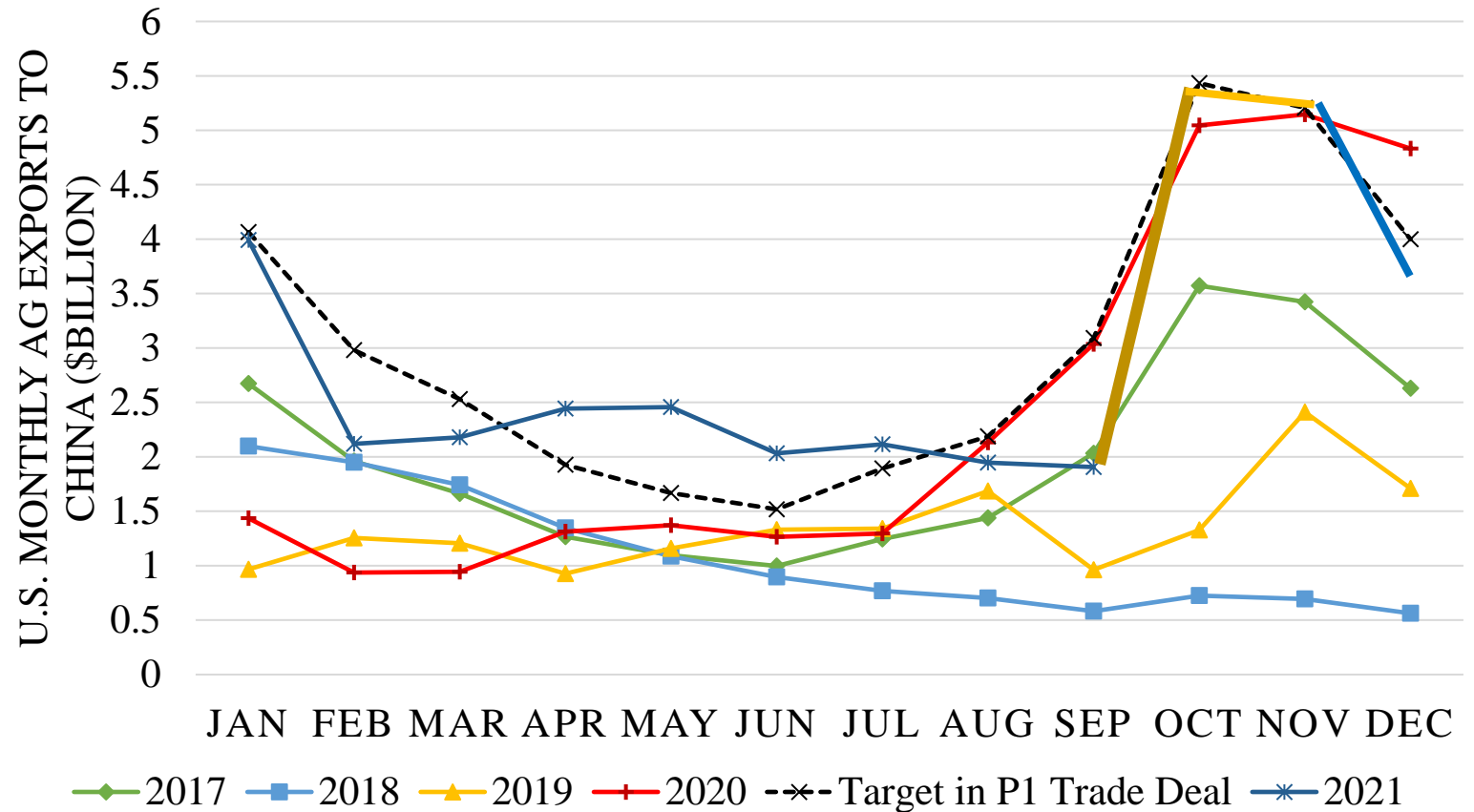


China's Major Crops



US Exports to China Are Strong, but Less So than 2021

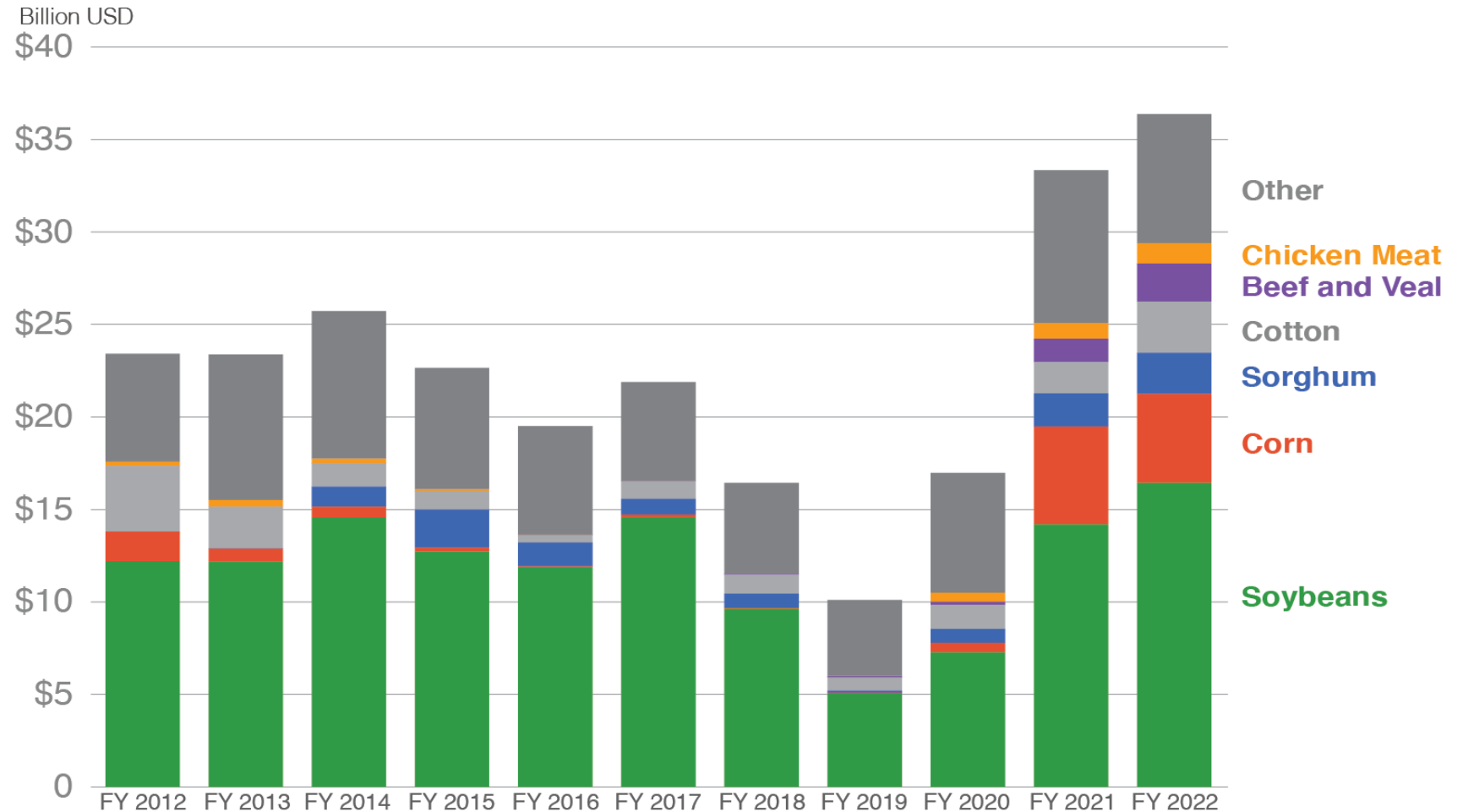
Hog rebuilding after ASF complete; phase one deal concluded



<https://www.card.iastate.edu/products/publications/synopsis/?p=1313>

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



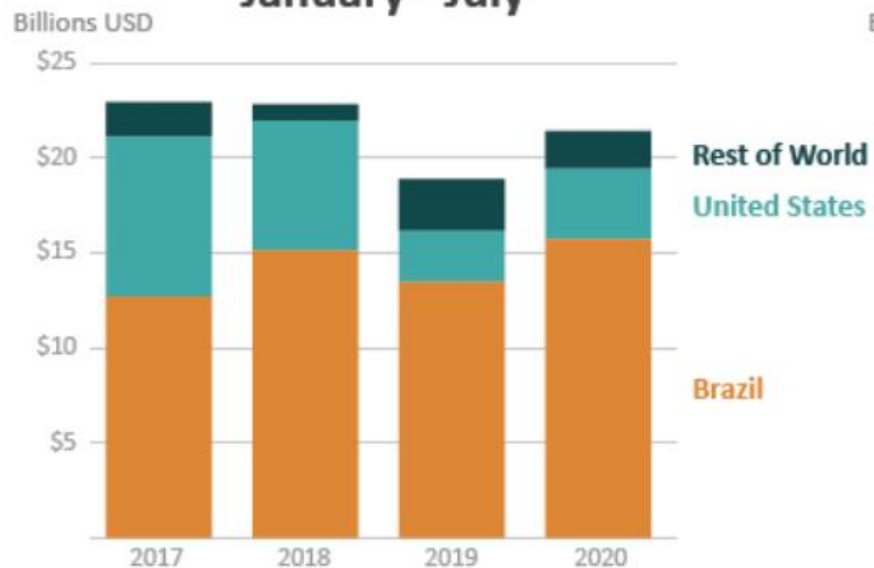
Featured Article

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

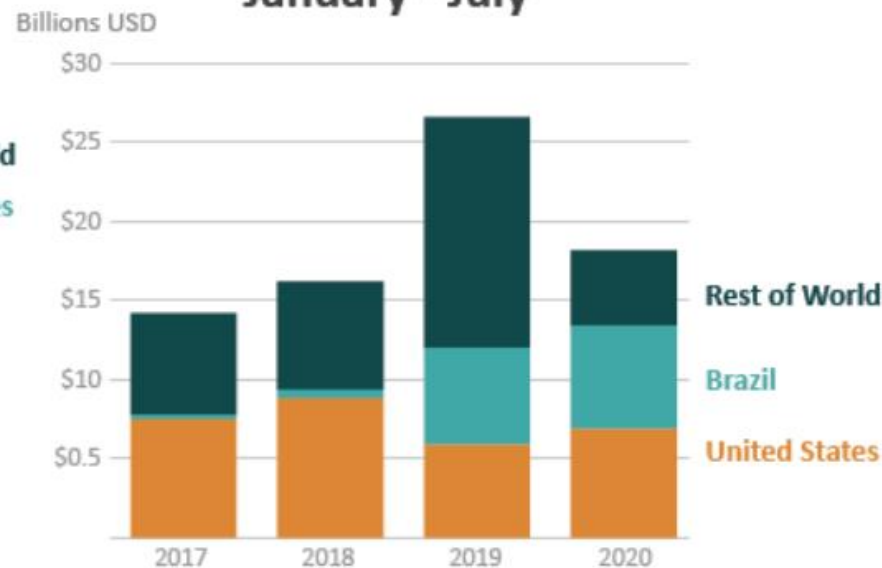
Wendong Zhang ✉

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

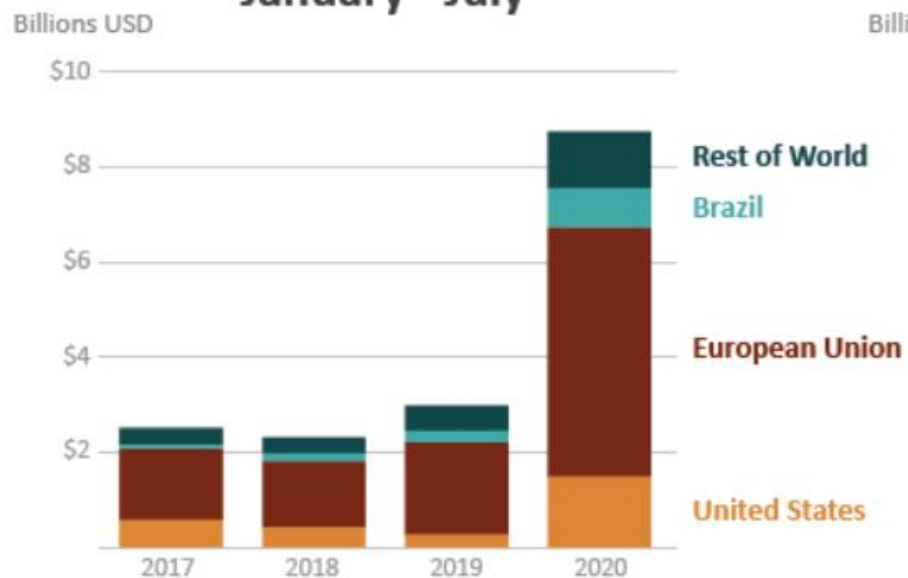
China's Soybean Imports, January - July



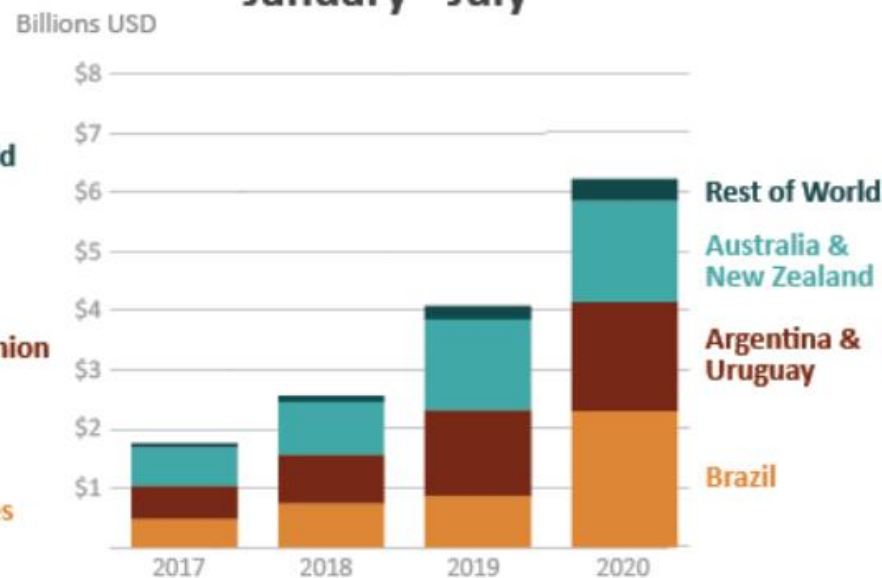
China's Cotton Imports, January - July



China's Pork Imports, January - July



China's Beef Imports, January - July

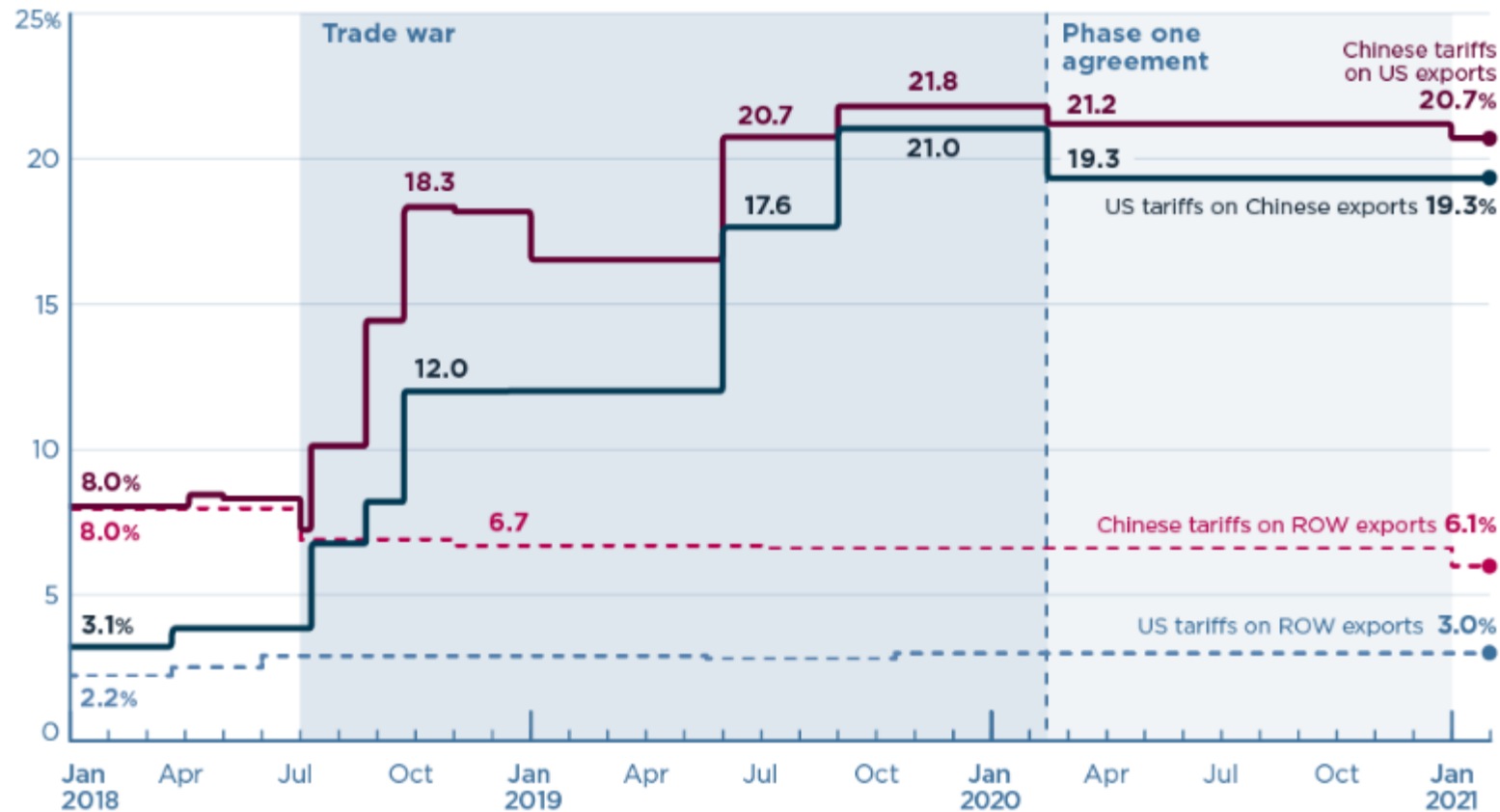


China's Strengthening Trade Ties with US Competitors

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

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

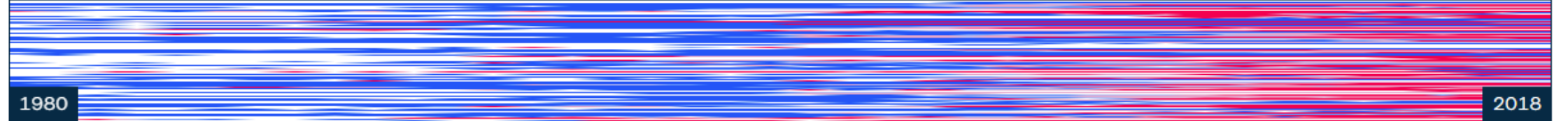
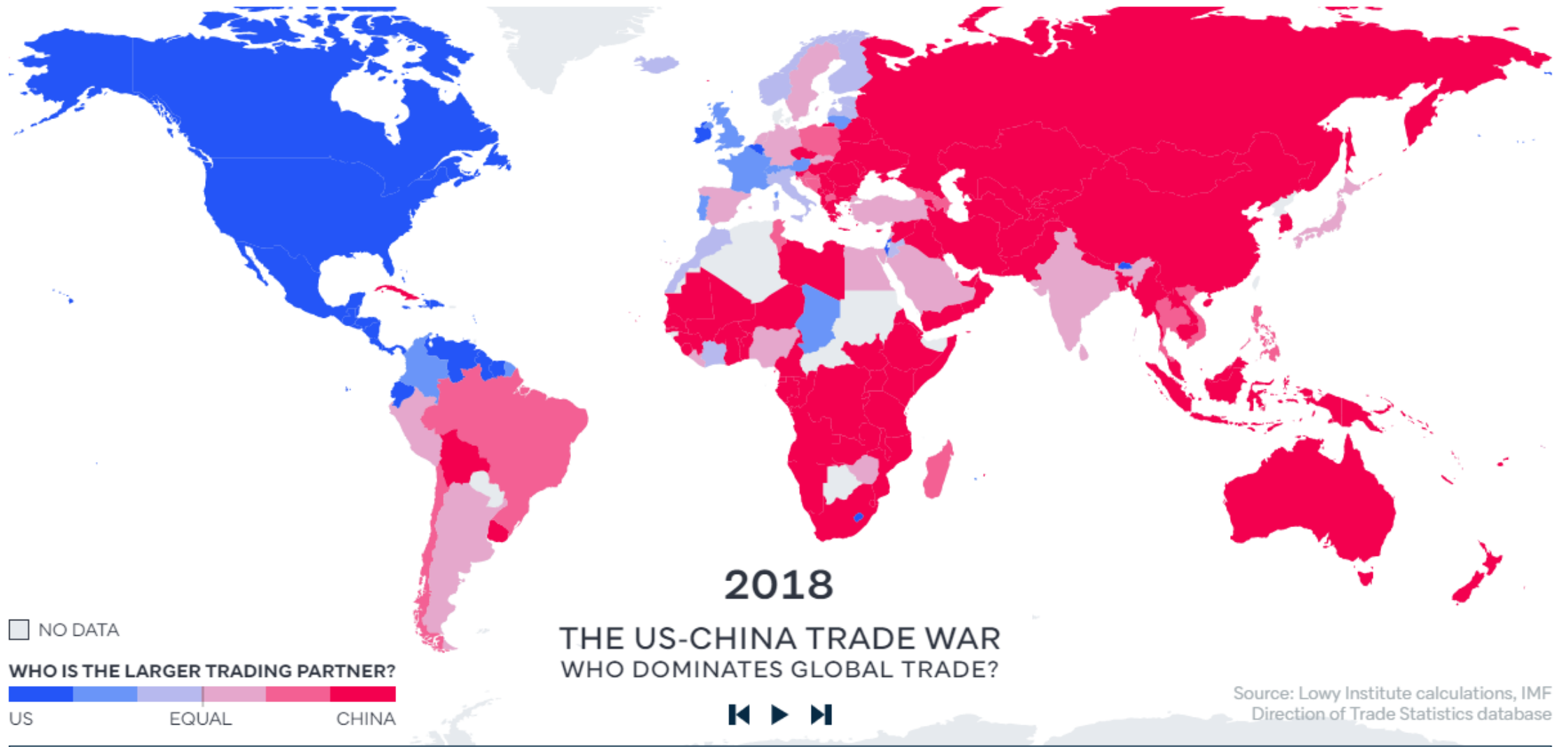
Belt and Road Initiative Still Going

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

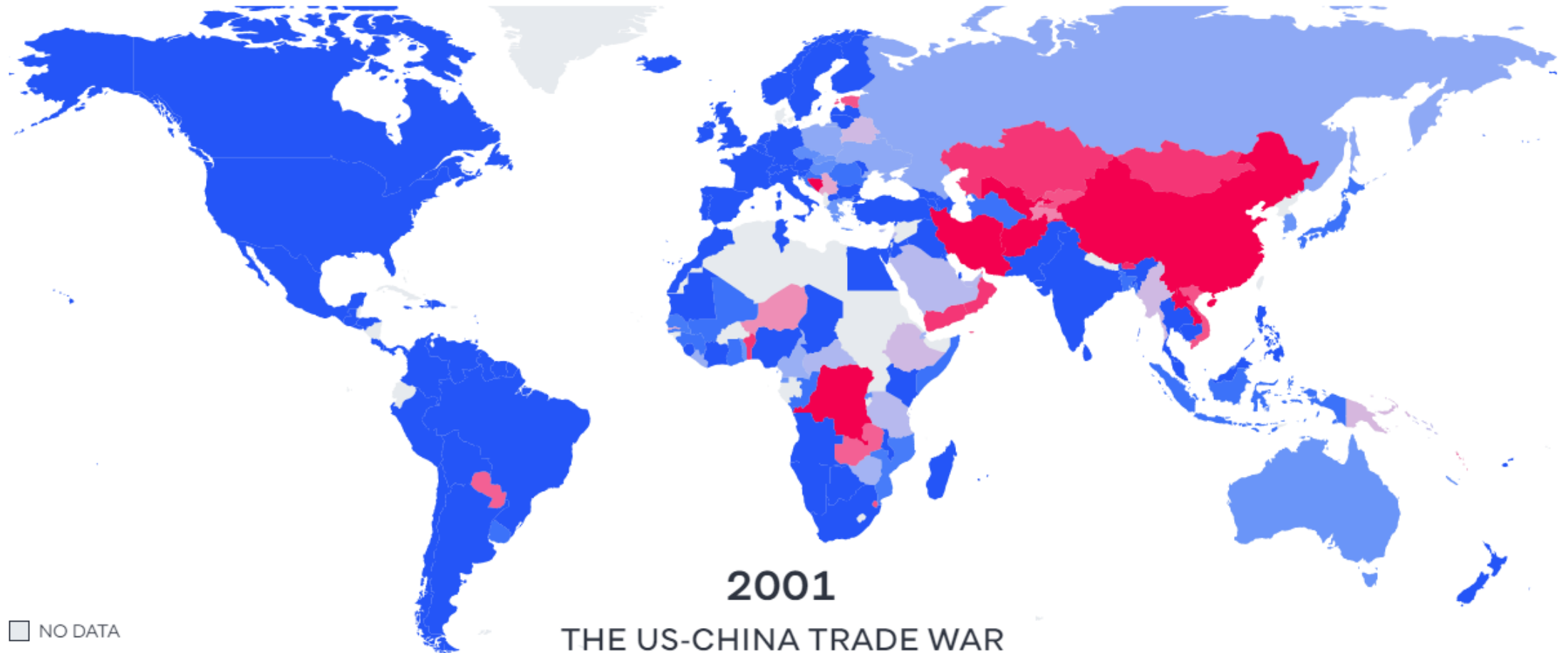


The track from Vientiane to Boten, a northern frontier town along the Laos-China border, will compress what is normally a two-day road trek through rugged mountain terrain into a brisk three hours or so. The Lane Xang, as the bullet train has been named after an ancient Laotian kingdom, will travel through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

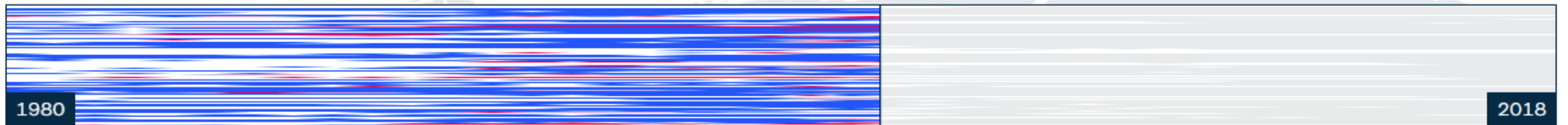
WHO IS THE LARGER TRADING PARTNER?



THE US-CHINA TRADE WAR
WHO DOMINATES GLOBAL TRADE?



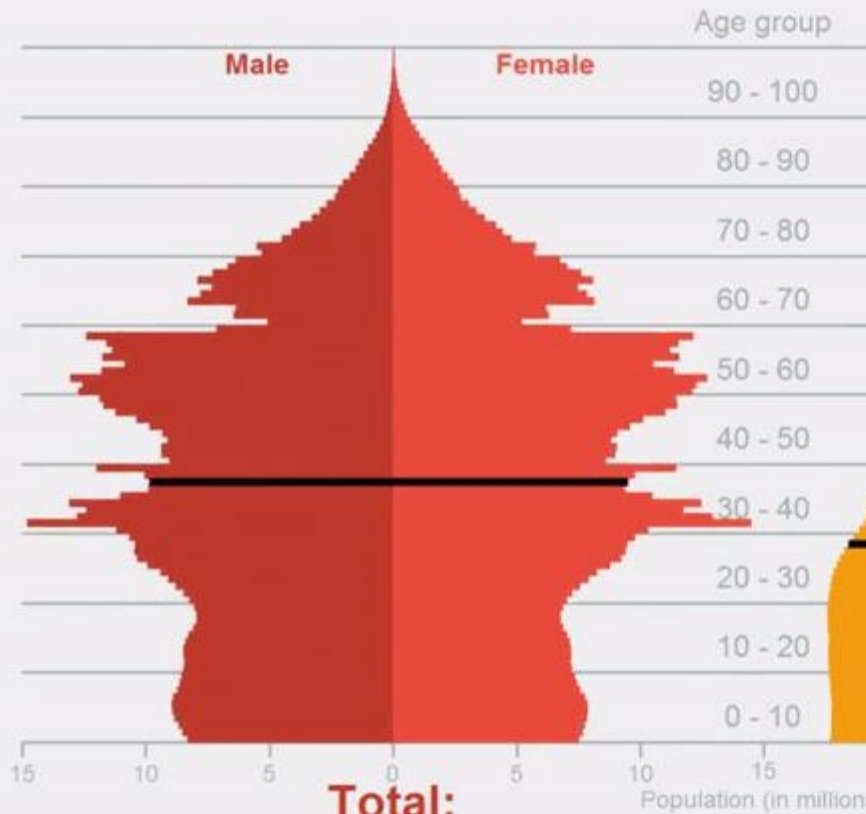
Source: Lowy Institute calculations, IMF
Direction of Trade Statistics database



Yes, Chinese Population is Aging, but Income Growth is More Important

Population projection
2021

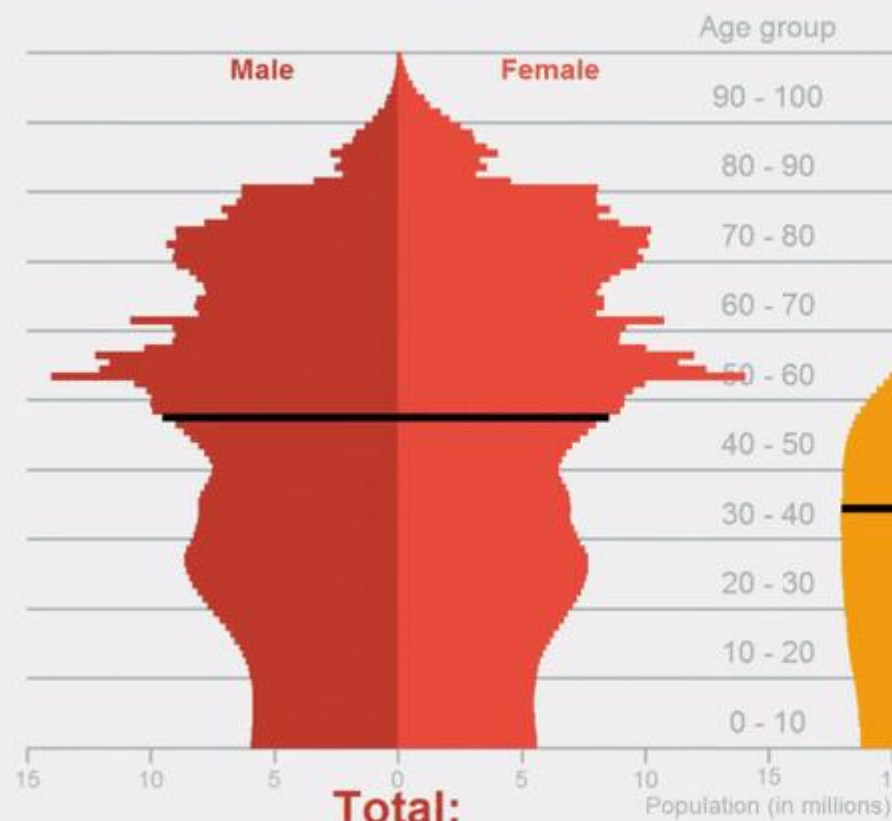
China



■ Median age

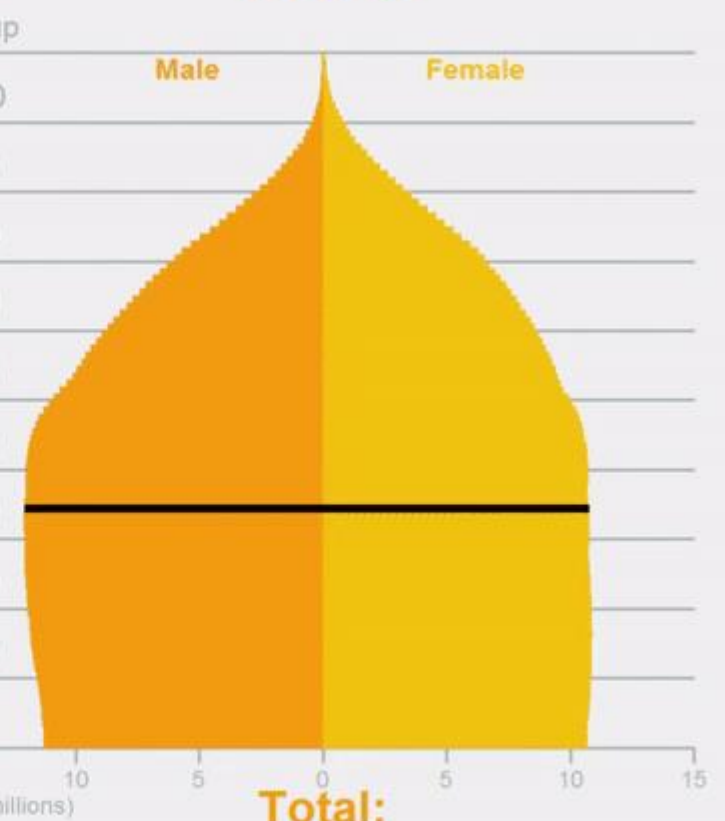
Population projection
2043

China



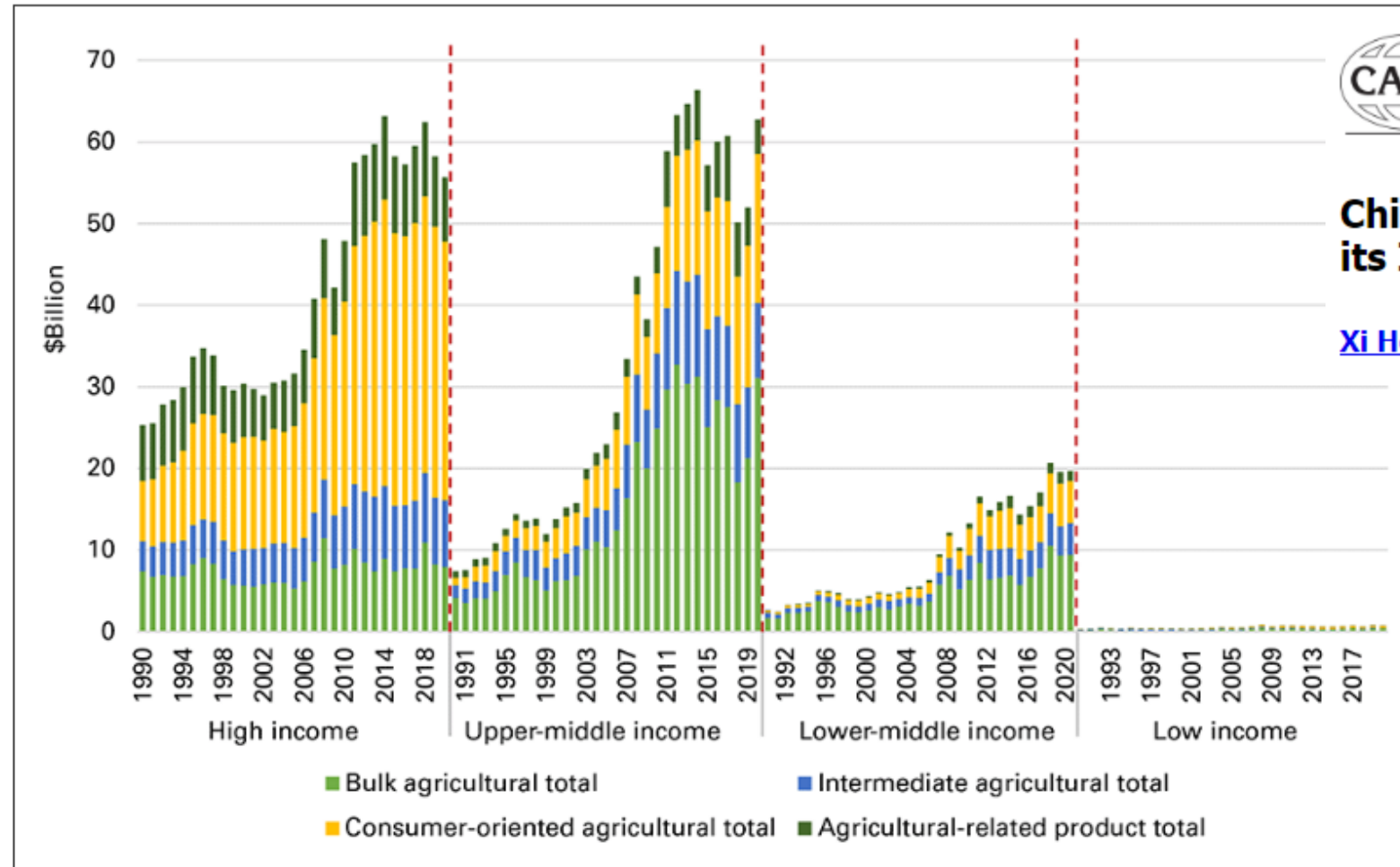
■ Median age

India



Data source: US Census Bureau IDB
Visualization by @aronstrandberg

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

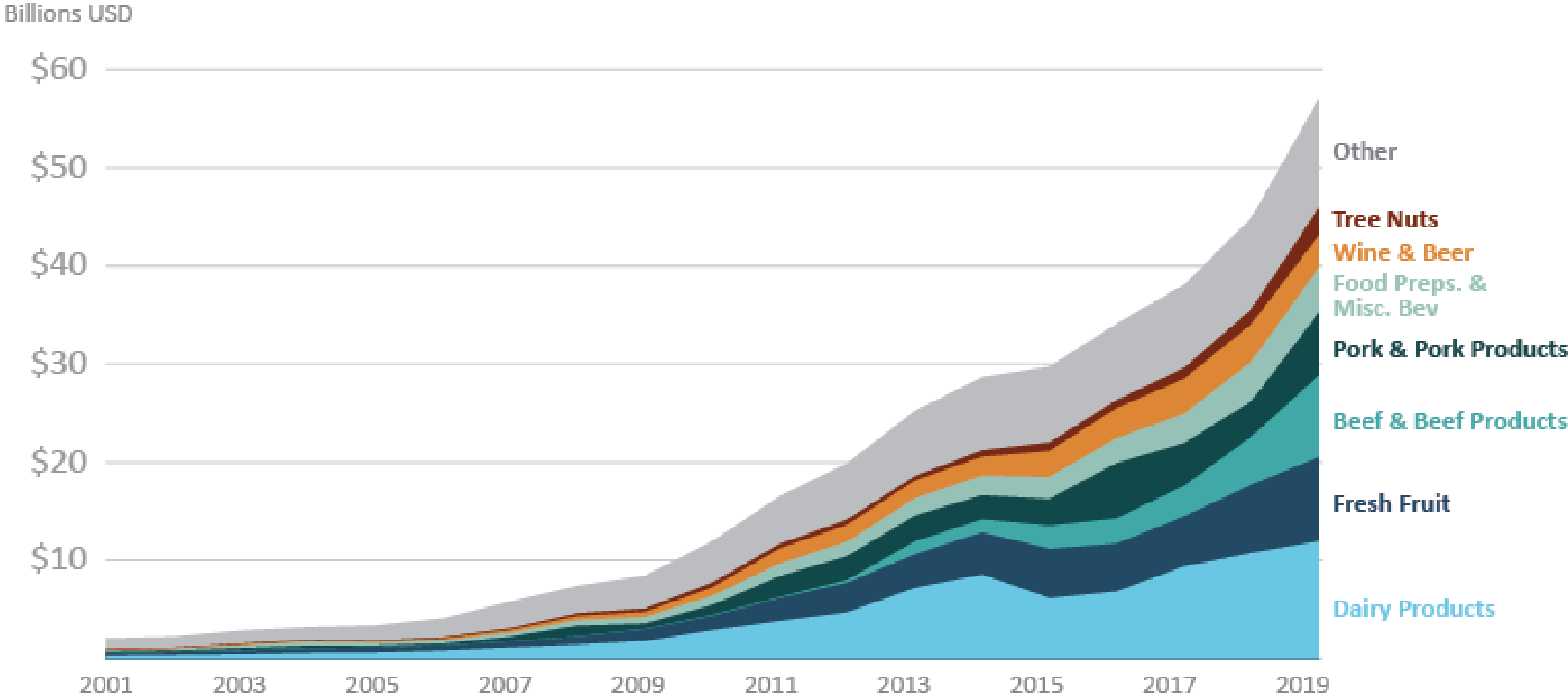
Xi He and Wendong Zhang

https://www.card.iastate.edu/ag_policy_review/article/?a=122

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.



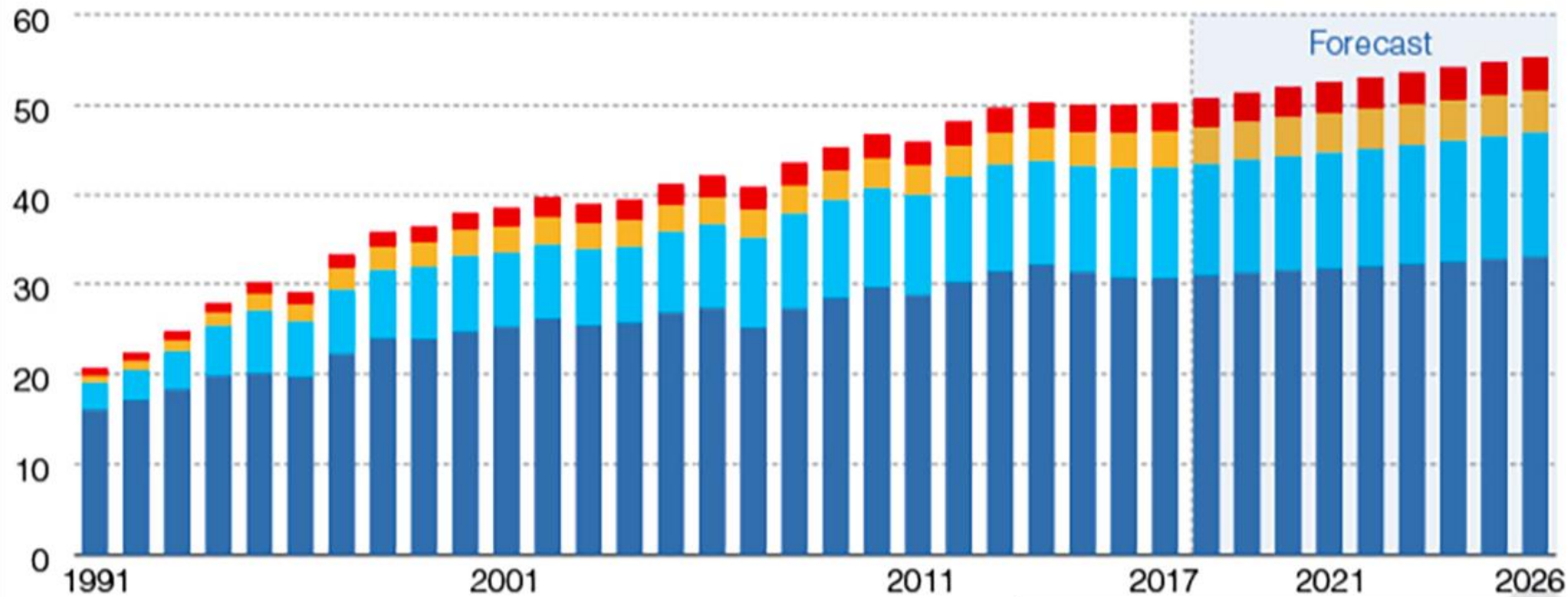
Fresh cherry exports from Chile to global markets in the 2022/23 season are expected to top 80 million boxes, or around **400,000 tons**

89% of Chilean cherry exports go to China

A Meatier Middle Kingdom

■ Pork ■ Poultry ■ Beef and veal ■ Sheep

Unit: Kilograms per capita



What remains unchanged after COVID-19: Chinese surging meat consumption & beyond

Source: 财新数据
Caixin Data

Original Sources: Organization for Economic Co-operation and Development, Food and Agriculture Organization of the United Nations

Oct 12, 2018 08:20 PM DAILY CHART



Charts of the Day: China's Growing Meat Consumption

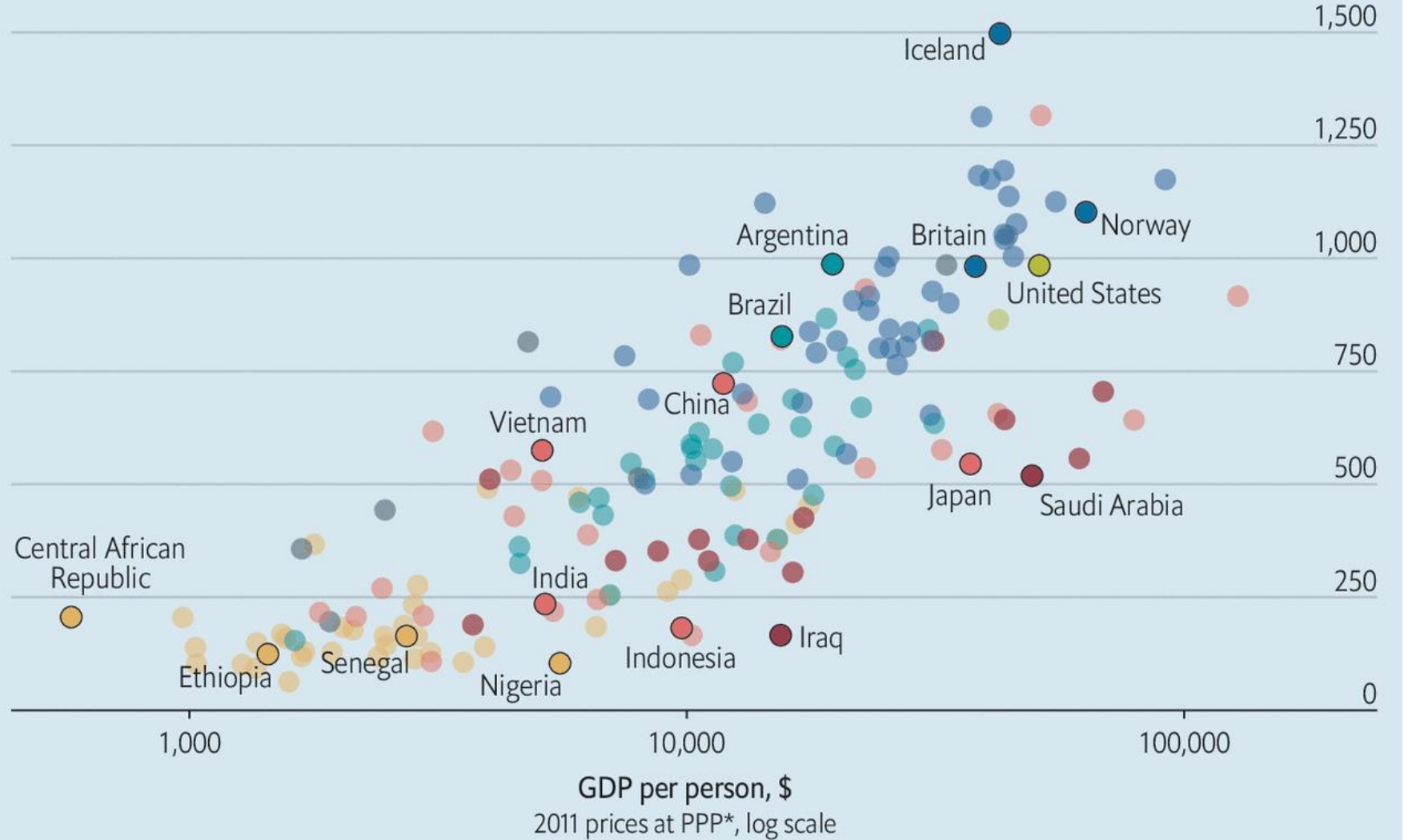
Meat Economics

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

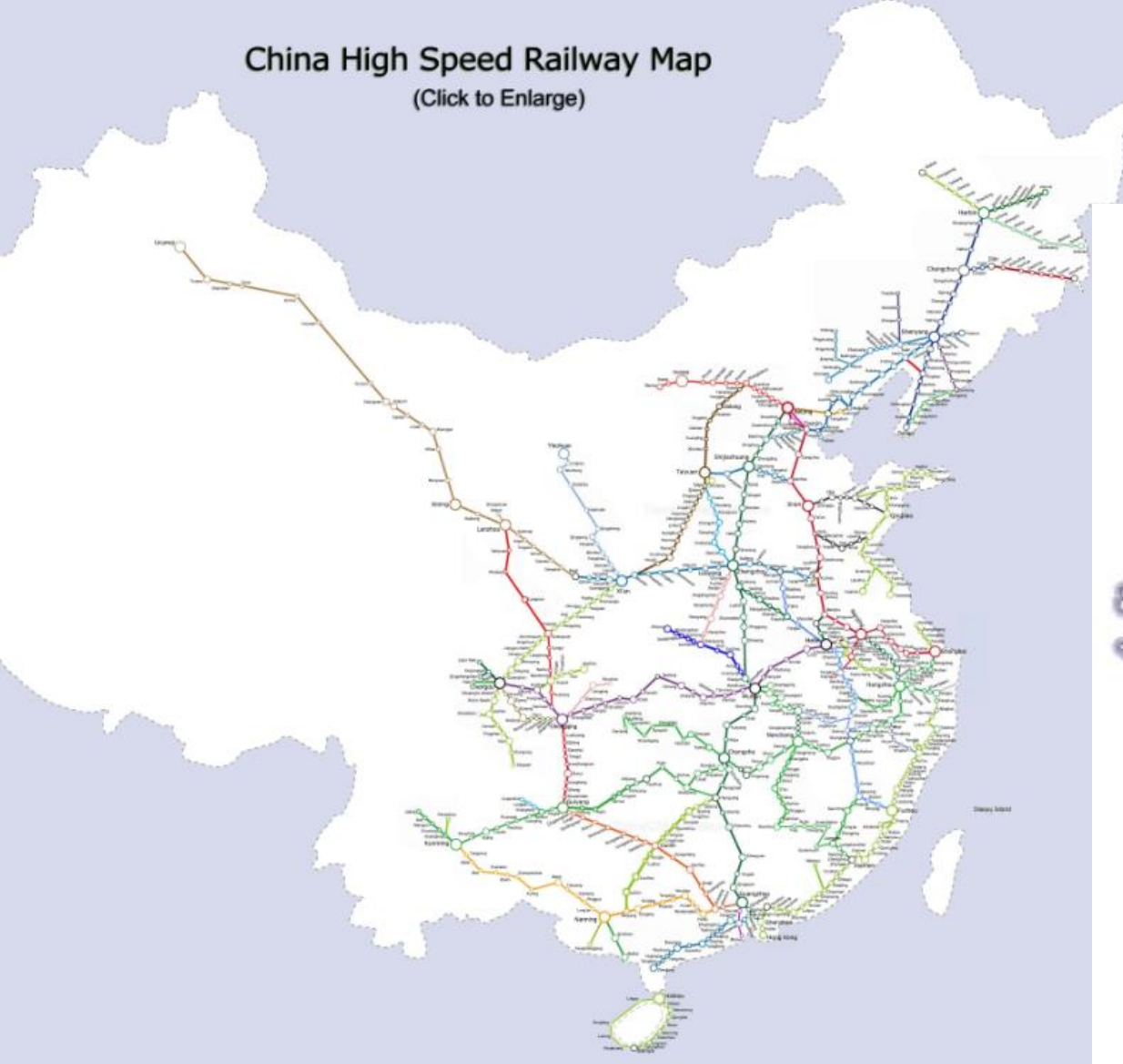


Sources: IMF; FAO

*Purchasing-power parity

China High Speed Railway Map

(Click to Enlarge)



High Speed Rail

<https://www.travelchinaguide.com/images/map/train/high-speed-railway.jpg>

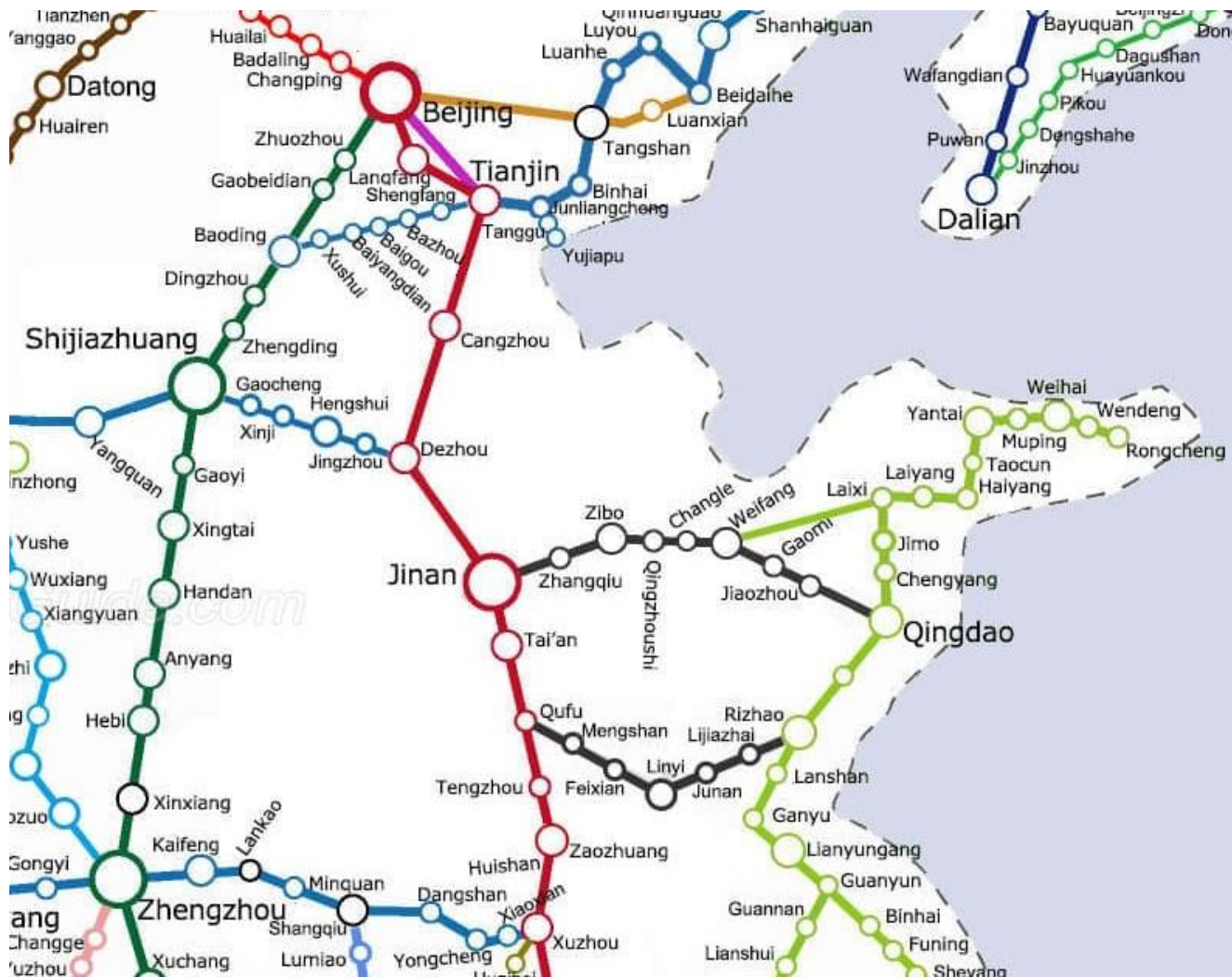
China is a Country of Rapid Change

“四横四纵” 国家冷链物流骨干通道网络布局示意图

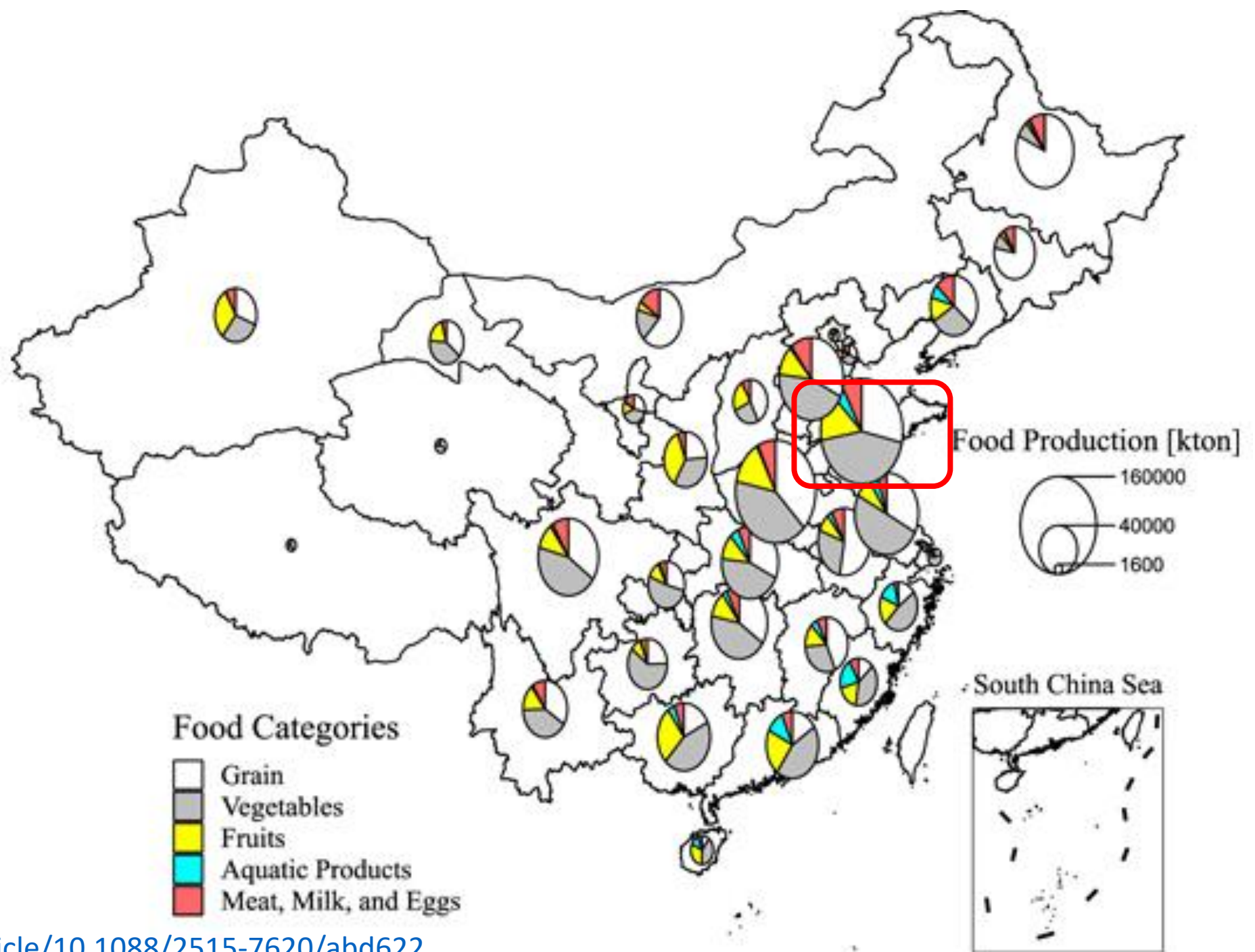
Cold Chains



China's High Speed Rail Map, 2021



Food Production in China, 2018



Agricultural transformation in my hometown

Greenhouse – plastic film - Shandong Province



Now the high-tunnel production system has been upgraded



3RD ANNUAL
U.S.-China Agriculture Roundtable

AGRICULTURE EDUCATION DIALOGUE

中美农业圆桌论坛：

农业教育对话会

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

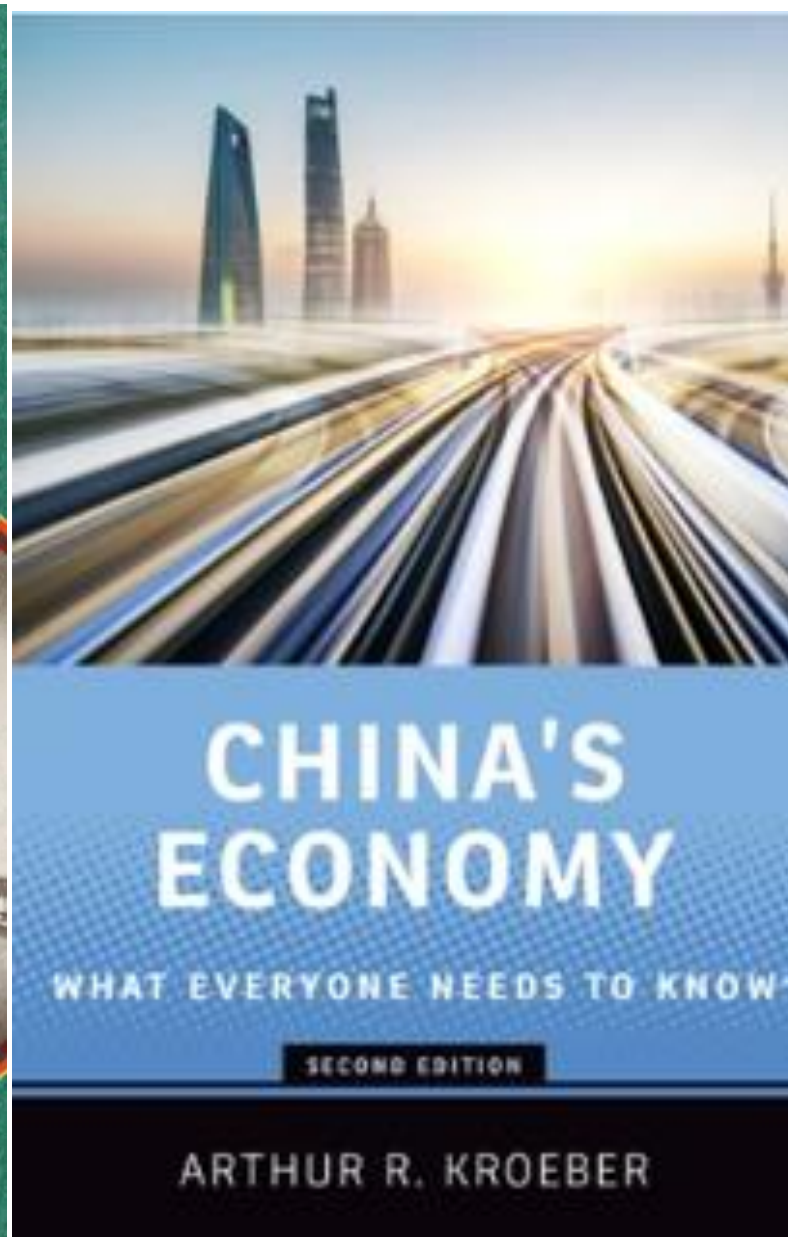
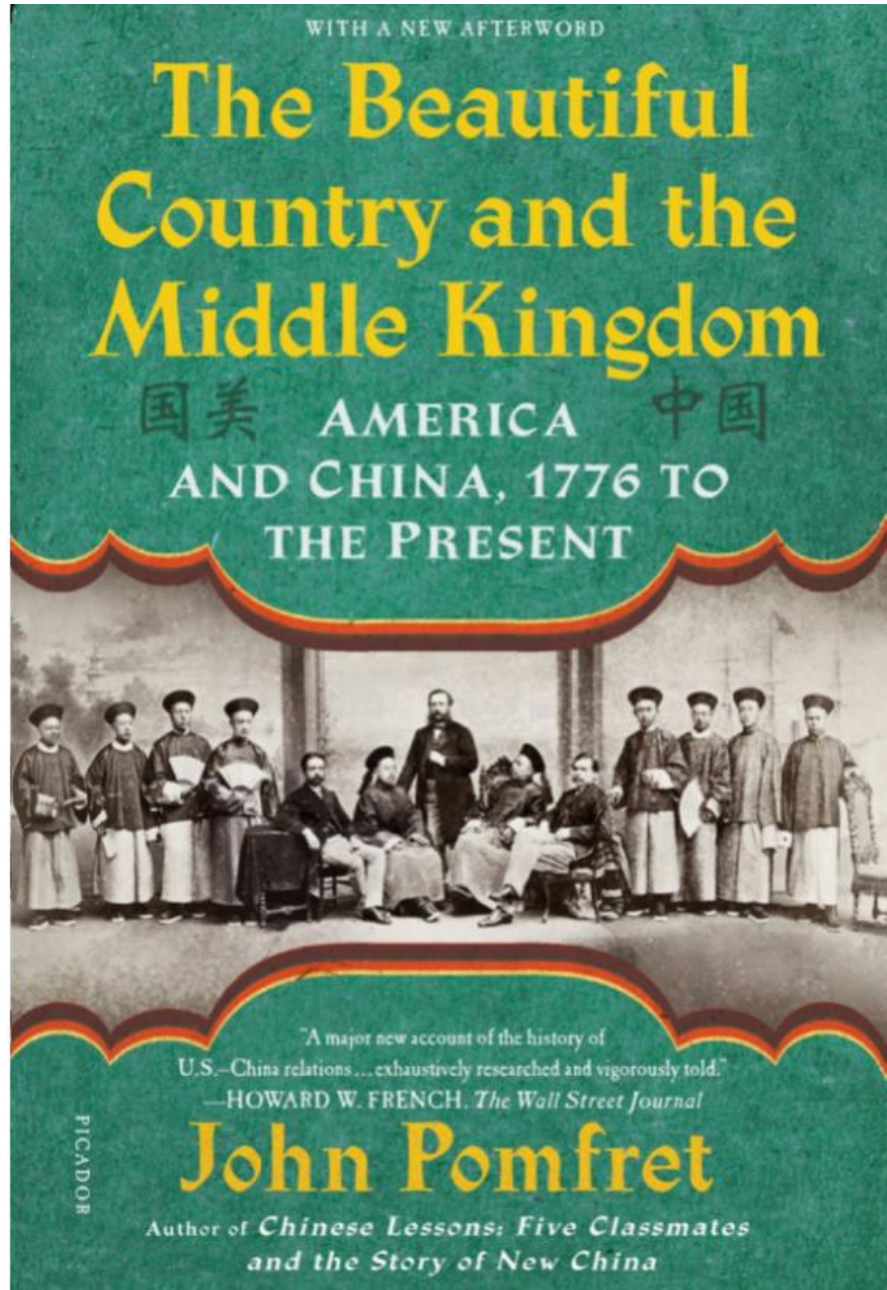


LAND OF FISH AND RICE

RECIPES FROM THE CULINARY HEART OF CHINA

FUCHSIA DUNLOP

Learn more about contemporary Chinese economy



Thank You!



2019 ISU Land Value Survey

2019 ISU Land Value Survey
The 2019 ISU Land Value Survey shows a 2.3 percent increase in average Iowa farmland values from November 2018 to November 2019. The average statewide value of an acre of farmland is now estimated at \$7,432. This modest increase, which barely exceeds the pace of inflation, is the second rise over the past six years, but still represents a 15 percent decrease from the 2013 peak in nominal land values, or a 23 percent drop in inflation-adjusted values.

2017 Iowa Farmland Ownership & Tenure Survey Paper Copy Available for Order (\$5 Only)

The new, 60-page [2017 Iowa Farmland Ownership and Tenure Survey report](#) is available for order at the [Extension Store](#) for only \$5 each paper copy. This is a unique survey across the nation which provides statistically representative information on many aspects of land ownership, tenure and transitions in Iowa. For example, the survey finds that 60% of Iowa land is owned by people 65 years or older, 82% of Iowa land is owned free of debt, and 29% of all acres is primarily owned for family or sentimental reasons.

1. What are you interested in?

- 2019 ISU survey results
- find more land value data
- recent analysis & contact

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Iowa State University
578 Heady Hall
518 Farm House Lane
Ames, Iowa 50011-1054

Phone: (515) 294-1183
FAX: (515) 294-6336

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CARD is a center located within the College of Agriculture and Life Sciences at Iowa State University.

www.card.iastate.edu/farmland

Wendong Zhang

Associate Professor and Extension Economist
478C Heady Hall, Iowa State University
515-294-2536

wdzhang@iastate.edu

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China Ag Center · Publications

Xi He and Wendong Zhang, 2020. "Implications of Hong Kong's Special Status Revocation for Agricultural Trade between the United States, Hong Kong, and Mainland China." *Agricultural Policy Review*. Center for Agricultural and Rural Development, Iowa State University.

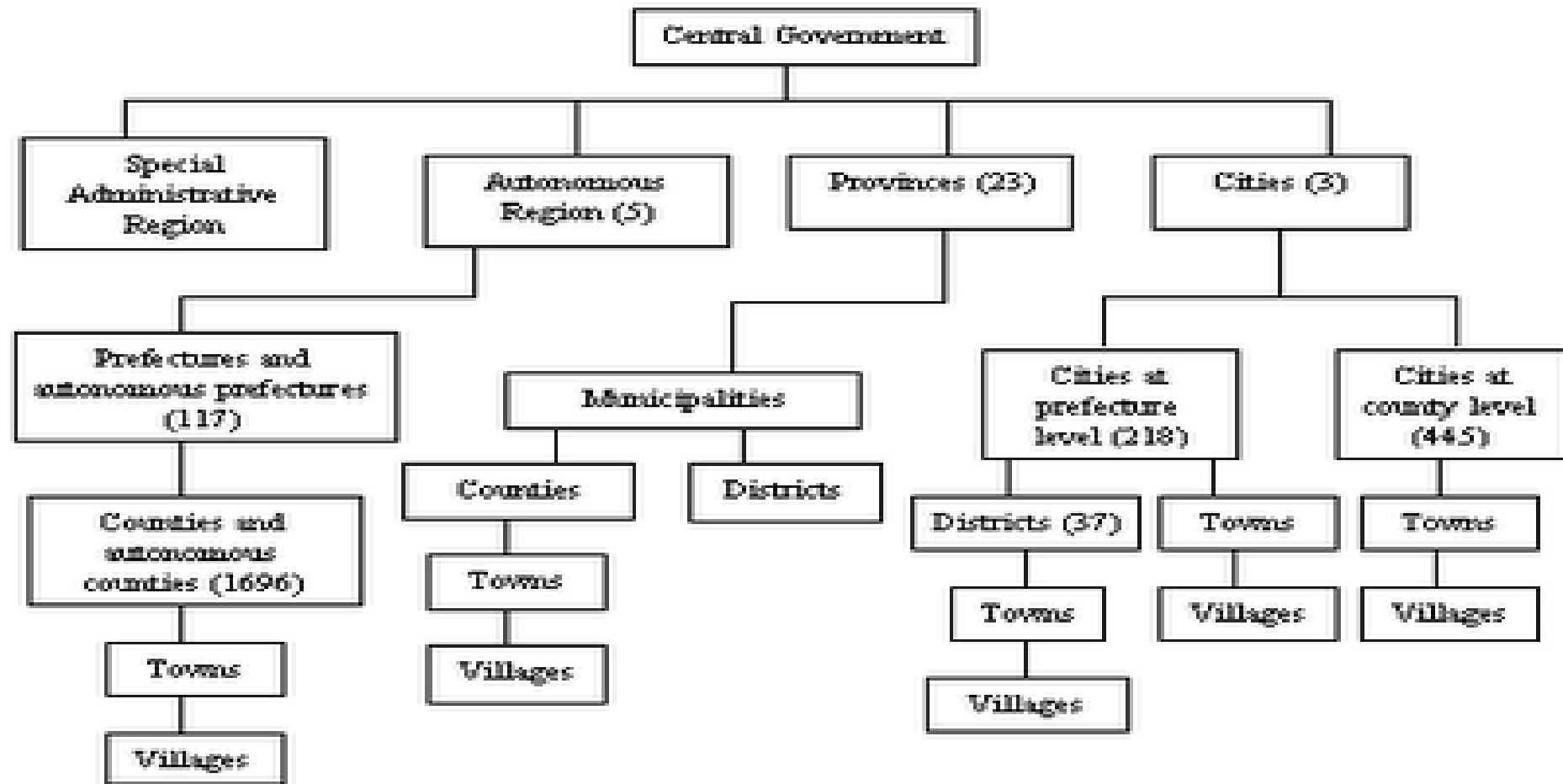
In 1992, the United States granted Hong Kong status as a customs territory separate from mainland China. On June 29, 2020, however, the US Department of Commerce withdrew that status due to recent tensions between China and the United States. Hong Kong, as the world's largest re-exporting port, plays a large intermediary role in US-China trade, and the revocation of its special status may provoke China into taking retaliatory economic and/or political actions. He and Zhang examine trends in Hong Kong's import/export of US agricultural products and how that trade may be affected. They find that the revocation itself is not likely to directly affect US-China agricultural trade prospects much if neither China nor the United States responds with further actions.

Chen-Ti Chen, Tao Xiong, and Wendong Zhang, 2020. "Large Hog Companies Gain from China's Ongoing African Swine Fever." *Agricultural Policy Review*. Center for Agricultural and Rural Development, Iowa State University.

Since November 2018, China has reduced its hog and sow inventory by almost 32% due to ongoing outbreaks of African Swine Fever (ASF).

www.card.iastate.edu/china

China's Governance Hierarchy



2000 yrs of imperial history

- huge legacies on governance structure

the only exception: emperor replaced by central government

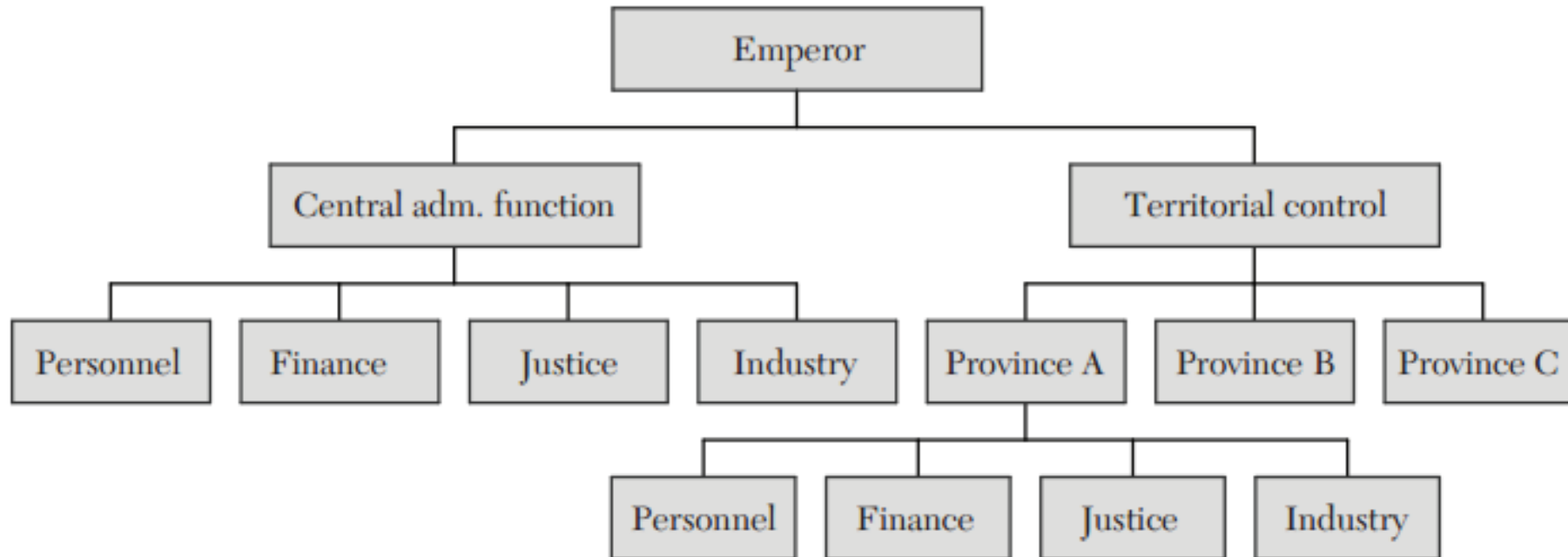
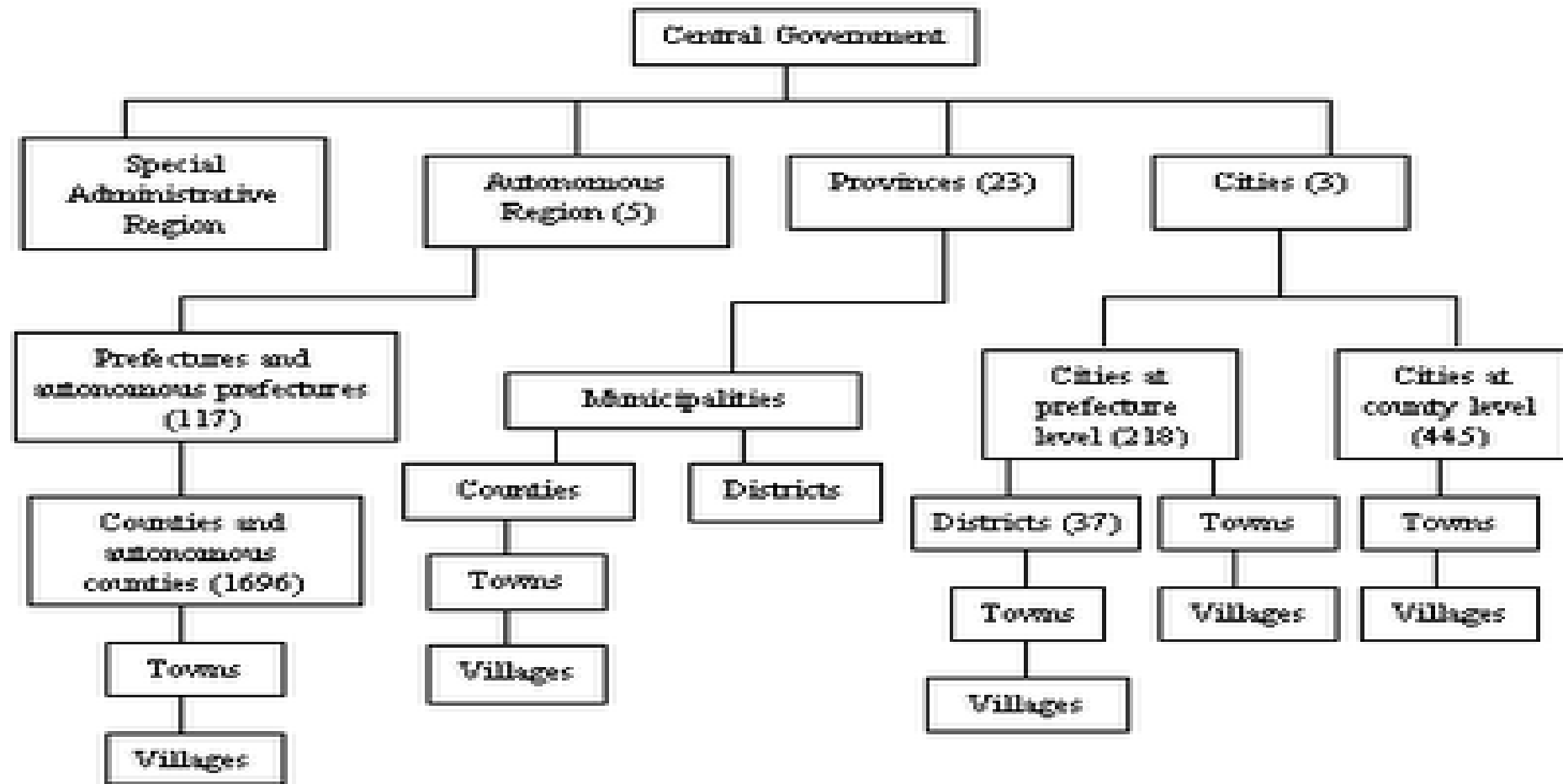


Figure 3. Stylized Governance Structure of Imperial China

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

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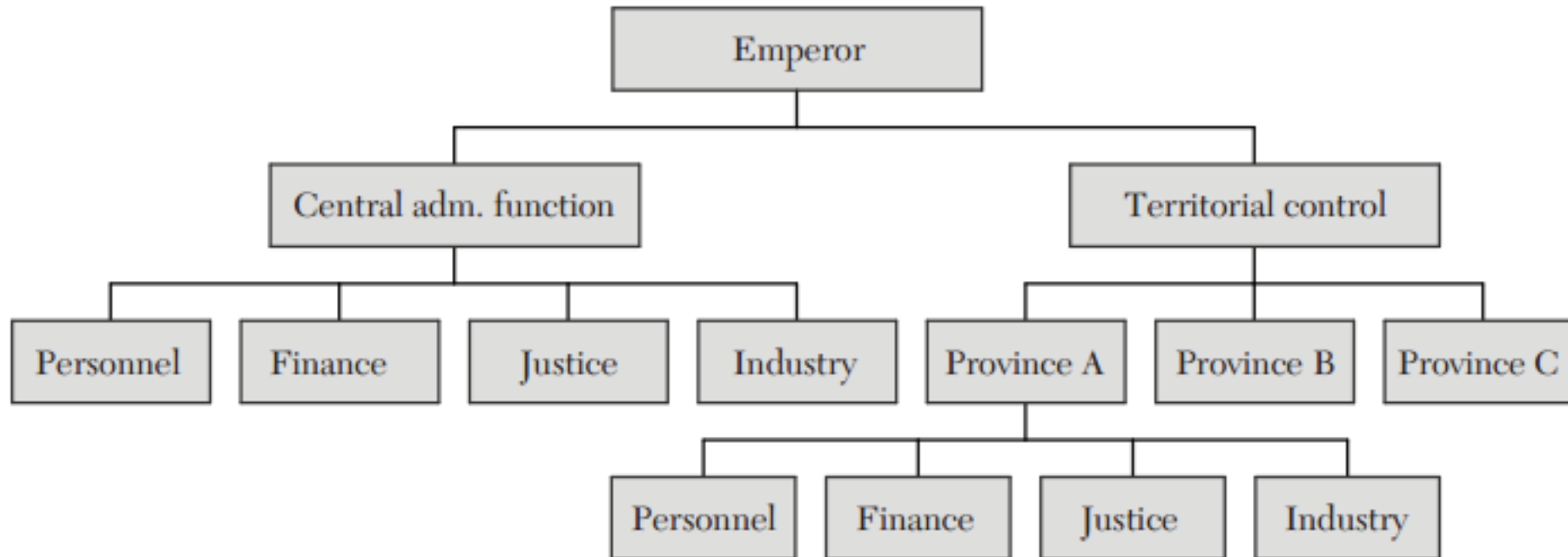


Figure 3. Stylized Governance Structure of Imperial China

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?