NEVIN REAL ESTATE ADVISORS

November 2022

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China: One from Column A and One from Column B

When I was growing up, going out for foreign food meant Chinese. And you had your choice: Mandarin or Szechwan. Today, when our family goes out to dine, the entire panoply of the Far East gives us a remarkable variety of options, ranging from Vietnamese, Thai, Indian, Japanese and Korean to name just a few.

And that is a severe Chinese problem. China, in years past, has been our near sole source of manufactured goods, blanketing the shelves of Walmart and Target and every grocery store. That picture is changing rapidly as China now finds itself with severe competition from countries with much lower manufacturing and operating costs. Pointedly, the other countries have learned to out-China China in terms of their manufacturing and marketing capabilities. And that means that China has to find other ways to keep its people working.

And that is only one of China's major problems. Perhaps the least mentioned, but exceptionally important, is the demographic conundrum that faces the 1.4 billion person nation.

This report is segmented into six sections:

Section I: Population and Quality of Life Changes

Section 2: The Education in China

Section 3: The Economy of China

Section 4. The Hour of Power

Section 5: What's the Bad News

Section 6: Wrap-up

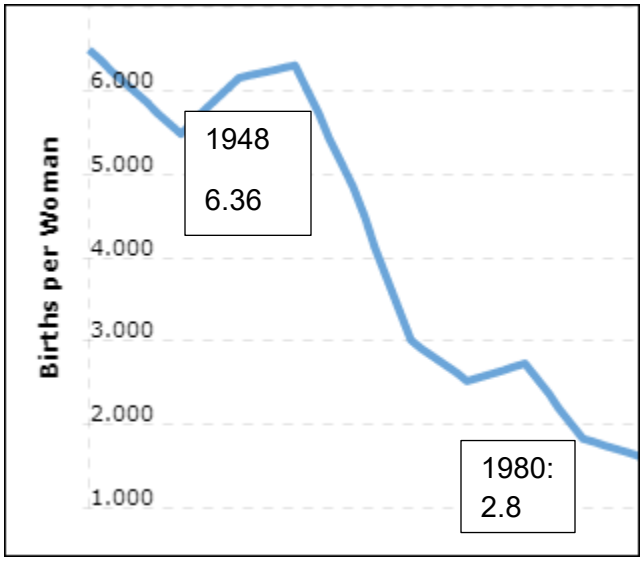
Section I: Population and Quality of Life Changes

A little history: In 1948, as it was recovering from World War II, China had 540 million persons and an exceptionally high birth rate. By 1980, the population almost doubled to 950 million. And the life expectancy increased from 35 years in 1948 to 66 years in 1980, an increase of 89%.

Snapshot
China Growth
Population & Life Expectancy
1948-1980

Category	1948	1980	Change	% Change
Population	540,000,000	950,000,000	410,000,000	76%
Life Expectancy	35	66	31	89%

1.1



1.2

China began promoting the use of **birth control** and **family planning** with the establishment of the **People's Republic in 1949**, though such efforts remained sporadic and voluntary until after the death of Mao Zedong in 1976.

At that point, the government needed to put a slowdown on population growth because they had neither the food nor jobs to support this burgeoning population; hence, in 1980, China invoked the infamous **one-child policy**.

On **September 25, 1980**, a public letter—published by the Central Committee of the Chinese Communist Party to the party membership—called upon all to adhere to the one-child policy, and that date has often been cited as the policy's "official" start date.

The law of unintended consequences has now come home to roost.

The one-child policy produced consequences beyond the goal of reducing population growth.

As in most non-industrialized nations, male children are much favored over female children. Thus, when most families were restricted to one child, having a girl became highly undesirable, resulting in a rise in abortions of female fetuses, increases in the number of female children who were placed in orphanages or were abandoned.

The result: China's millennial population consists of more males than females. And that means the number of household formations has been very modest.

Because of the low birth rates, an aging population, and a shrinking workforce, in May 2021 the Chinese government announced that all married couples would be allowed to have as many as **three children;** this was formally **passed into law in August 2021**.

Noteworthy with this change was the accompanying promise from the government that it would also be enacting supportive policy changes in areas such as employment, finance, childcare, and education to address the social and economic reasons why couples had thus far hesitated to have more children.

The Longer-Term Effect of the One-Child Policy

Demographically speaking, China has an ongoing population problem. It is projected that from 2020 to 2060 China will decline in population by 124,000,000 persons. In that same timeframe, the U.S. is projected to add 79 million population.

A major part of the U.S. growth will depend on continued immigration. Conversely, immigration to China is meager. It has not been a warm welcoming country.

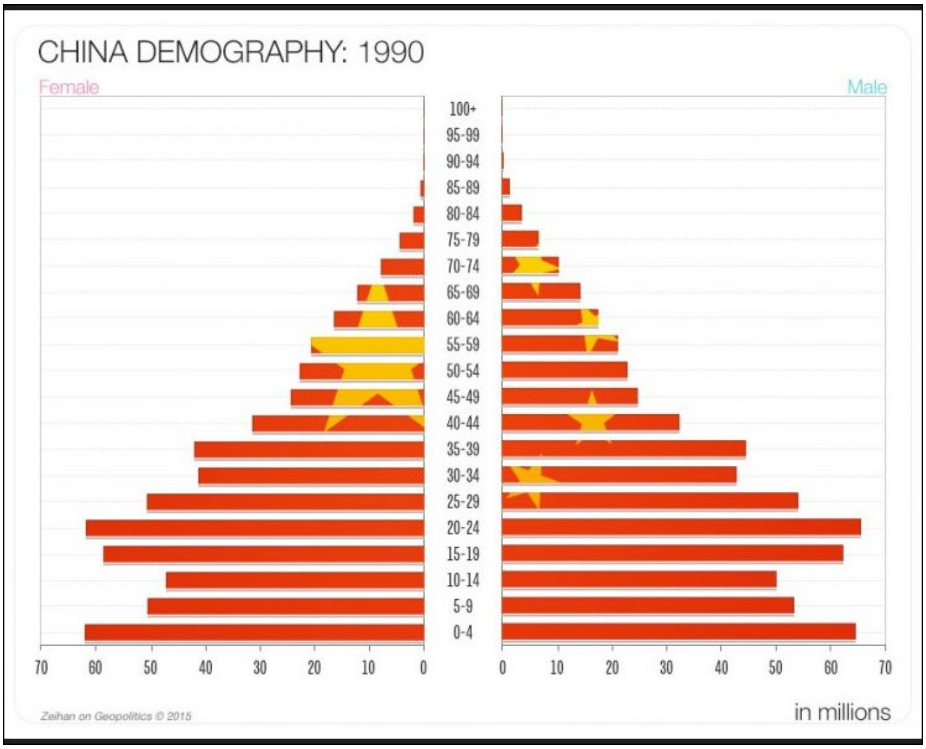
Population (Millions)
Major Countries
2020-2060 (Projected)

Country	2020	2060	2020-2060 Change	2020-2060 % Change
United States	325,700	404,500	78,800	24%
Viet Nam	103,808	121,833	18,025	17%
South Korea	51,245	46,900	(4,345)	-8%
Russia	142,021	126,898	(15,123)	-11%
European Union	448,825	432,470	(16,355)	-4%
Japan	127,141	99,100	(28,041)	-22%
China	**1,410,539**	**1,286,294**	**(124,245)**	**-9%**

Source: United Nations Population Division

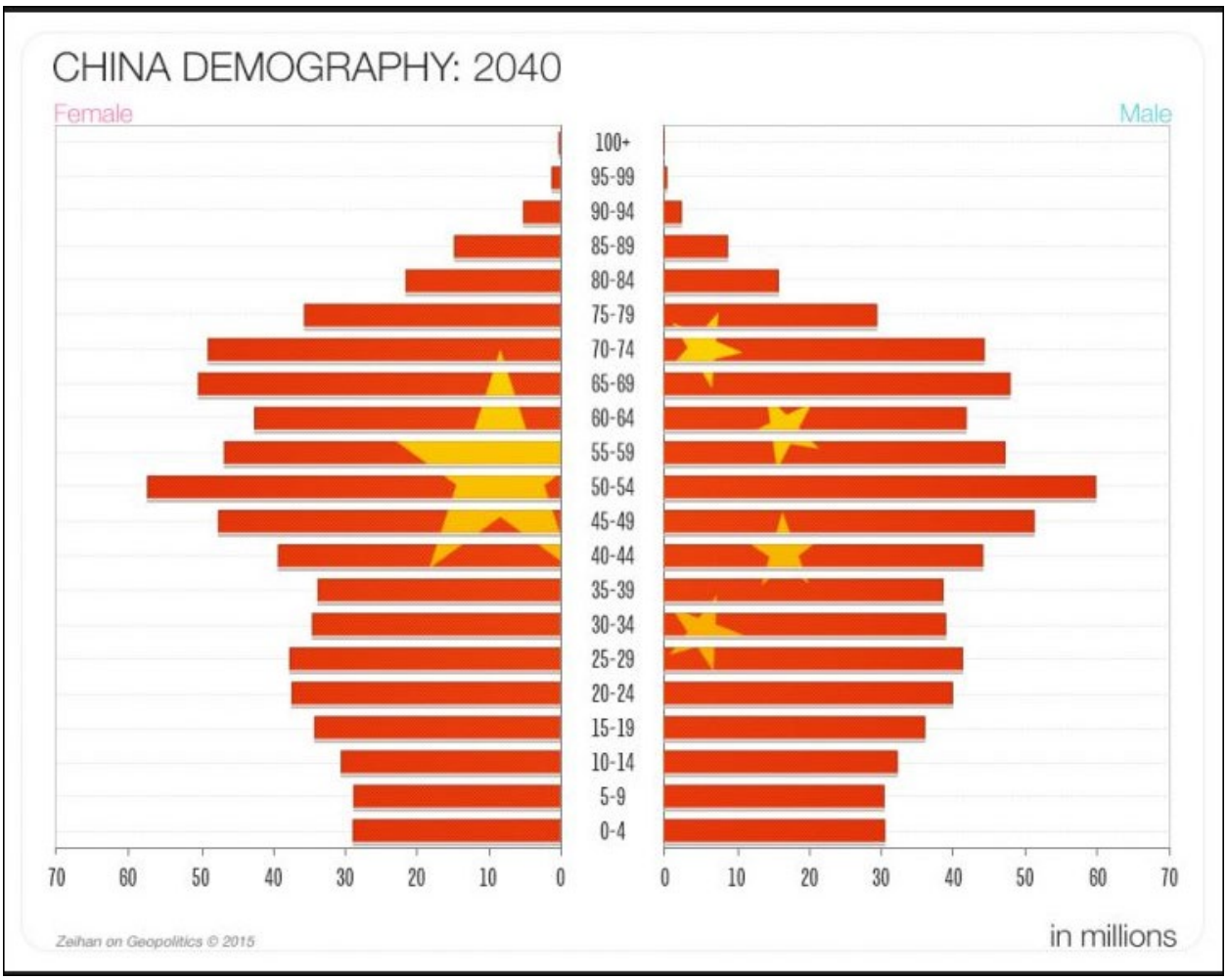
1.3

The aging of the Chinese population is best shown in these two graphs prepared by author Peter Zeihan. In 1990, the graph shows a population bulge in the under 40-year old range:



1.4

Fast forward 20 years, and the bulge moves up dramatically with most population additions in the **over 40-year old** category:



1.5

The increase in the percentage of the population over age 65 in China has moved upward in a highly aggressive manner, from 5.7% in 1990 to a projected 24% in 2040.

% of Population over Age 65
Major Countries
1990-2040 (Projected)

Country	1990	2020	2040
Japan	11.9	26.6	34.0
South Korea	5.2	13.0	31.0
European Union	12.7	19.4	26.0
China	**5.7**	**10.1**	**24.0**
United States	12.6	14.9	22.0
Russia	10.3	13.6	20.0
India	3.8	6.0	11.0

Source: United Nations Population Division

1.6

This exhibit summarizes the World Bank projections of population, population under age 18 and the fertility rate of several major countries: Perhaps most poignant is that in China **the number of persons under age 18 has declined from 43% of the population to 21% of the population.**

Comparison of Major Countries
Population & Fertility Factors

Factor	United States	China	India	Russia	Japan
Population					
2020	331,003,000	**1,439,324,000**	1,380,004,000	145,934,000	126,476,000
2050	379,419,000	**1,402,405,000**	1,639,176,000	135,824,000	105,804,000
Change	48,416,000	**(36,919,000)**	259,172,000	(10,110,000)	(20,672,000)
% Change	15%	**-2.6%**	19%	-7%	-16%
% of Pop. Under Age 18					
1980	28%	**43%**	45%	26%	28%
2020	22%	**21%**	32%	21%	15%
Fertility					
1980	1.80	**2.5**	4.85	2.04	1.70
2020	1.78	**1.7**	2.24	1.82	1.37

Source: World Bank, International Monetary Fund

1.7

The effect of these phenomena has been predictable:

The paucity of household formations means that the dollars spent on new housing, household goods and the myriad of goods that forming households normally acquire in the millennial years has not been sufficient to keep the Chinese manufacturing machine going which means that the labor force is aging and less productive and less adventurous in accepting new manufacturing and scientific methodologies. Not good for China.

Immigration

For countries with lackluster birth rates, immigration can be a saving grace. For countries like India, Russia and China, immigration is not a popular option.

Immigration by Country
Six Major Nations
2021

Country	Total Pop.	Net Migration	Immigration as % of Pop.
India	1,380,004,000	(2,663,000)	-0.193%
China	**1,439,324,000**	**(1,742,000)**	**-0.121%**
Russia	145,934,000	106,000	0.073%
United States	331,003,000	477,000	0.144%
Germany	83,240,000	208,000	0.250%
Great Britain	67,215,000	270,000	0.402%

Source: Moody's Analytics; World Bank

1.8

Human Development Index

The Human Development Index (HDI) is **a summary measure of human development**. It measures the average achievements in a country in three basic dimensions of human development: a **long and healthy life, access to knowledge**

Section 2: Education in China

China's enormous patent achievements and its remarkable output of goods of all qualities could not take place without a very strong education system.

On the education front, China has made major strides in the past few decades, almost doubling the level of educational attainment since 1980. Of the major nations, only India has achieved a more rigorous achievement.

Education Attainment
Selected Countries
1980-2015

Country	1980	2000	2015	Change 1980-2015	% Change
China	**0.136**	**0.227**	**0.263**	**0.127**	**93%**
India	0.073	0.132	0.201	0.128	176%
Japan	0.492	0.691	0.656	0.165	33%
Russia	0.343	0.364	0.597	0.253	74%
USA	0.586	0.746	0.787	0.201	34%

United Nations AHDI ratings

2.1

Education scoring depends to a major degree on the government's expenditures on education. In this exhibit, we show the change in expenditures for public education for selected counties.

China has made major progress in that category, moving upward from 72% to 126% in six years:

Index of Change
Total Public Expenditure
on Education
2012 & 2018

Nation	2012	2018
China	**72%**	**126%**
Korea	93%	112%
Japan	100%	101%
U.S.	99%	107%
Germany	98%	107%
India	82%	121%

Source: OECD

2.2

These next two exhibits show the major increase in educational attainment in the younger age groups in China. In Exhibit 2.3, the percent of the **25-64** year old population with a bachelor's or master's degree is negligible.

Level of Education
Adults 25-64
as of 2020

Nation	Bachelors	Master's
China	**3%**	**0%**
Korea	32%	40%
Japan	31%	9%
U.S.	25%	12%
Germany	17%	12%
India	9%	9%

Source: OECD

2.3

But, when you look at the more youthful population ages **25-34,** the percent of graduation for both men and women rises very significantly to 18%. It is still significantly below the percentage of the other nations in the exhibit, but it does show major strides for China.

College Graduation Men & Women Adults 25-34 as of 2020

Nation	Men	Women
China	**18%**	**18%**
Korea	66%	61%
Japan	59%	64%
U.S.	47%	57%
Germany	33%	36%
India	22%	17%

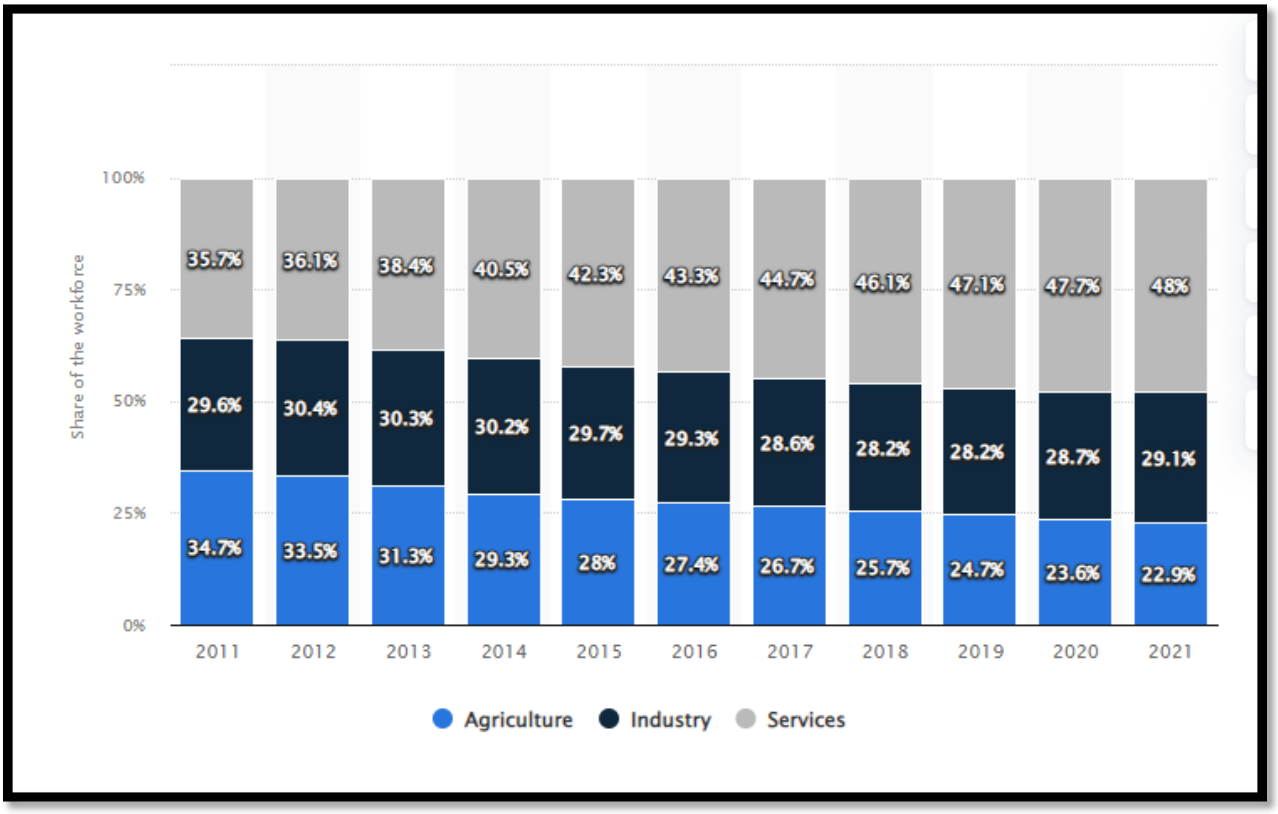
Source: OECD

2.4

Chapter 3: The Economy of China

This chapter focuses on the economy of China.

The basis for China's economy is displayed in this chart:

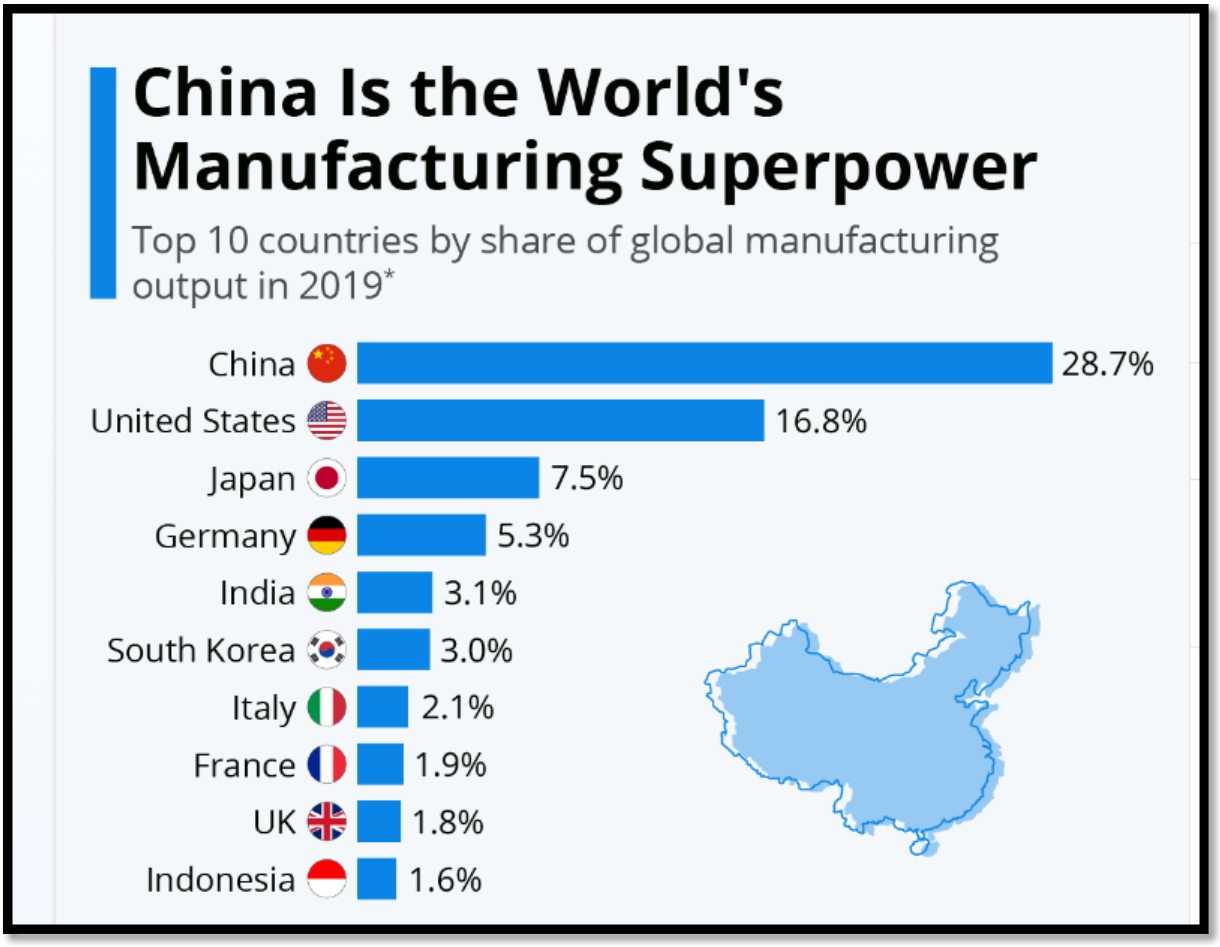


3.1

In the past decade, the percent of employment devoted to agriculture has declined dramatically from 34.7% to 22.9% -- symbolic of the increasing industrialization of the country. In the U.S., only 4.0% of employment is devoted to agriculture.

The percent devoted to industrial production has remained stable, but service employment has increased substantially, recognizing that the servicing is providing service to an increasingly educated and affluent Chinese citizens.

China remains the world's largest supplier of manufactured goods, producing almost twice the percentage as the United States.



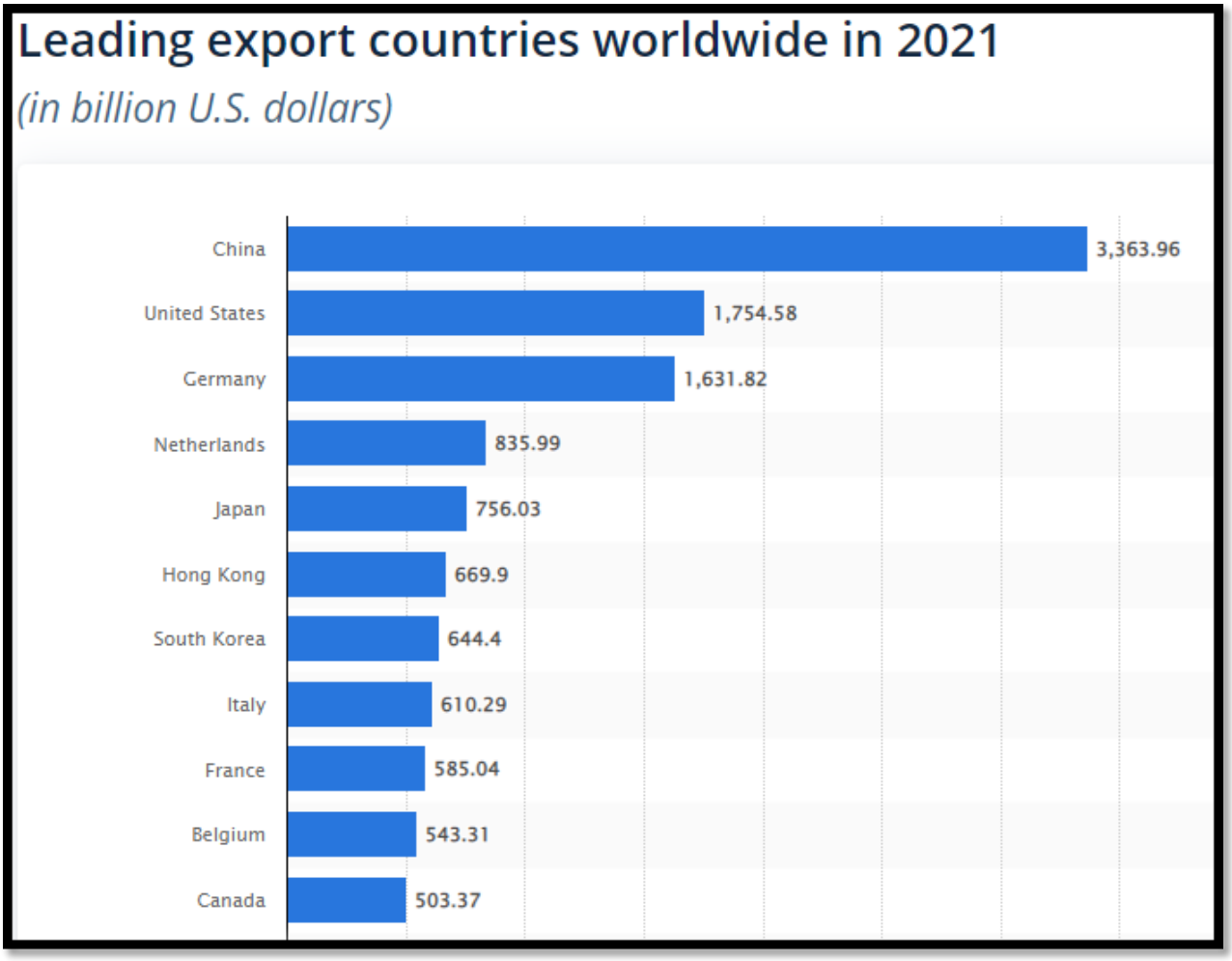
3.2

In terms of billions of dollars, China, Hong Kong, South Korea and Japan together, in 2021, produced three times the output of the U.S.

Exports from the Far East 2021

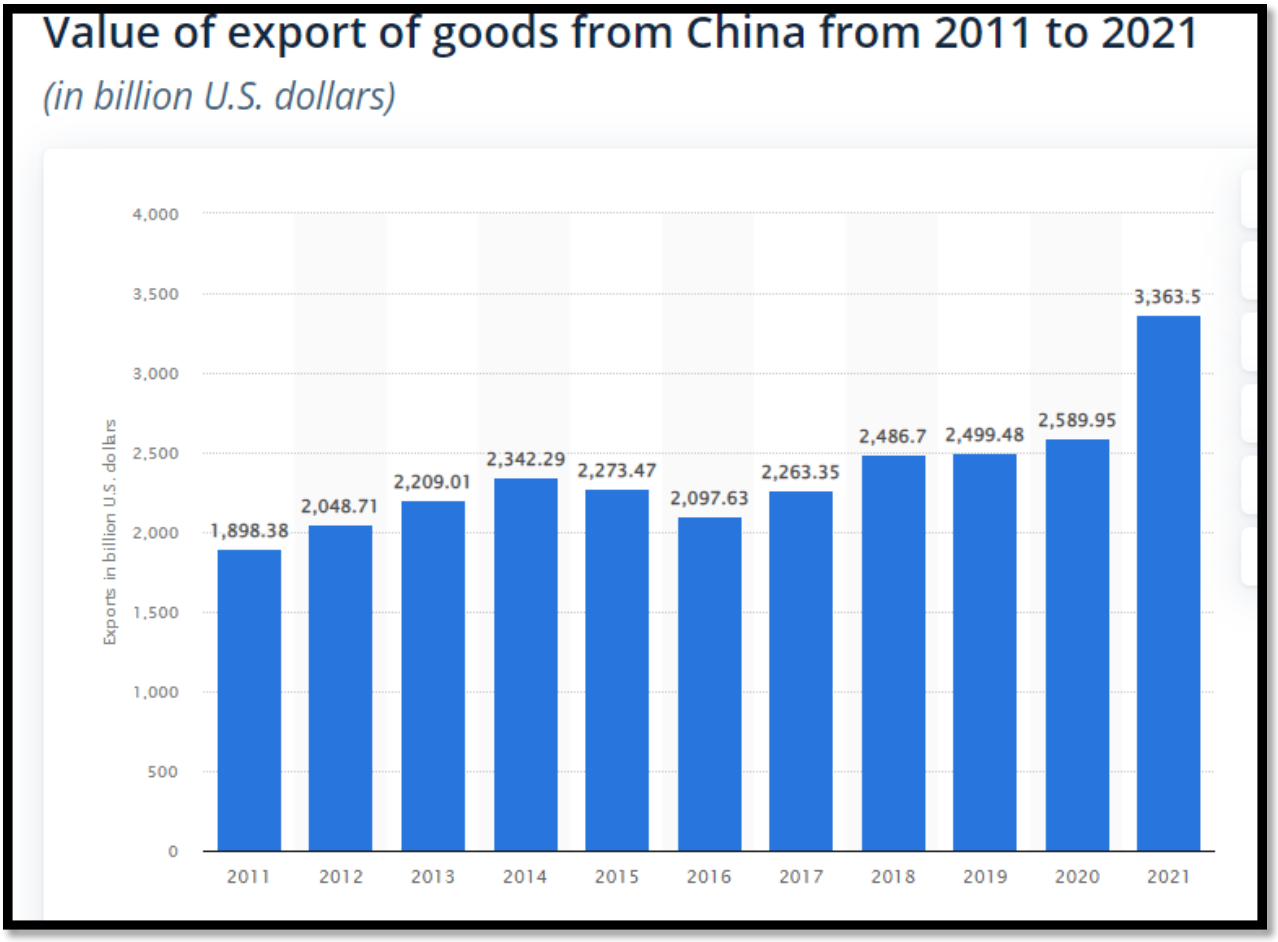
	$ billions U.S.
China	$ 3,363
Japan	$ 756
Hong Kong	$ 669
South Korea	$ 644
Total	$ 5,432

3.3



3.4

The exhibit below shows the billions of dollars of exports to the U.S. in the past decade:



3.5

Gross National Product

Gross National Product (GNP) is the sum of all goods and services produced by a country. It's a measuring stick that is calculated by several sophisticated organizations and tends to be accurate even for third world countries.

The world is about to pass the 100,000 trillion mark.

World GNP (Trillions)
2016-2022 (F)

Year	Trillions	Index
2016	$ 76,439	1.00
2017	$ 81,359	1.06
2018	$ 86,347	1.13
2019	$ 87,607	1.15
2020	$ 84,705	1.11
2021 (F)	$ 89,702	1.17
2022 (F)	$ 94,097	1.23

Source: World Bank

3.6

Looking back 50 years, China accounted for 3/4s of 1.0% of the world's GNP. Fast Forward to 2020 and a remarkable story reveals itself. In that 50-year period, China has moved into **second place** with 1/6th of the world's GNP. And note that California is moving up, but probably won't catch up to China in our lifetime.

Gross Domestic Product ($Trillion)
Major Countries
A 50-Year Pictrure
1970-2020

Country	1970	% of World	2020	% of World
World	**$ 12.14**		**$ 87.70**	
United States	$ 1.07	**8.84%**	$ 21.43	**24.44%**
China	$ 0.09	**0.76%**	$ 14.34	**16.35%**
Japan	$ 0.21	1.70%	$ 5.08	5.79%
Germany	$ 0.20	1.67%	$ 3.86	4.40%
California	$ 0.11	0.91%	$ 3.30	**3.76%**
India	$ 0.06	0.51%	$ 2.87	3.27%
United Kingdom	$ 0.12	1.01%	$ 2.83	3.23%
Russia	$ 0.21	1.70%	$ 1.70	1.94%
South Korea	$ 0.08	0.66%	$ 1.65	1.88%
Mexico	$ 0.04	0.32%	$ 1.27	1.45%

Sources: World Bank, Directorate of Intelligence, CIA

3.7

On a per capita basis, the **U.S. has an average GDP six times that of China**; however, given the ongoing strengths of the China economy, that six times will be trimmed to two times by 2040.

Gross Domestic Product Per Capita
Major Countries
2000-2040 (Projected)

				2000-2020		2020-2040	
Country	**2000 (1)**	**2020 (2)**	**2040 (3)**	**Change**	**% Change**	**Change**	**% Change**
United States	$ 36,449	**$ 67,082**	**$ 75,700**	**30,633**	**84%**	8,618	**13%**
China	$ 959	**$ 10,971**	**$ 34,000**	**10,012**	**1044%**	23,029	**210%**
Japan	$ 38,532	$ 42,748	$ 58,200	4,216	11%	15,452	36%
European Union	$ 19,740	$ 36,593	$ 40,848	16,853	85%	4,255	12%
South Korea	$ 11,947	$ 34,209	$ 58,600	22,262	186%	24,391	71%
Russia	$ 1,771	$ 11,710	$ 44,800	9,939	561%	33,090	283%
India	$ 438	$ 2,379	$ 18,300	1,941	443%	15,921	669%
Ratio		**6.11**	**2.23**				

Source: (1)World Bank; (2) International Monetary Fund; (3)European Commission (Global Europe 2050)

3.8

On a household basis, The U.S. median income per capita is $19,306, five times that of the household income in China ($4,246).

Median Household Income
Per Capita
Major Countries
2021

Country	**2021**
United States	**$ 19,306**
Canada	$ 18,652
Germany	$ 16,845
United Kingdom	$ 14,793
Japan	$ 14,543
South Korea	$ 12,507
Russia	$ 5,504
China	**$ 4,246**
Mexico	$ 3,315
India	$ 1,314

Source: World Bank, United Nation

3.9

Tax Collections

The economic growth of China can be seen in their tax collections over the past decade. On average, their **collection increases have averaged more than 18% per annum.**

Tax Collections
China
2010-2020

Category	Billions 2010	2020	Change	% Change	Annual % Change
Total Tax Revenue	$ 7,321	$ 20,340	$ 13,019	178%	18%
Taxes on Income	$ 1,896	$ 5,446	$ 3,550	187%	19%
Taxes on Property	$ 540	$ 1,505	$ 965	179%	18%
Taxes on Goods & Services	$ 4,805	$ 8,476	$ 3,671	76%	8%
Enterprise Income Tax	$ 1,284	$ 3,643	$ 2,359	184%	18%

Source: Organization for Economic co-Operation and Development (OCED)

3.10

Patent Power

The World Intellectual Property Organization tracks the patent activity worldwide, but particularly what it calls GIH (**Global Innovation Hotspots**). In its most recent index, China had the strongest gains in patents of any first world country:

Patents
Global Innovation Hotspots
1991-1995 & 2011-2015

GIH	1991-1995	2011-2015
China	42.3	60.3
Germany	63.8	63.5
Japan	51.5	56.3
U.S.	30.8	36.5

Source: WIPO

3.11

Looking at the last three decades, China had scant activity in the 1970-1989 period, but has **expanded ten-fold** since then. In fact, in 2018, China's intellectual property office received a record 4.54 million patent applications **(half the world's total).**

Patent Power tilts to Asia
1970-2018

Nation	Share of Patents		
	1970-1979	1980-1989	2000-2018
China	**1.0%**	**1.0%**	**10.0%**
Japan	21.0%	29.0%	24.0%
United States	28.0%	24.0%	22.0%
Germany	12.0%	16.0%	11.0%

Source: World Intellectual Property Organization

3.12

Section 4: The Hour of Power

For China to produce its enormous number of products and to provide heating, air conditioning and cooking power to its 1.4 billion population, the country must generate an enormous amount of energy.

Fortunately, for China, it is one of four countries that is saturated with coal (Russia, The U.S. and Australia). **It's the world's largest consumer, producer and importer of coal, with its consumption and production each accounting for around half of the world's total.**

According to China's National Bureau of Statistics, coal accounted for 50% of the country's energy consumption in 2021. Notably, that is a reduction from 70% in the mid-2000's.

Over the past 40 years, China has had an annual GNP growth averaging 9.5%. Only by using a low-cost fuel like coal could the country support its economic growth.

China produces about 90% of the coal it consumes but it imports about 70% of its oil and 50% of its gas needs.

China appears to be serious about cutting back its coal use, but in the first few weeks of 2022, it announced that five new coal power projects have been approved; however, the country announced that will not build any new coal-fired projects abroad.

China appears to be serious about cutting back its coal use. Time will tell. Meanwhile, incidents of lung diseases have caused the cost of health care to rise dramatically.

In my last trip to Beijing, I recall the air being a little dark. Maybe it was just my imagination.

Section 5: What's the Bad News

Obviously, the economy of China is a modern miracle, but there are a few items that deserve mention that are not inspiring:

Leadership

In many respects, we need China and China needs us. The President of China, Xi Jinping, is not our enemy. In fact, he speaks perfectly good English and his daughter graduated Harvard. How bad can he be? The question arises: **how long can he be the President**? Politically, he can rule forever, but he is 70 years old, overweight and smokes heavily.

Cost of Production

A key problem is that producing goods in China has become increasingly expensive. It no longer is the third world country that can provide the world with cheap goods. It now has competition from third world countries.

Labor Shortage

Because of Russia's labor shortage, a substantial part of their farm employment is Chinese. Currently, the Chinese farm 1,300 square miles of Russian land in eastern Russia.

Potential Control over Other Countries

Many countries, like Germany, sell a billion dollars in goods to China. And China wants to invest more in Germany including a major transportation project. China is in a very good position to cause economic havoc with Germany and others like it by investing heavily in those countries.

Not Nice

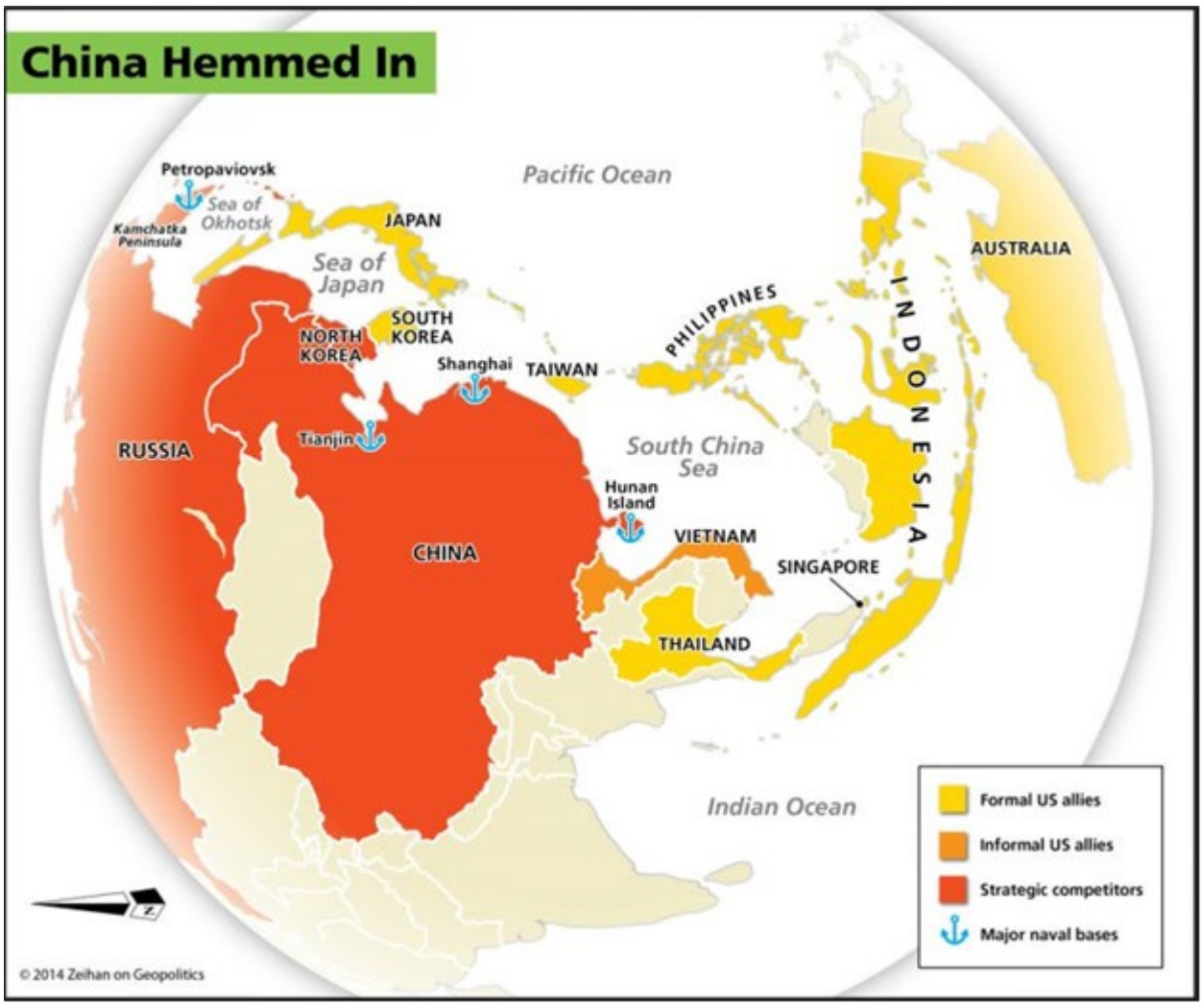
There are some 2.0+ Turkish speaking Uyghurs (Muslims) living in China's Xinjiang region (far northwest China) in camps and subject to re-education. Another 9.0 million are suffering from a crackdown by Chinese authorities. Stories abound of torture, sleep deprivation, children moved to orphanages and women being raped. Apparently, China wants them to renounce their religion.

COVID

Most certainly, China did not want to become the center or founder of COVID, but it did and proceeded to cause 6.5+ million deaths worldwide.

Geological

If China has one overwhelming long-term problem, it is geological: it is surrounded by countries that are not warm and fuzzy and certainly these neighbors do nothing to strengthen China and do not want to be business partners with it (though they have no choice). The map below visually displays China's geologic problem.



Section 6: The Wrap-Up

China is a miracle in the making. It is a Nation that has figured out how to feed 1.4 billion people; provide them with clothing and housing and jobs and at the same time manufacture enough goods to be the largest supplier in the world.

The entire miracle of China did not happen in a democratic fashion. It never could. It took a military-like regime for many decades to accomplish the rising prosperity and an educated workforce.

Yes, there were hiccups along the way, like the now abandoned one-children rule and the COVID disaster, it has shown the world that it can dramatically enhance education, be highly inventive and use its seemingly endless funds to acquire lands and goods production in a multitude of countries around the world.

China isn't warm and fuzzy, but it is a miracle in the making.

Alan Nevin

Mr. Nevin currently serves as Director of Economic Research and Valuations for Xpera Group, a subsidiary of Vertex, Inc. and is the principal at Nevin Real Estate Advisors.

- Mr. Nevin has an extensive background in real estate economics, appraisal, lending and market analysis. He serves the development investment, legal and public agency communities with a broad range of services, including residential and commercial real estate valuation, economic damage analysis and diminution of value and market and financial analyses of real estate developments
- Prior to joining Xpera Group, Mr. Nevin was a principal at London Moeder Real Estate Advisors and before that was Director of Research for 14 years with MarketPointe Realty Advisors. In the past, Mr. Nevin served as Director of Real Estate Research for HomeFed Bank and was President of ConAm Securities, a subsidiary of ConAm Management Company. Mr. Nevin also served as Chief Economist for the California Building Industry Association and currently serves as the economist for the San Diego Association of Realtors.
- Mr. Nevin holds a Master of Arts degree in Statistics and Research from Stanford University, a Bachelor of Arts degree in Marketing and a Master of Business Administration in Real Estate Economics from American University in Washington, D.C.
- He is the co-founder of four firms that bought, built, rehabbed and operated more than three dozen residential and commercial projects in San Diego County, valued in excess of $250 million.
- Mr. Nevin taught real estate related courses for 30+ years at UCSD Extension. He is an instructor of a CLE-approved seminar on Litigation Economics and taught the capstone course on feasibility studies for the Master's program at USD Burnham Moores Institute

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