

# CHINA'S INDUSTRIALIZATION AND ITS EFFECTS



Providing historical context about China's industrialization process, and how it has affected the country's economy, population, and environment.

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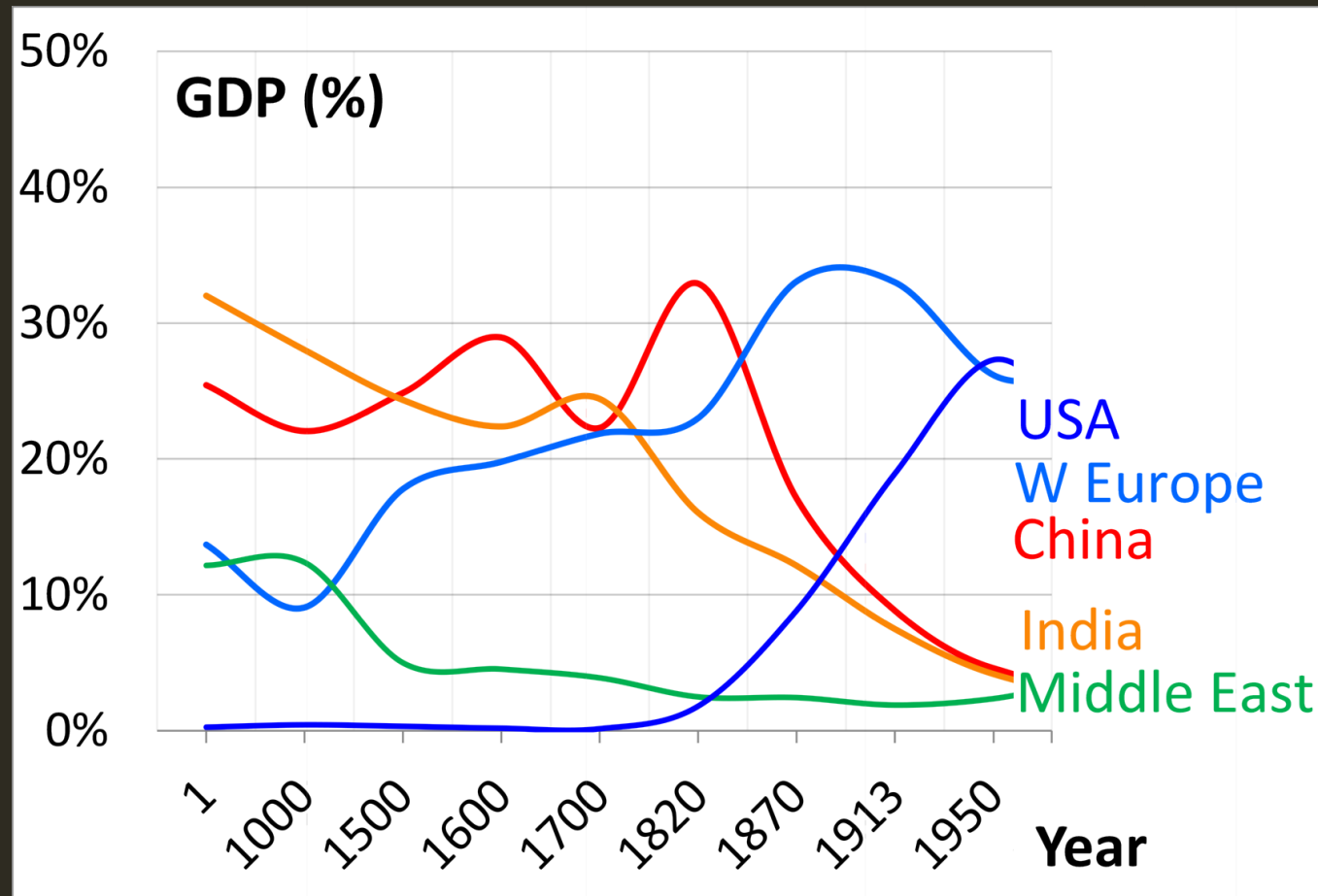
# FIELD RESEARCH

Informal interview with a family member (born June 14, 1940) who has experienced China's economic shifts firsthand.

- Great Leap Forward (1958-1961)
- Chinese Economic Reform (1978-Present Day)

This interview was a great help in finding appropriate secondary research for this project.

# BACKGROUND: A CENTURY OF INSTABILITY



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- Opium Wars (1839-1841)
- Taiping Rebellion (1851-1864)
- Punti-Hakka Clan Wars (1855-1867)
- Nian Rebellion (1851-1964)
- Dungan Revolt (1862-1877)
- Panthay Rebellion (1856-1873)
- First Sino-Japanese War (1894-1895)
- Boxer Rebellion (1899-1901)
- Wuchang Uprising (1911-1912)
- Warlord Era (1916-1928)
- Chinese Civil War (1927-1936)
- Second Sino-Japanese War (1937-1945)
- Chinese Communist Revolution (1946-1950)
- Mao Zedong establishes the People's Republic of China and declares himself Chairman (1949)
- Great Leap Forward (1958-1961)
- Cultural Revolution (1966-1976)
- Mao Zedong dies September 9, 1976
- Deng Xiaoping named Chairman in 1978

# GREAT LEAP FORWARD (1958-1961)

An economic reform program created by Mao Zedong intended to modernize China.

## Goals :

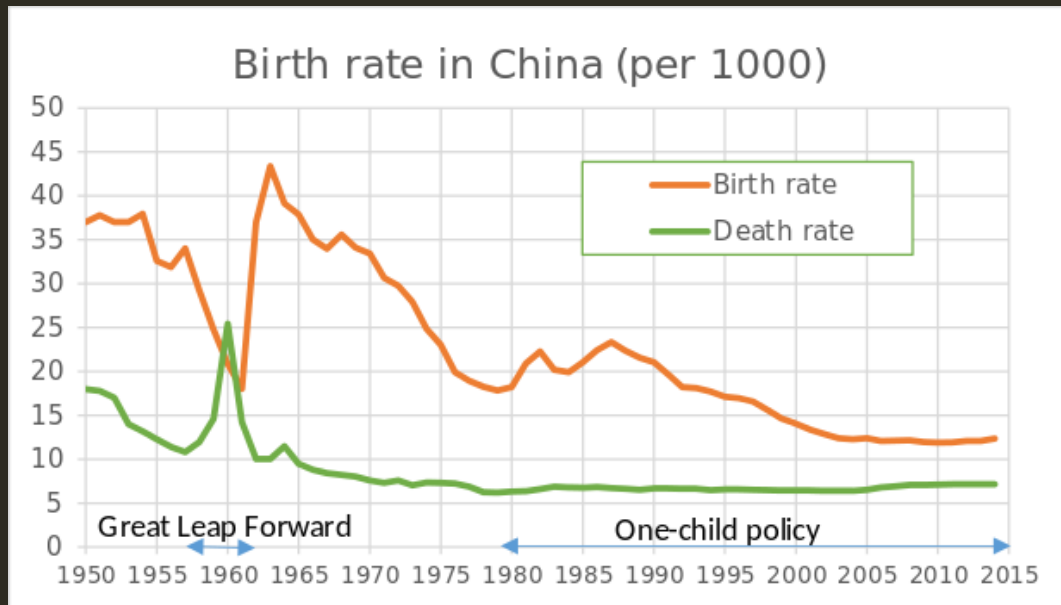
- Modernize China using industrialization and collectivization (commune farming).
- A huge increase in overall production.
- Rapidly transform China from a mainly agriculture-based economy to an industry-based planned economy.

# THE GREAT FAMINE

Estimations of 18 million to 32.5 million dead Chinese citizens due to starvation<sup>1</sup>.

Main cause was forced collectivization of farm produce.

- Crops were immediately seized by the government, with none reserved for farmers.
- Farmers who had opposed collectivization or practiced private farming were considered enemies of the state.
- Collectivization was enforced through social pressure, public humiliation, and forced labor.
- More than 60% of the labor force was employed in agriculture.
- Survivors had to eat dirt, grass, tree bark, and in some cases resorted to cannibalism.



<sup>1</sup>GREAT LEAP INTO FAMINE. CORMAC Ó GRÁDA (2011).

# “MAO’S GREAT FAMINE” (2012)



# CULTURAL REVOLUTION (1966-1976)

Considered to be the worst period in all of Chinese history.

It was a social/political movement, not an economic reform movement.

The Great Leap Forward and the Cultural Revolution further delayed China's industrialization.



# CHINESE ECONOMIC REFORM (1978-PRESENT)

- Chinese Leader Deng Xiaoping implemented this program two years after Mao's death in 1976, wanting a real economic reform.
- Fundamentally different from Mao's Great Leap Forward, could be considered contrary to traditional socialist belief.
- "Under Mao, resources were allocated and production was determined through government plans, not through a market based demand oriented system. In short there was no true commerce"<sup>2</sup>.
- China changed from a planned economy to a "socialist market economy". Even though it is officially a part of socialism, many economists say it is a form of state capitalism<sup>3</sup>.

<sup>2</sup> THE MAKING OF AN ECONOMIC SUPERPOWER. YI WEN (2015).

<sup>3</sup> THE RISE OF STATE CAPITALISM. *THE ECONOMIST* (2012).

# CHINESE ECONOMIC REFORM (1978-PRESENT)

## First Stage of Reform (1978-late 1980s)

- Farmers were allowed to sell crops on the open market.
- Opening up of China to foreign investment.
- Allow entrepreneurs to start businesses, but most of Chinese industry remained state-owned.

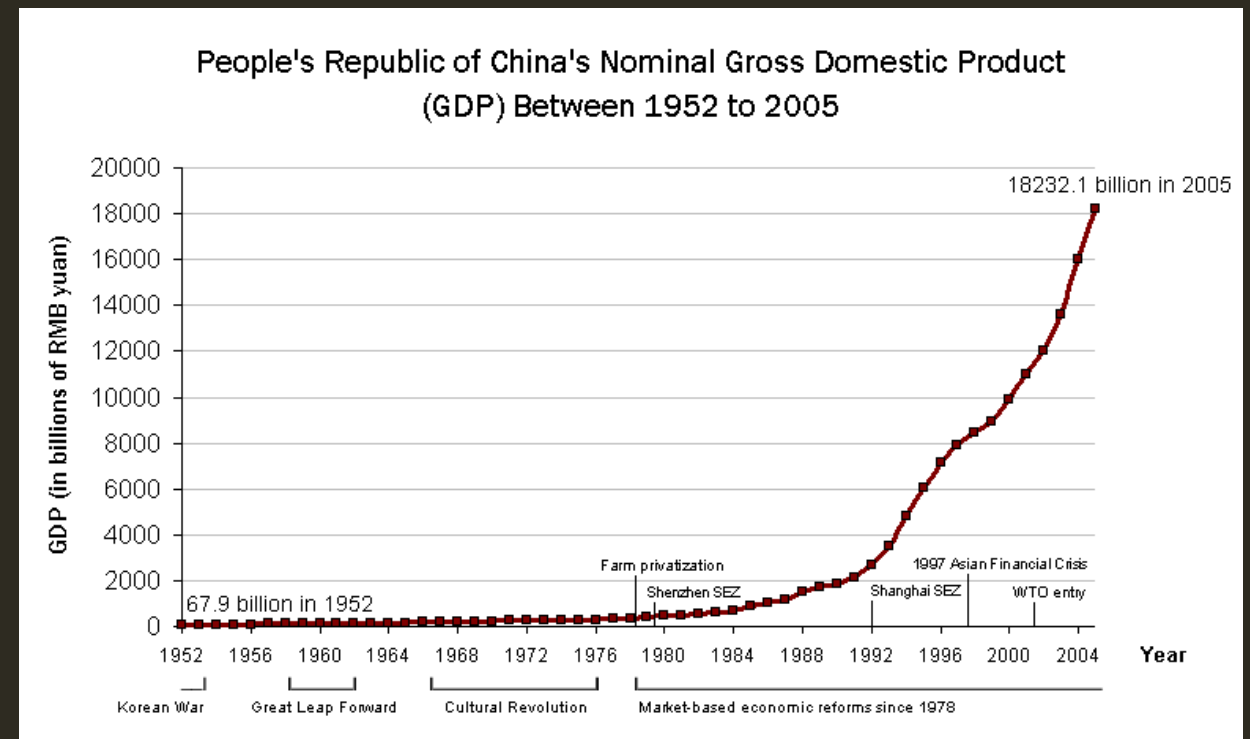
## Second Stage of Reform (late 1980s-1990s)

- Privatization of almost all state-owned industry.
- Mass deregulation of industry.
- Removed price controls and protectionist policies (taxes on imported goods, import limits)
- Only the banking and petroleum sectors remained state-owned.
- China joins the “Asian Tiger Economies” of Hong Kong, Japan, Singapore, and South Korea.

# CHINA SKYROCKETS

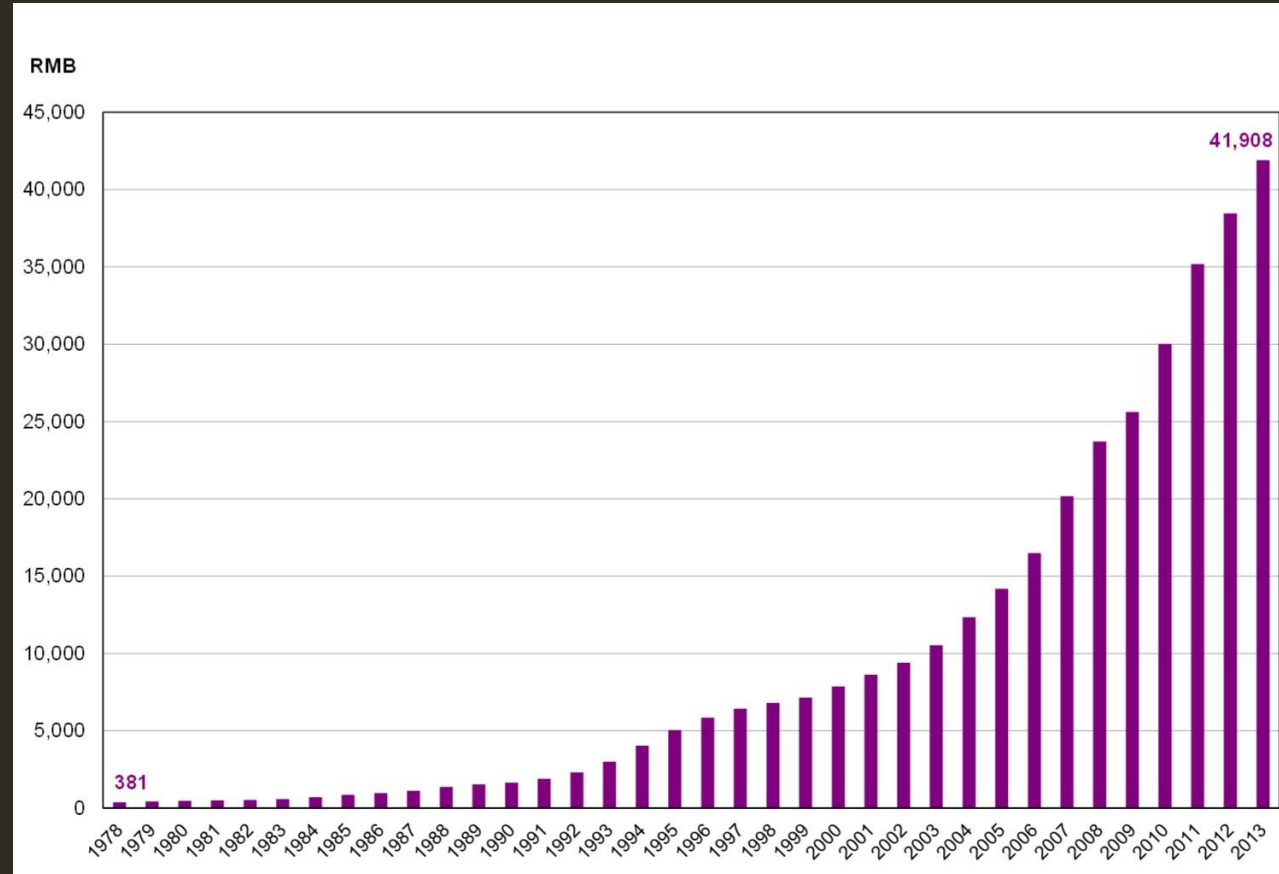
Because of Deng's economic policies, China has undergone unprecedented growth in economy and production.

- The Chinese economy has grown about 10% every year from 1978 to 2013.
- Average wages rose six fold (6x) between 1978 and 2005, creating a new middle class.
- Absolute poverty declined from 41% of the population to 5% from 1978 to 2001.<sup>3</sup>



<sup>3</sup> "THE CHINESE LABOR MARKET IN THE REFORM ERA", CHINA'S GREAT TRANSFORMATION. LOREN BRAND, G. THOMAS RAWSKI (2008).

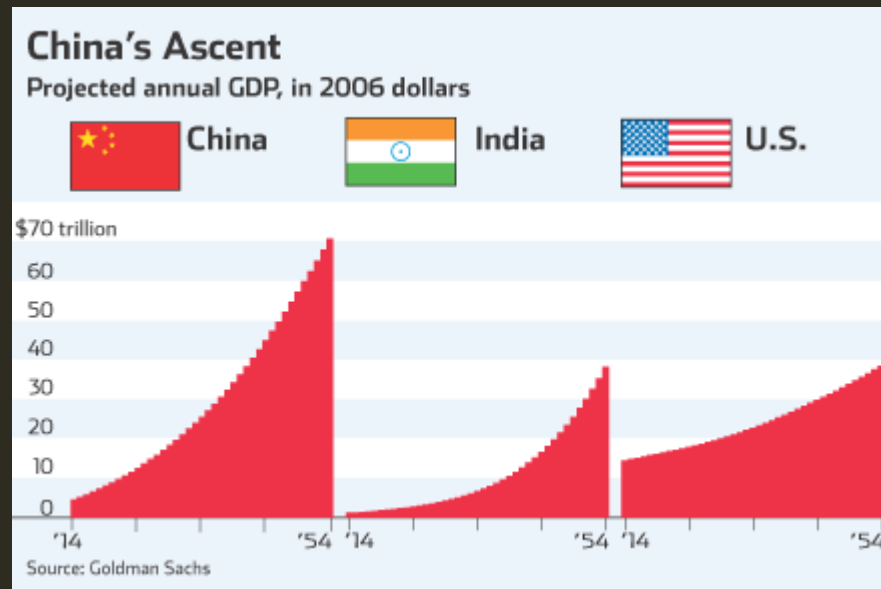
# CHINA SKYROCKETS



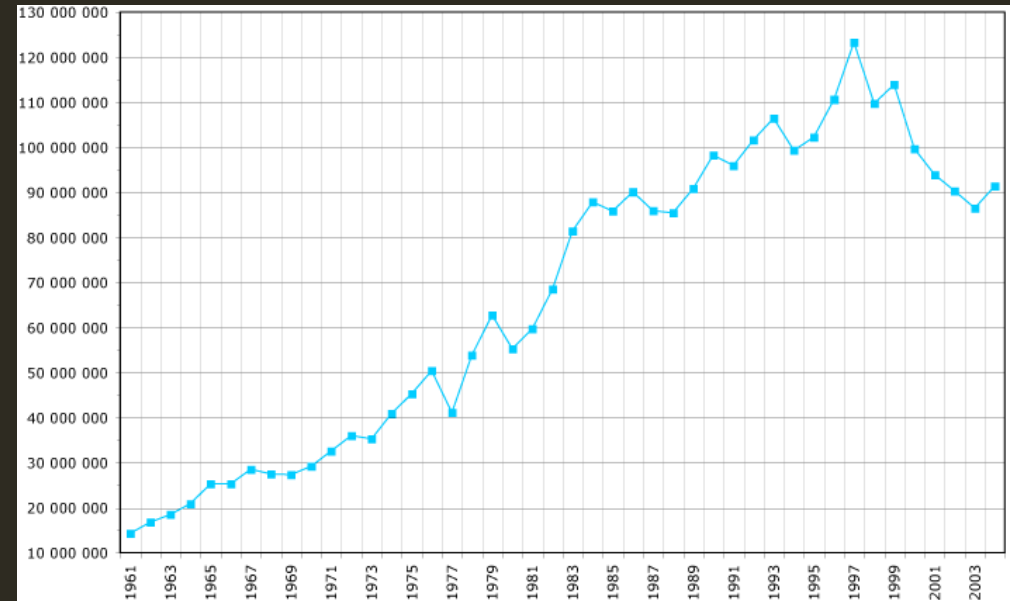
CHINA'S GDP PER CAPITA (1978-2013)

# CHINA SKYROCKETS

## Projected GDP Growth

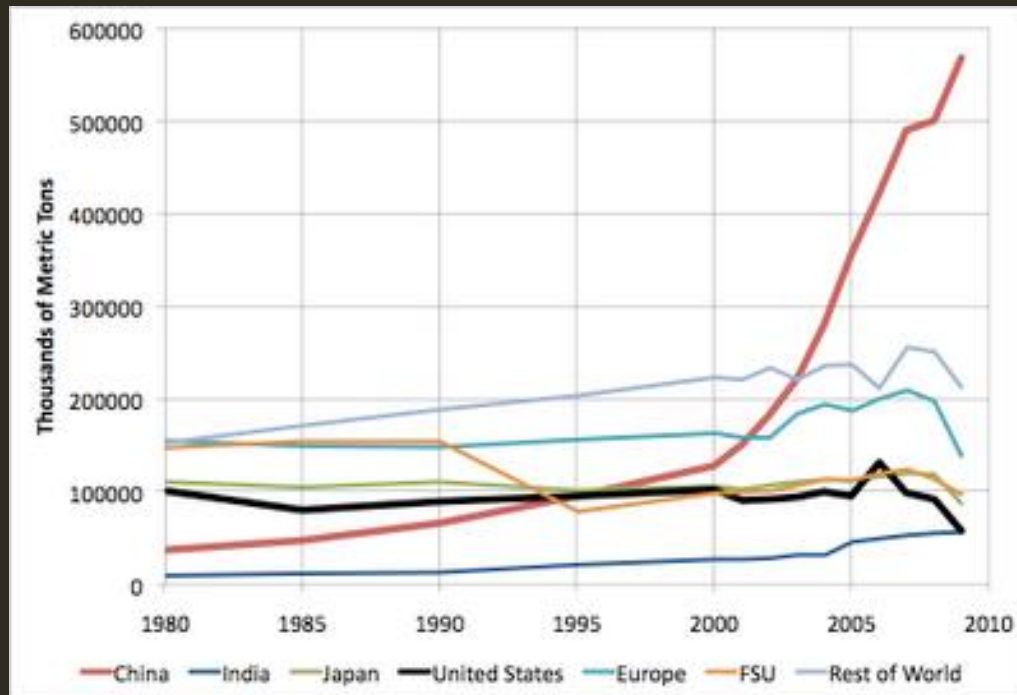


## China's Wheat Production

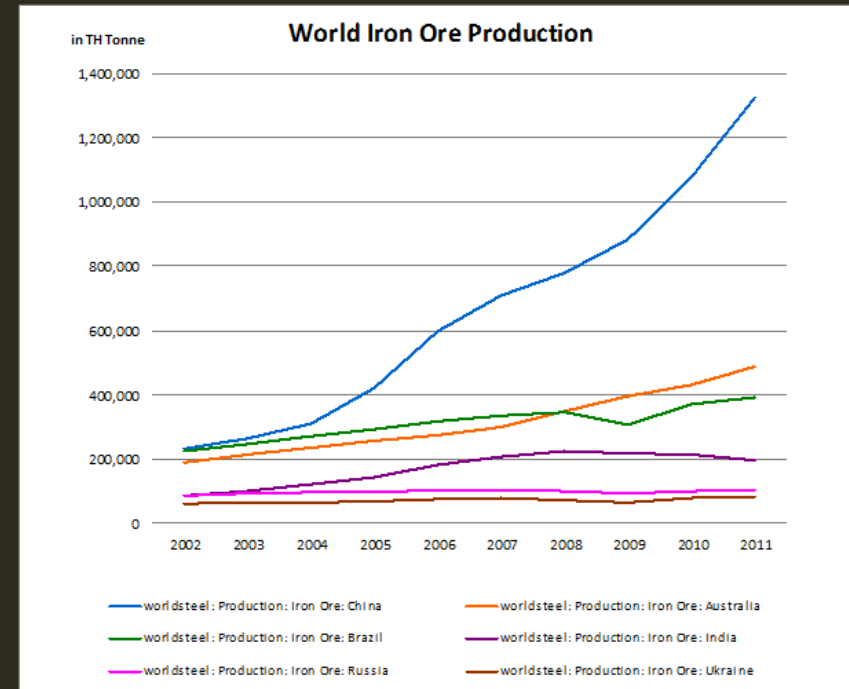


# CHINA SKYROCKETS

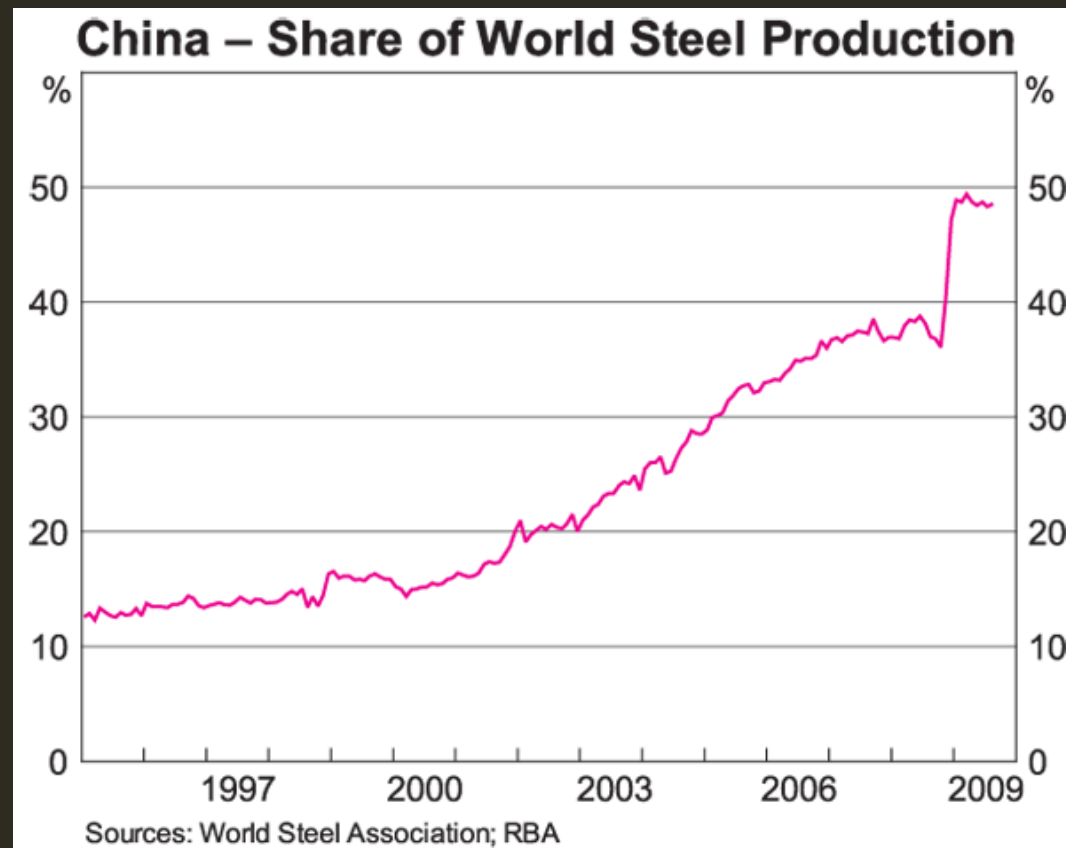
## World Steel Production



## World Iron Ore Production



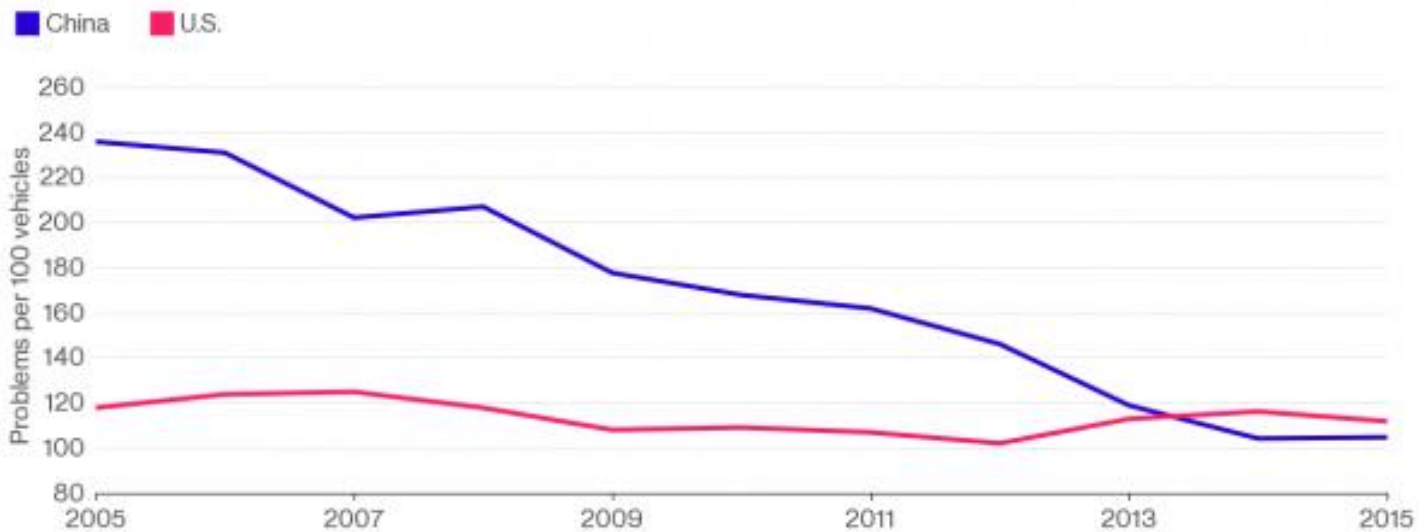
# CHINA SKYROCKETS



# CHINA SKYROCKETS

## China's Auto Quality Improves

J.D. Power's initial quality study finds fewer problems with new vehicles



Source: J.D. Power & Associates

Bloomberg





SHANGHAI (1990 & 2010)



SHENZHEN (1980 & 2011)

# HOW CHINA BECAME 2<sup>ND</sup> LARGEST ECONOMY



# CONSEQUENCES OF UNCHECKED INDUSTRY

Because there were little to no regulations, a great amount of environmental damage occurred.

- In 2006, the World Bank had published its list of the world's top 20 most polluted cities, and 16 of the listed cities were in China.
- World Bank estimates that pollution kills 350,000 to 500,000 people in China every year.
- A more recent scientific research paper from University of California – Berkeley estimates that outdoor air pollution kills 1.6 million people in China every year, or about 4,400 people a day<sup>4</sup>.
- A documentary about China's pollution called "Under the Dome" was released in China on February 28 2015. It had 300 million views on Chinese internet sites before it was removed and censored by the Chinese government one week later on March 7 2015. It is still available on YouTube (<https://www.youtube.com/watch?v=T6X2uwIQGQM>)

<sup>4</sup> AIR POLLUTION IN CHINA: MAPPING OF CONCENTRATIONS AND SOURCES. ROBERT A. RHODE. RICHARD A. MULLER (2015).

# CONSEQUENCES OF UNCHECKED INDUSTRY



# WHAT CHINA IS DOING NOW

In response to global leaders criticizing China's contributions to climate change, China has been proactive in trying to curb pollutants and investing in renewable energy.

- According to a NY Times article, China has surpassed Denmark, Germany, Spain and the United States in being the world's largest manufacturer of both wind turbines and solar panels <sup>5</sup>.
- They are attempting to lessen their coal dependency by making more nuclear power plants and retrofitting coal plants with more efficient burners
- Clean energy investment has been greater than the United States, the United Kingdom, and France combined, estimated at \$126 billion in 2014 <sup>6</sup>.

<sup>5</sup> CHINA LEADING GLOBAL RACE TO MAKE CLEAN ENERGY. KEITH BRADSHER (2015).

<sup>6</sup> CHINA IS TOTALLY CRUSHING THE US ON RENEWABLE ENERGY. TIM MCDONNELL (2015).

# SUMMARY

Out of desperation, China had to rapidly industrialize to catch up to other countries.

The Great Leap Forward was not properly planned out, leading to one of the greatest tragedies in modern history.

The Chinese Economic Reform was a huge success, combining aspects of socialism and capitalism for tremendous growth, and modernizing China.

Deregulation of Chinese industry, which led to damage to the environment.  
Unrestricted industry is not sustainable.

China is now taking early steps towards renewable energy, trying making a more sustainable economy.

## Economic Optimism in Asian Countries during the 1980s

