

The Asian Giants

History & Future of India & China

Naeem Zafar

Twitter: @naeem

University of California, Berkeley

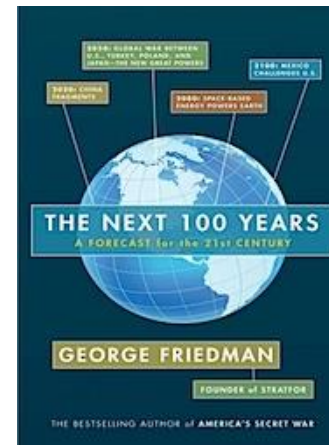
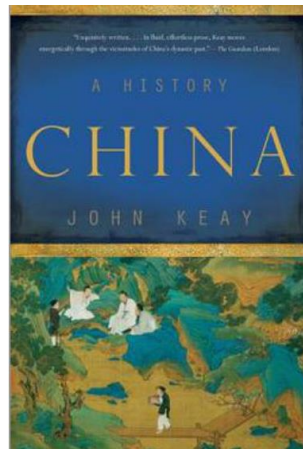
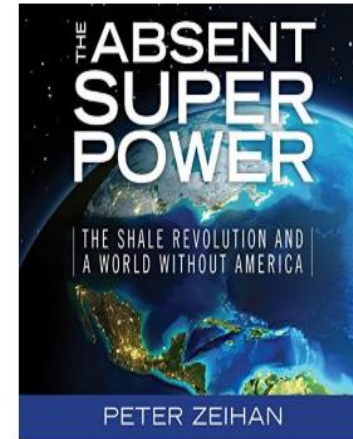
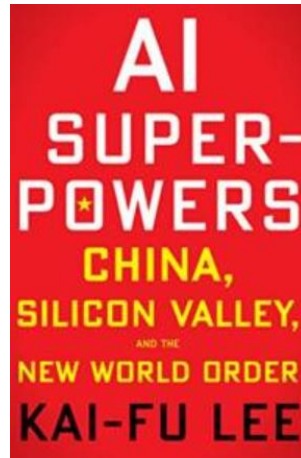
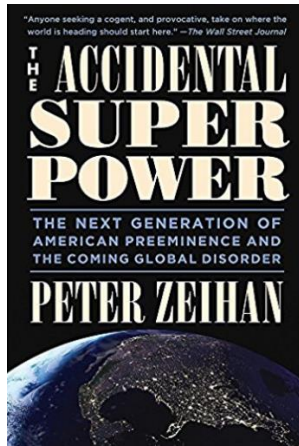
www.NaeemZafar.com



Asian Giants



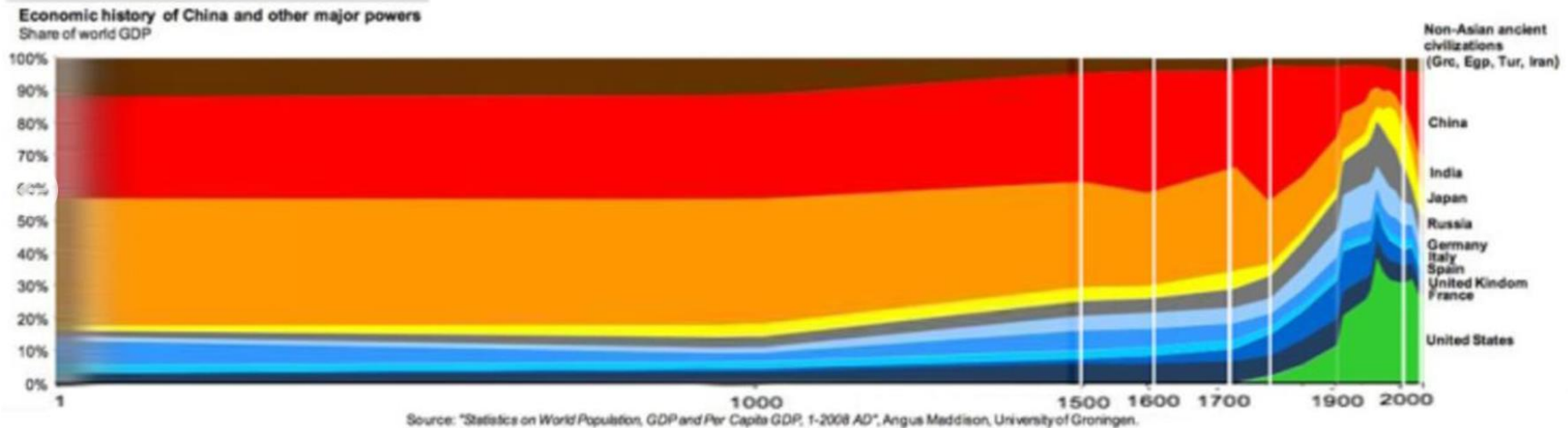
Based Largely on Knowledge Extracted from These Books



Power is geography, demographics, technology & culture

These factors will define how once the richest countries in the world face the future

The Richest Country in the World for the Longest Time

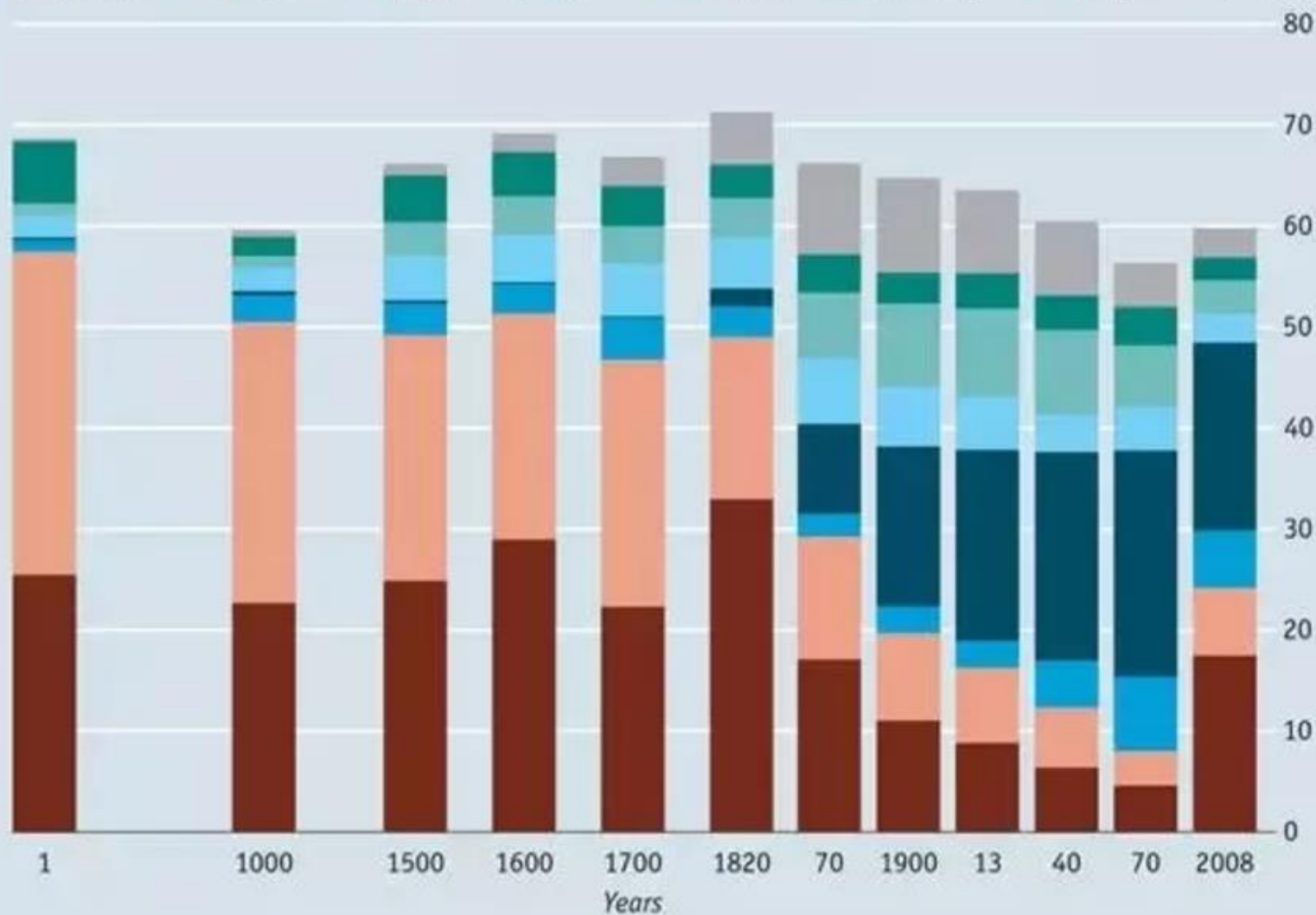


- Rich natural resources
- Protected borders
- Trade with neighbors

A history of world GDP

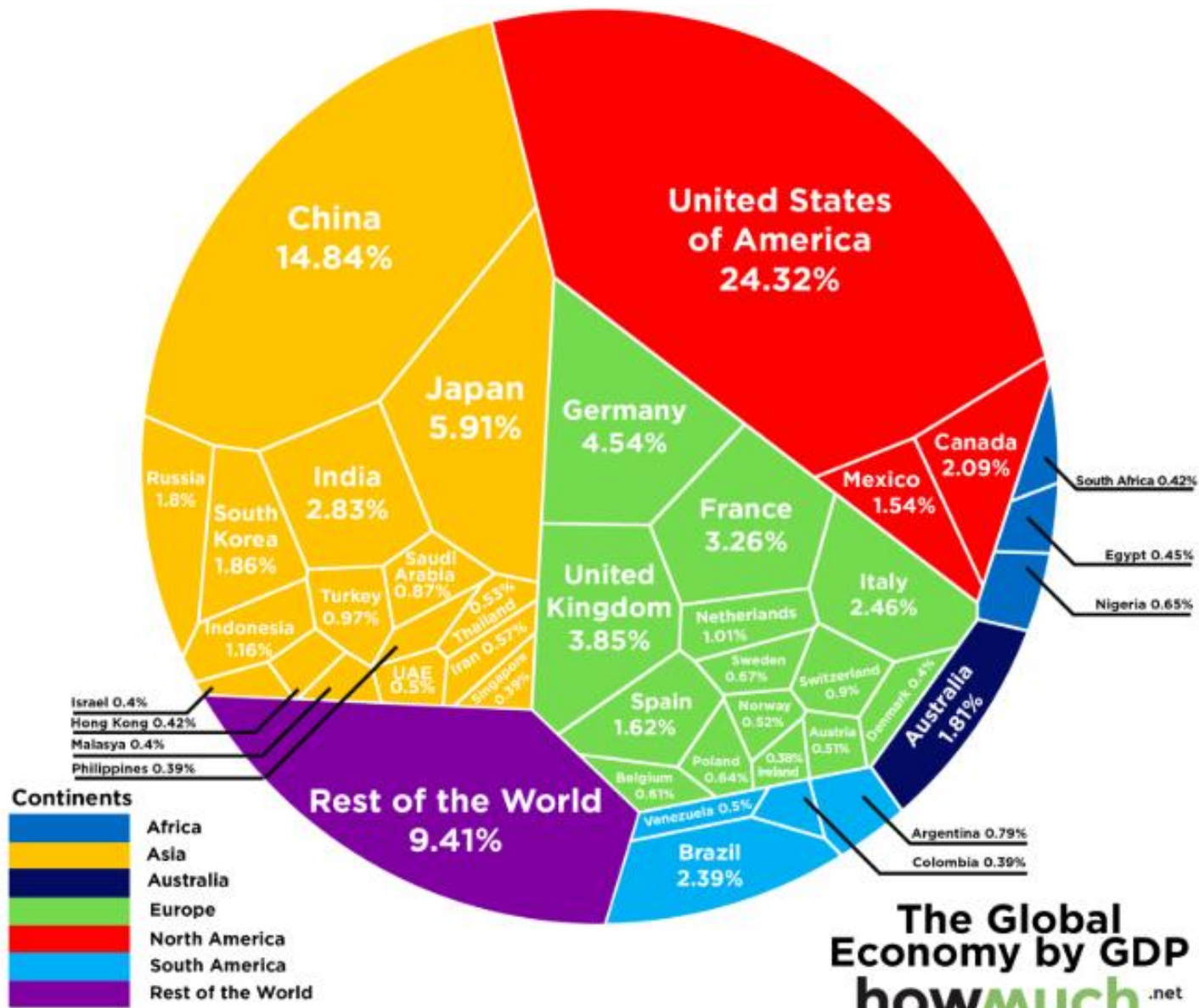
Percentage of total, 1990 \$ at PPP*

China India Japan US France Germany Italy Britain



Sources: Angus Maddison, University of Groningen; *The Economist*.

*Purchasing-power parity



Pop: 1.39 B
GDP: \$12.24 T
Area: 3.7M sm.

Pop: 1.34 B
GDP: \$2.69 T
Area: 1.27M sm.

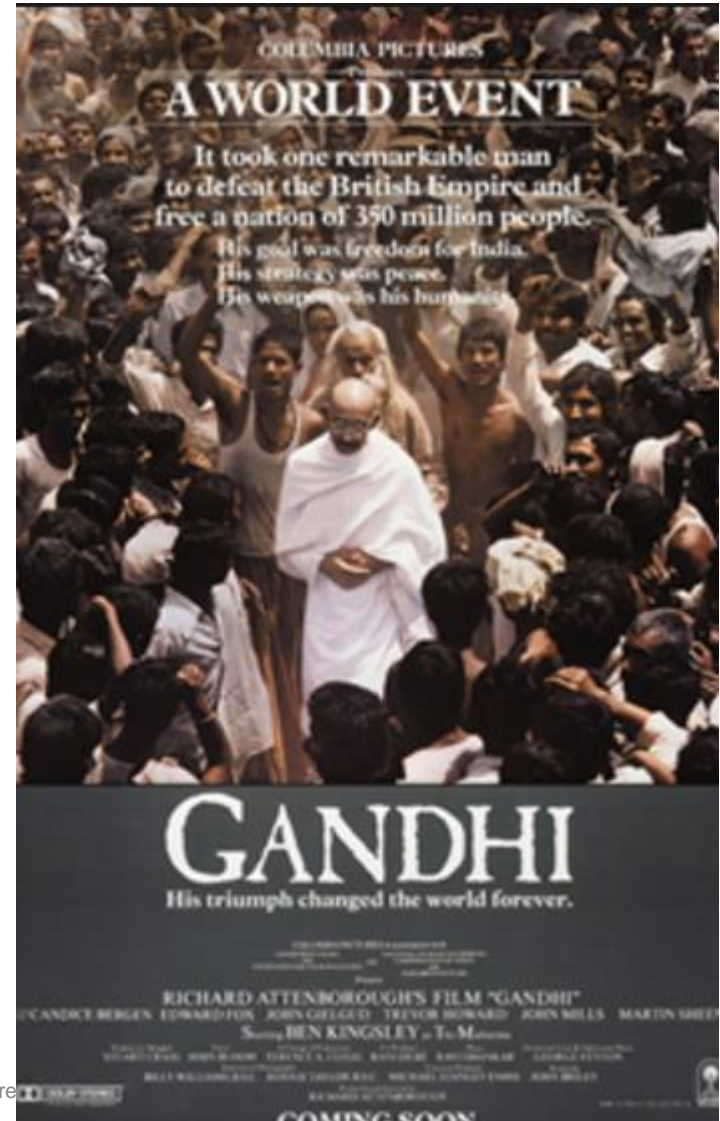
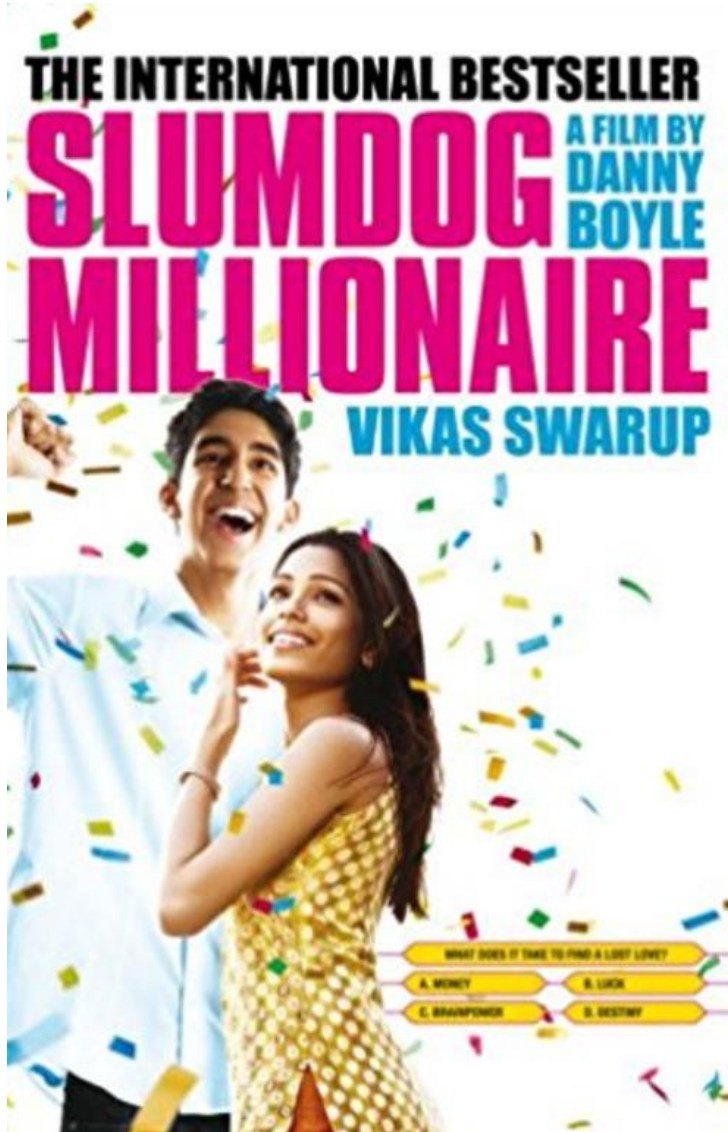
**Prime Minister
of India
Narendra Modi**



**President of
China
Xi Jinping**



What is India



Strange Mix of Extreme Wealth & Extreme Poverty



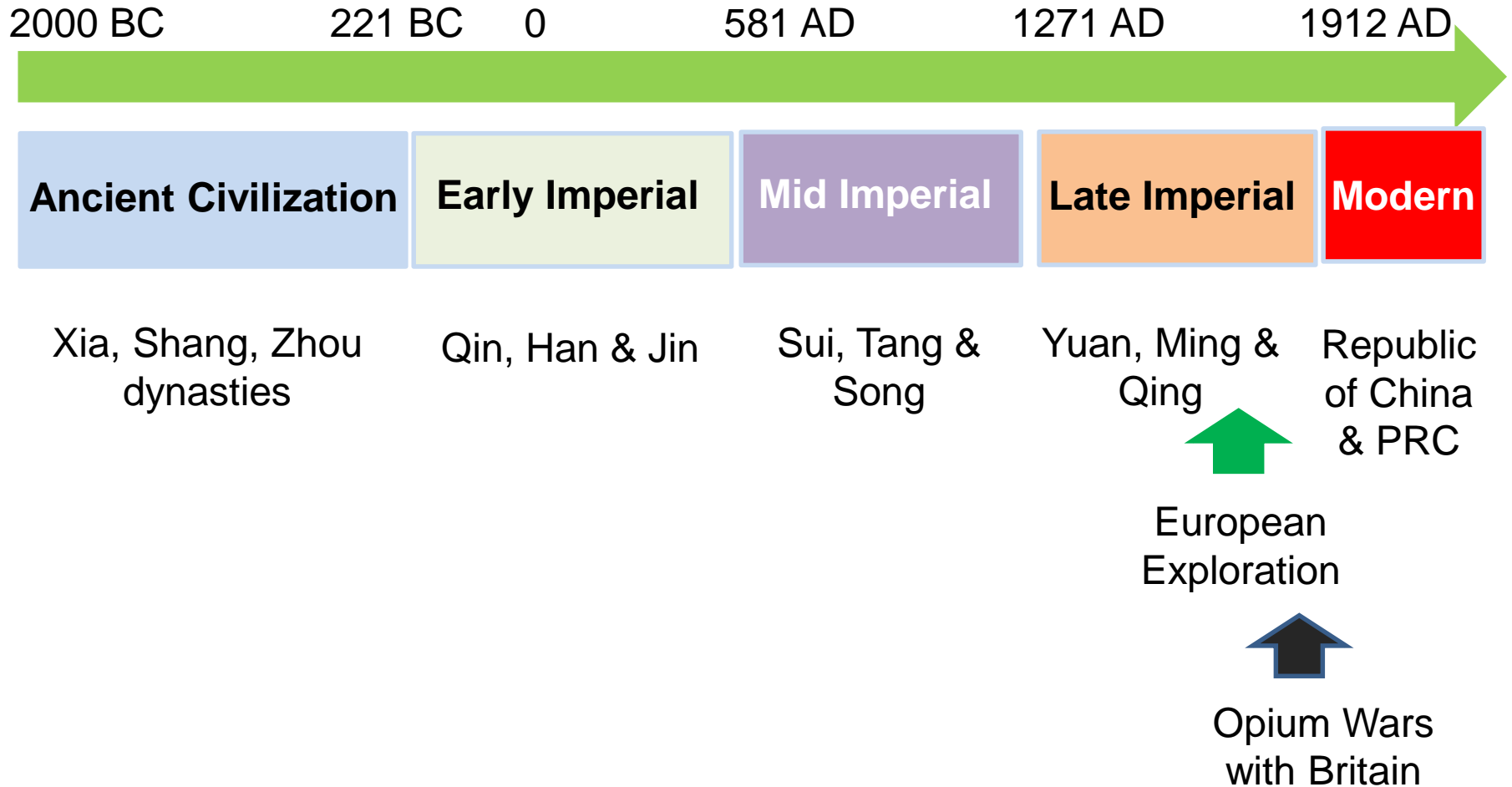
Crowded & Hot Place



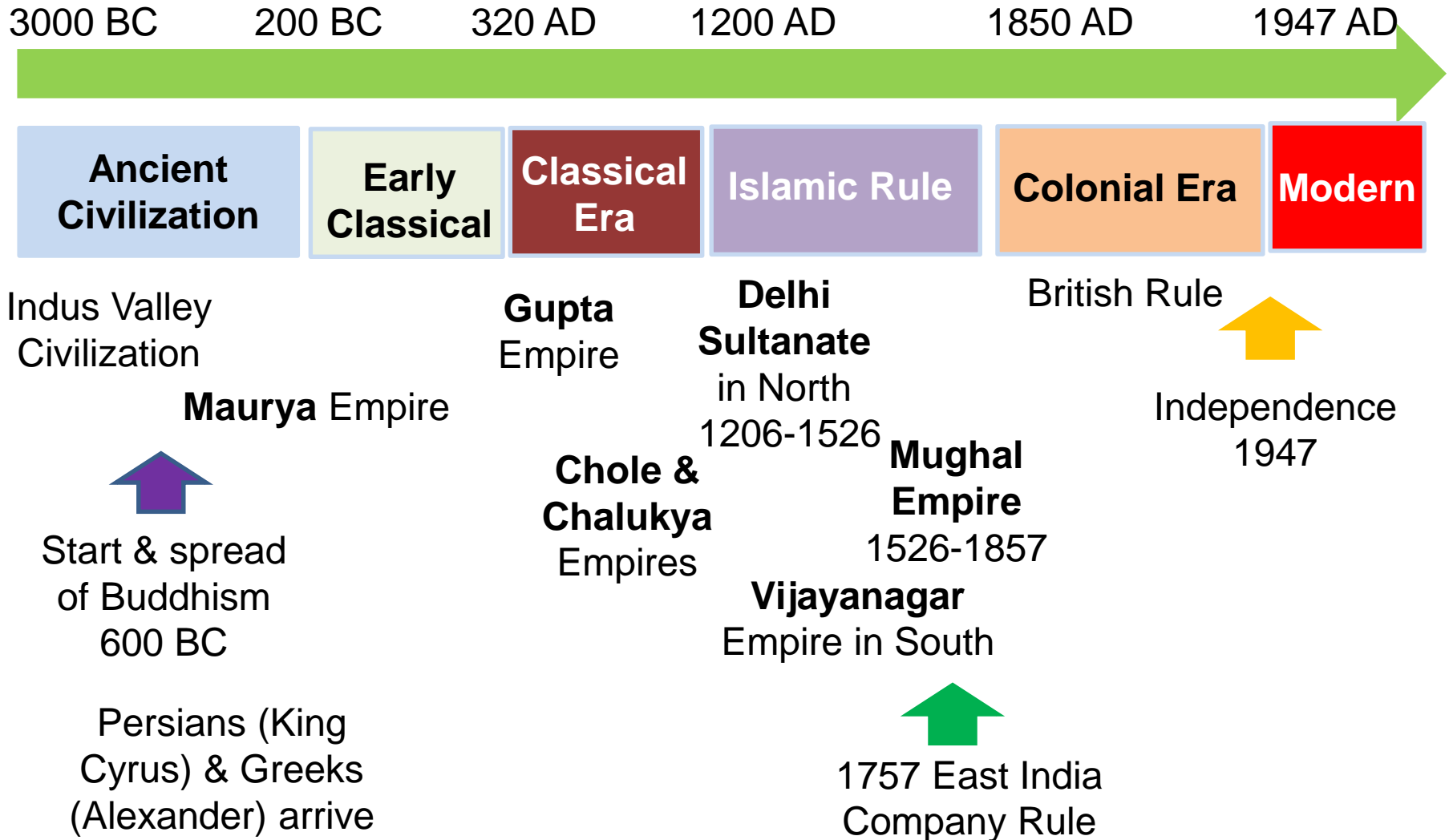
India: 526 Languages & Dialects Spoken



History of China



History of India



3000 BC to 200 BC

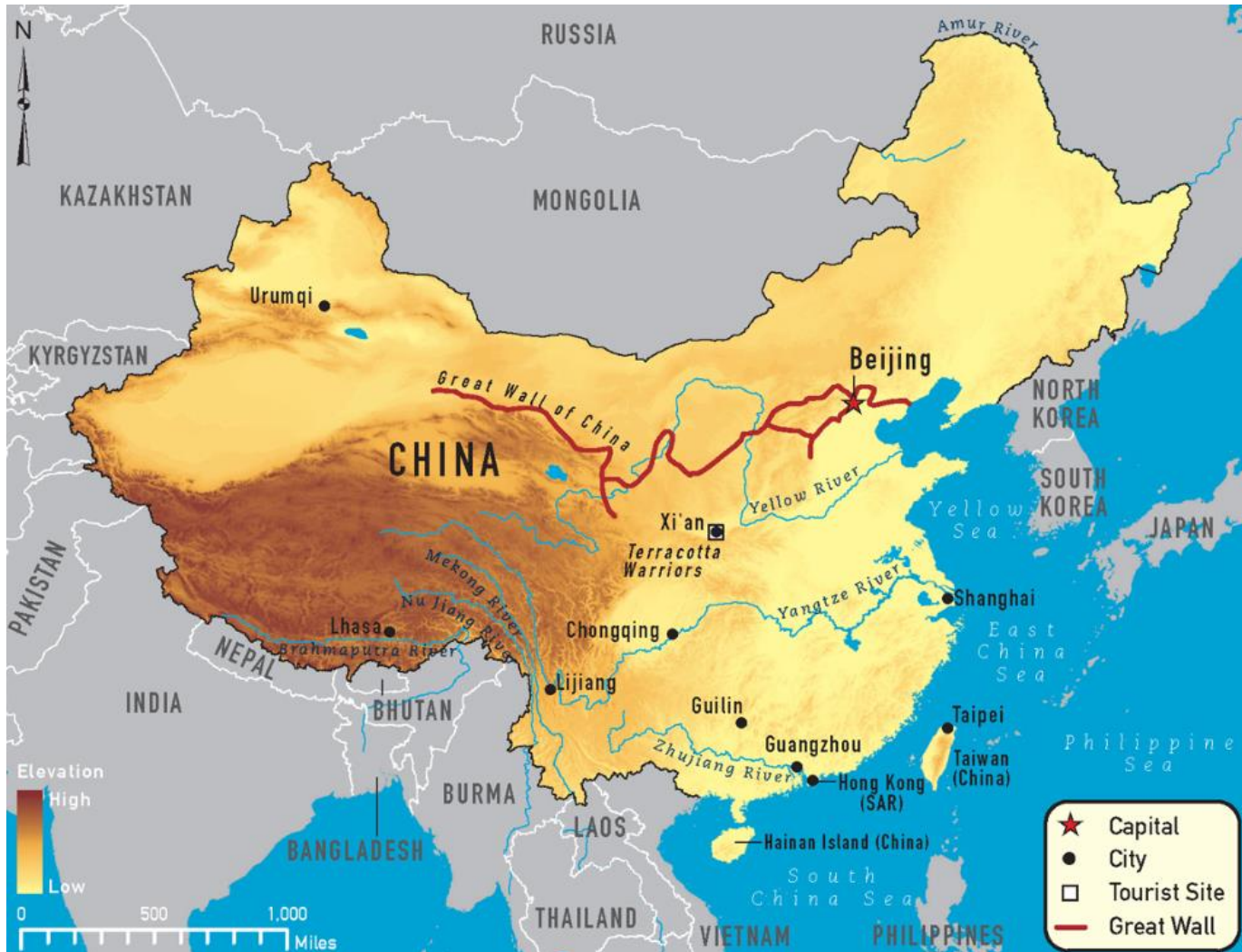
Our World 5,000 Years Ago

Four Early Civilizations:

1. Mesopotamia (Sumer) on Tigris & Euphrates Rivers
2. Egyptians on River Nile
3. Indus Valley (India) on Indus River
4. Ancient China on Huang He (Yellow) River

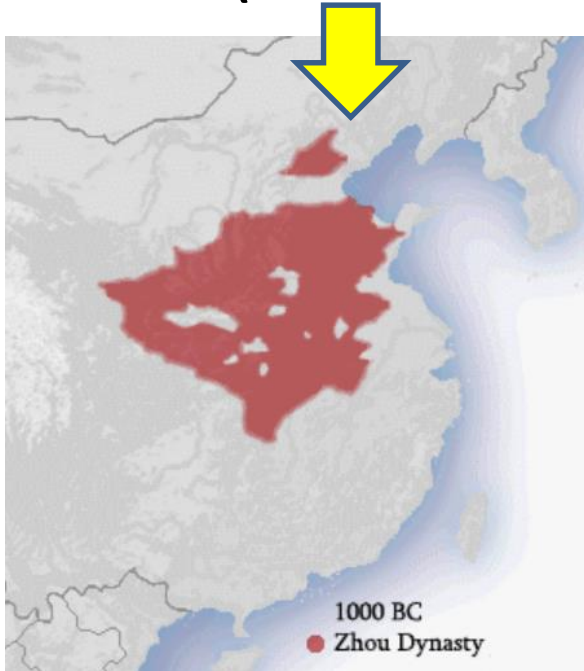


Civilization Around Two Rivers



Ancient China

- Xia (2070 – 1600 BC)
- Shang (1600-1046 BC)
- Zhou (1046-256 BC)



Bronze from Shang Dynasty



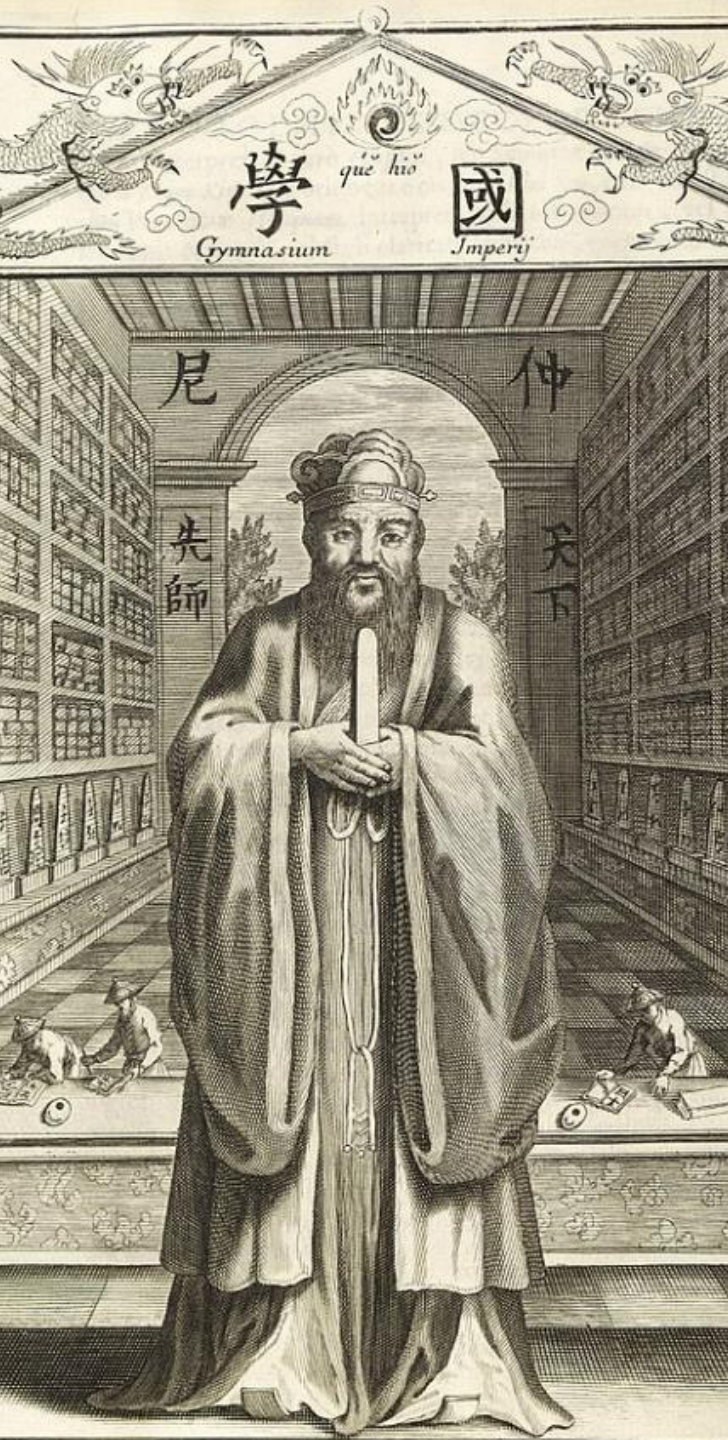
**Bronze from the
Shang Dynasty
(1600 BC to 1046 BC)**



Zhou Dynasty: 1046-256 BC

- The Zhou dynasty is the longest-lasting dynasty in Chinese history
- Zhou dynasty emerged in the Yellow River valley

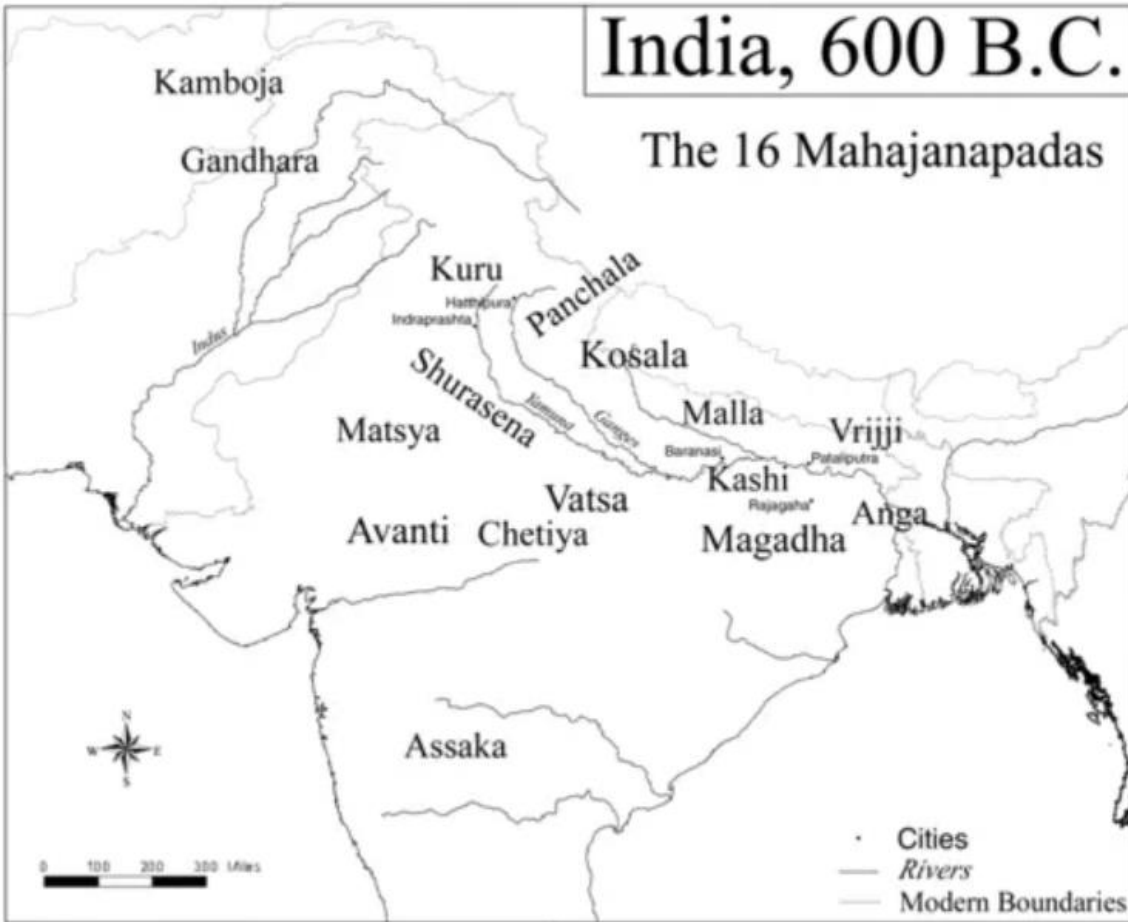




Confucius (551-479 BC)

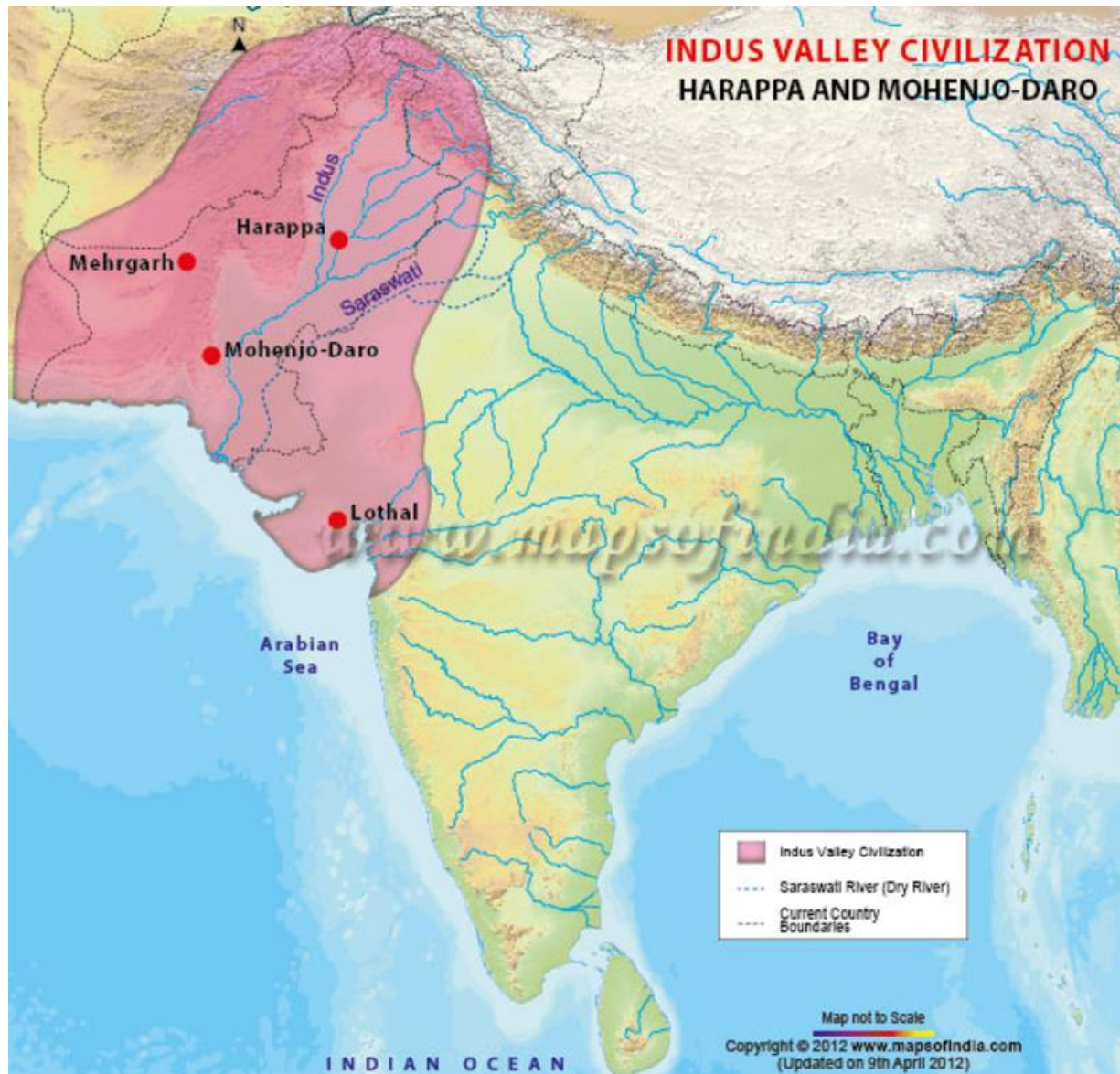
- Philosophy of Confucius, also known as Confucianism, emphasized personal and governmental morality, correctness of social relationships, justice and sincerity
- Wrote Five Classic
 - 305 poems (divided in 160 folk songs)
 - Book of documents
 - Book of Rites
 - Book of Changes
 - Spring & Autumn Annals

Ancient India



**Gautam Buddha
563-483 BC)**

Indus Valley Civilization: The Rivers



**Start of
organized
civilization:
language, tools,
cities**

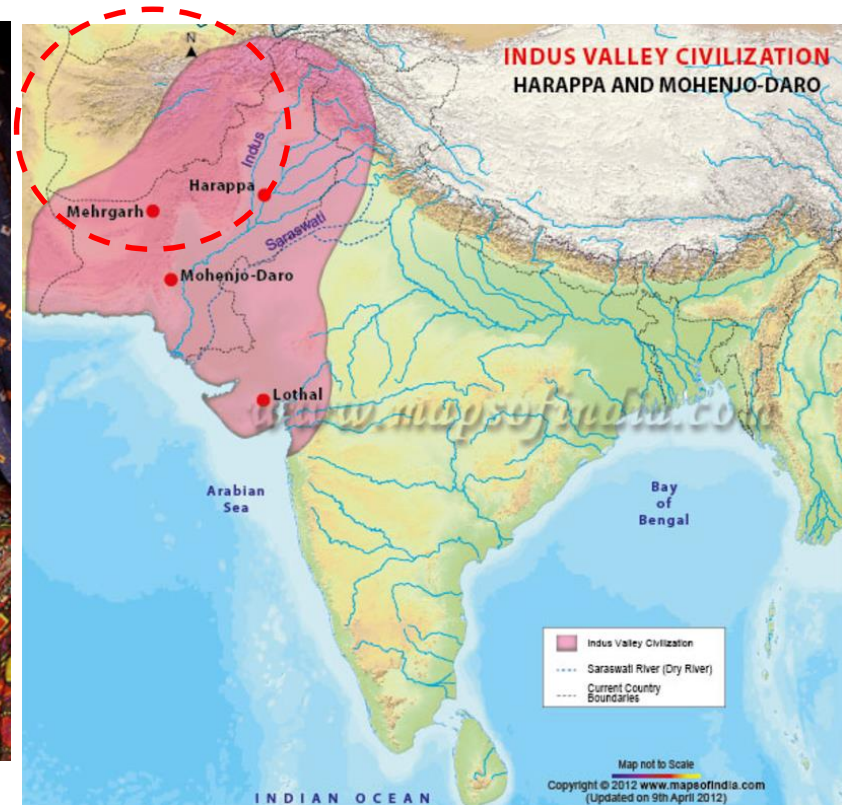
Harappa ~3000 BC



- Indus Valley civilization
- Population ~5 million
- 1,056 cities & human settlements found so far

Alexander the Great Arrives

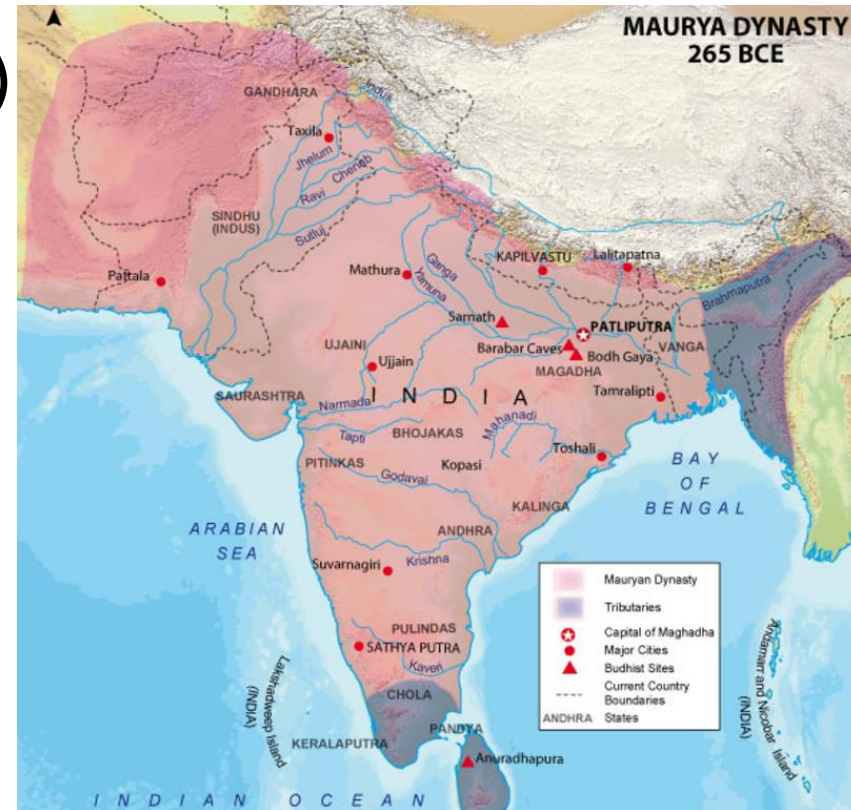
- **326 BC** Alexander the Great invades India via Persia
- Started new wave of civilization
- Alexander was defeated & turned back from Punjab



Maurya Dynasty (321 BC to 184BC)

Most prominent emperor **Ashoka**

- Maurya Empire (320-185 BC) was first major historical Indian empire, & largest one: Population ~60 million
- After Alexander the Great's invasion of northwest India, Maurya Empire was created



King Ashoka's (269 -232 BC) Monument

- 261 BC Ashoka turned pacifist after Kalinga war
- Spread Buddhism
- **40% of world population & 50% of world's GDP** from Ashoka Empire



Early Indian Civilizations

Contributions



Discovery of cotton



Invention of pottery



Modern Metallurgy

Carved Decoration of Gateway Torana to the Great Sanchi Stupa

A great deal of cultural exchange between these countries took place in ancient times, so that many Indian, Thai, Chinese, Korean, Japanese and other East, South and Southeast Asian cultural practices are related



Early Classical & Imperial Era

Qin Dynasty 221-207 BC

Emperor Qin Shi Huang

- Economic & administrative reforms
- Mercilessly unified China & killed Confucianism
- *Contemporary of King Ashoka*
- End of feudalism & rise of meritocracy



Also known as **Shih Huang-ti**

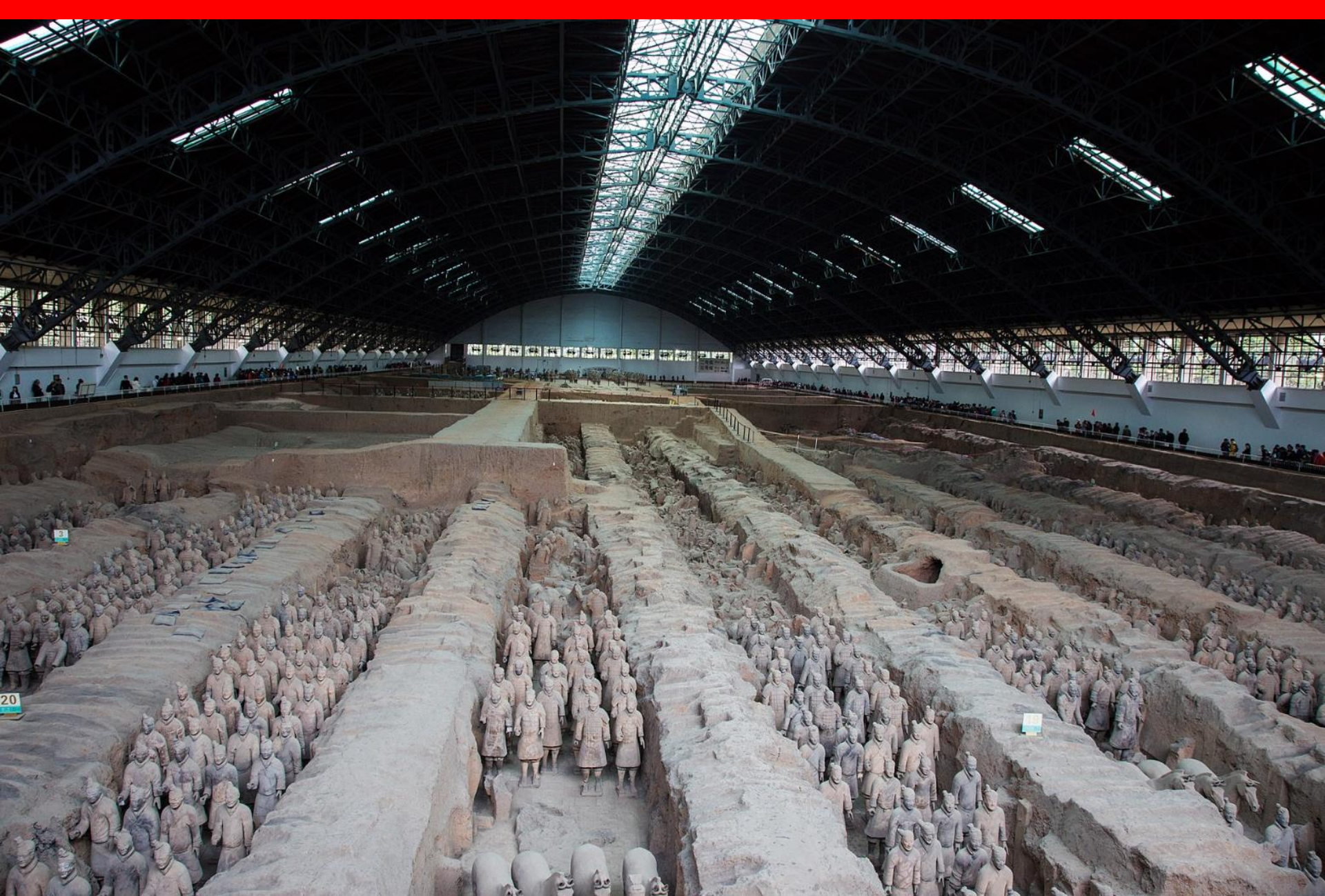
Qin Dynasty: Start of Imperial China

- Introduced a “system” to govern, Scholar-Officials: meritocracy
- Standards introduced (Axel length on carts)
- Started first Great Wall of China
- Standardization: coins, measurement, currency unification
- Cultural : language



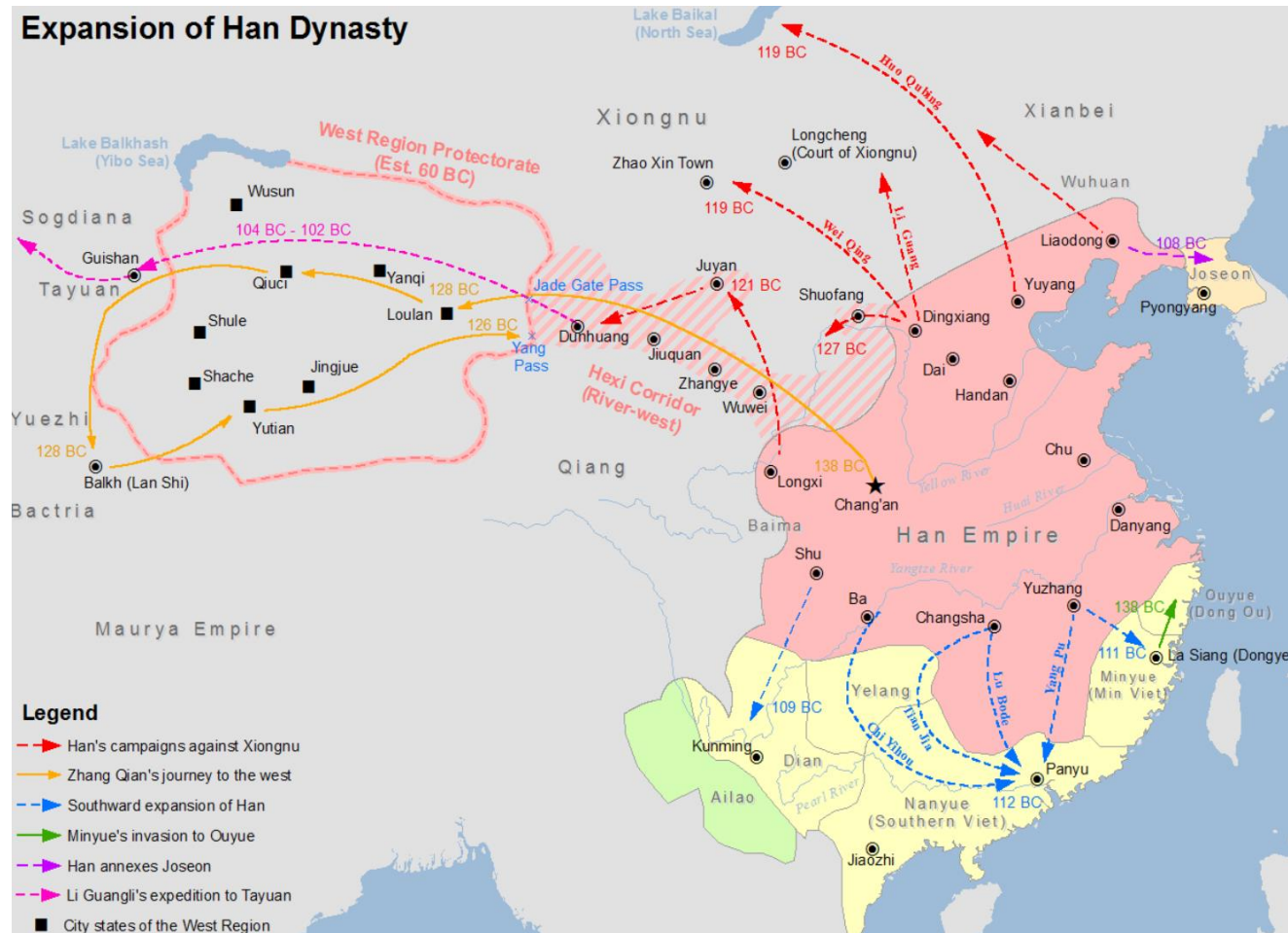
Emperor Qin Shi Huang's Terracotta Army in Xi'an





Han Dynasty 202 BC to 220 AD

- Papermaking
- Rudder
- Negative numbers
- Seismometer
- Astronomy
- New trade networks (Silk Road)



Maijishan Caves 280 - 500 AD

194 caves, 7200
sculptures in
Northwestern China
(Gansu Province)



Hanging Monastery in Shanxi

Built ~1500 years ago these represent 3 main religions:
Taoism, Buddhism & Confucianism



Early Classical Era in India

Gupta Empire

The initial Golden Age of India

~320 – 590 AD



Gupta Empire 320 AD – 590 AD

- Good governance
- Advances in arts, astronomy, mathematics, playwrights, architecture
- Literary sources, Mahabharata and Ramayana, were canonized during this period
- First university formed



Gupta Dynasty

Age of Innovations (320 - 520 AD)



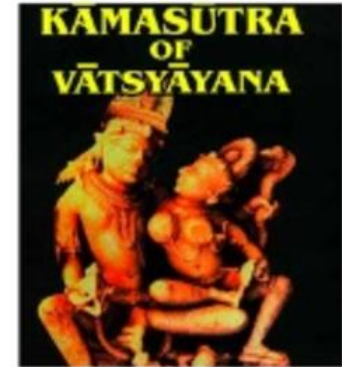
Chess

0

Place value
system



University



Sex
Education

King Chandragupta II was the most influential – canonized major Hindu religious books & was a patron of the arts

Borobudur, Java, Indonesia Manifest to Gupta Influence



Near the town of Muntilan, in Central Java, Indonesia. It is the **world's largest Buddhist temple** -- consists of nine stacked platforms, six square & three circular, topped by a central dome - decorated with 2,672 relief panels & 504 Buddha statues.

Cut Rocks in Ellora

Over 100 caves at the site, 34 of which are open to public

12 Buddhist, 17 Hindu, 5 Jain caves -- Multi-level temple complex covering **an area twice the size of the Parthenon in Athens**



Virupaksha Temple: Bangalore South India



Mid Imperial Era 600-1200 AD

Tang Dynasty: 618 AD – 907 AD

- Tang dynasty was the start of the **golden age** of Chinese civilization
- Most prosperous period of China with significant developments in culture, art, literature, particularly **poetry**, and technology
- Buddhism became the predominant religion for the common people
- Cordial relationship with Japan, less so with Korea

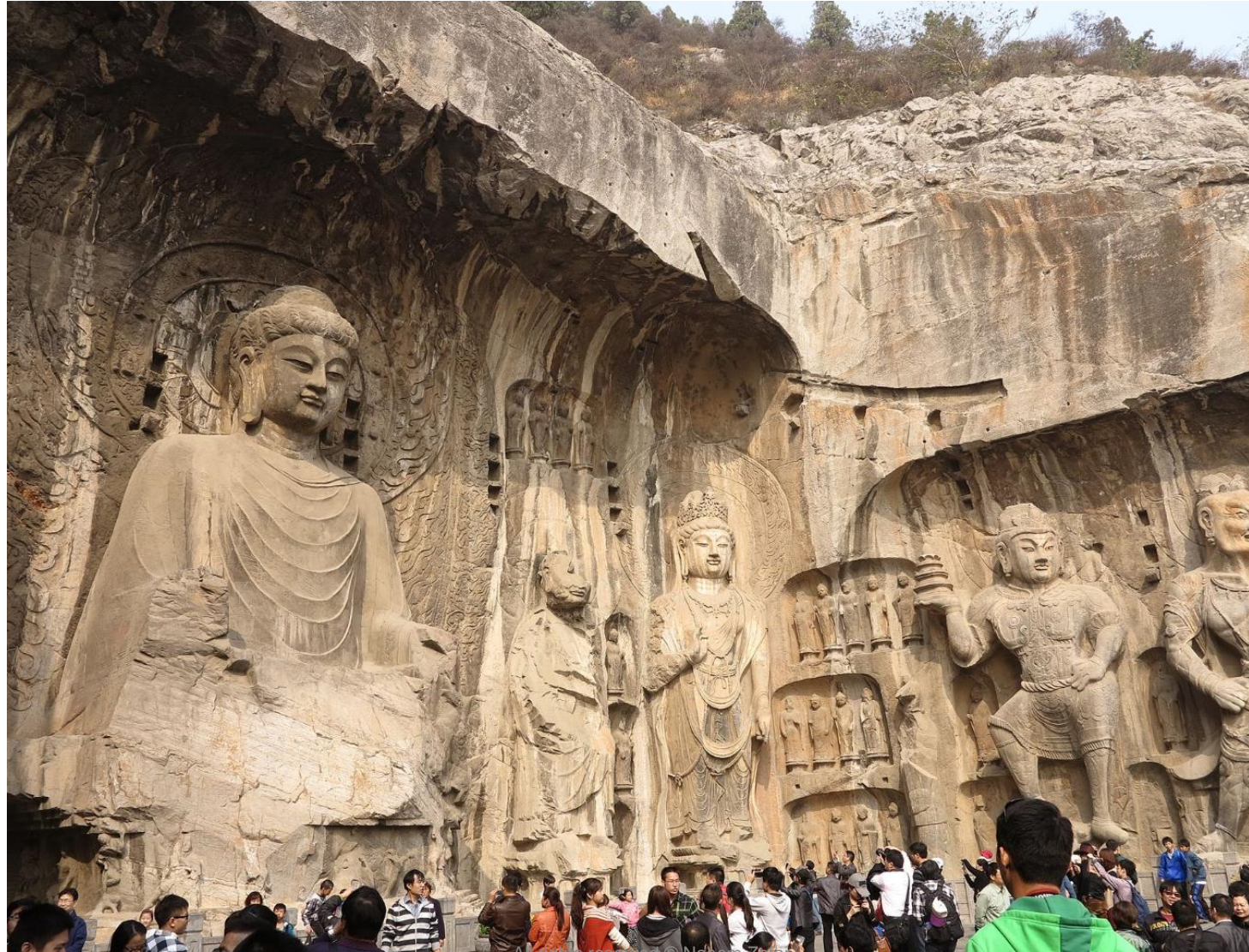
Tang Dynasty: 700 AD

global influence
ambassadors
exchanged
prosperous trade of
pottery & silk
silk-road established
(by land & by port)

an open-minded
culture



The Feng Xian Cave (c. 675 AD)



All rights reserved © Nacem Zairi

Fashionable Times – Foreign Influence



Fig. 7: **618-907 AD**
Tang dynasty
Clothing is modeled after Sui



Fig. 8: **618-907 AD**
Tang dynasty
most open to foreign influence;
also influenced many other nations



Fig. 9: **618-907 AD**
Mid-Late Tang dynasty
Women's clothing become
more loose

FASHION TIMELINE OF CHINESE CLOTH



Fig. 1: 221 BCE -220 AD
Qin to Han dynasties
1-piece garment is the de-facto
formal wear for women



Fig. 7: 618-907 AD
Tang dynasty
Clothing is modeled after Sui



Fig. 19: 1930s-1940s AD
Dress is further western
tailored to flatter body
1949: Footbinding is er

Start of Foot Binding



Song Dynasty: 960 AD to 1279 AD

- Despite its military weakness, the Song dynasty is widely considered to be the high point of classical Chinese civilization
- The Song economy, facilitated by technology advancement, had reached a level of sophistication probably unseen in world history before its time
- The population soared to **over 100 million** and the living standards of common people improved tremendously due to improvements in rice cultivation and the wide availability of coal for production



4 Inventions: paper, gun powder, woodblock print, compass

Song Dynasty: 960 AD to 1279 AD

- The capital cities of Kaifeng and subsequently Hangzhou were both the **most populous cities in the world** for their time, and encouraged vibrant civil societies unmatched by previous Chinese dynasties
- Inventions such as the hydro-mechanical astronomical clock, the first continuous and endless power-transmitting chain, **woodblock printing and paper money** were all invented during the Song dynasty

Captures daily life of people & landscape of the capital, Bianqing (present-day Kaifeng)






Song Dynasty: 960-1279

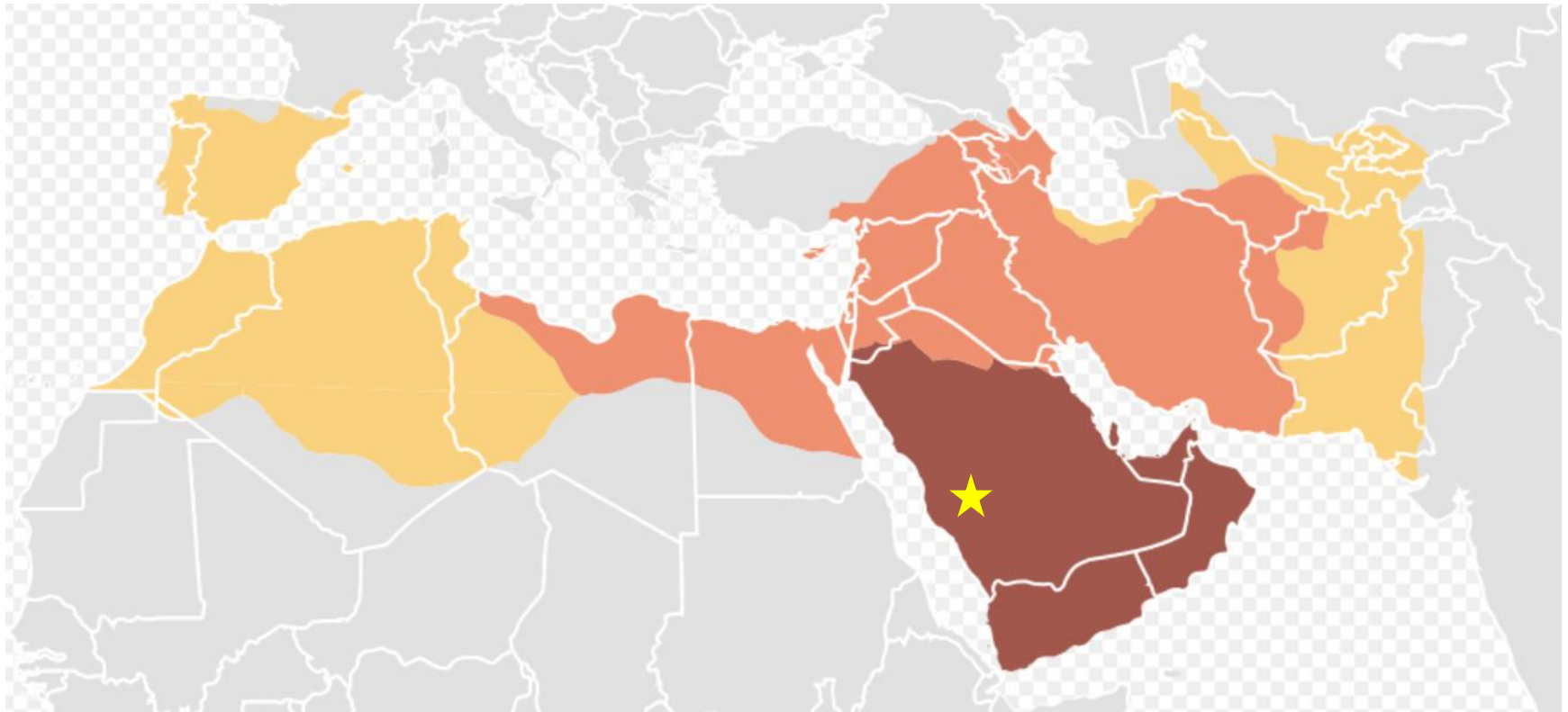


India in Middle Ages

600-1200 AD

Islam Arrives in 610 AD

-  Expansion under Muhammad, 622–632
-  Expansion during the Rashidun Caliphate, 632–661
-  Expansion during the Umayyad Caliphate, 661–750



Invasion of India by Umayyad Army in 711 AD

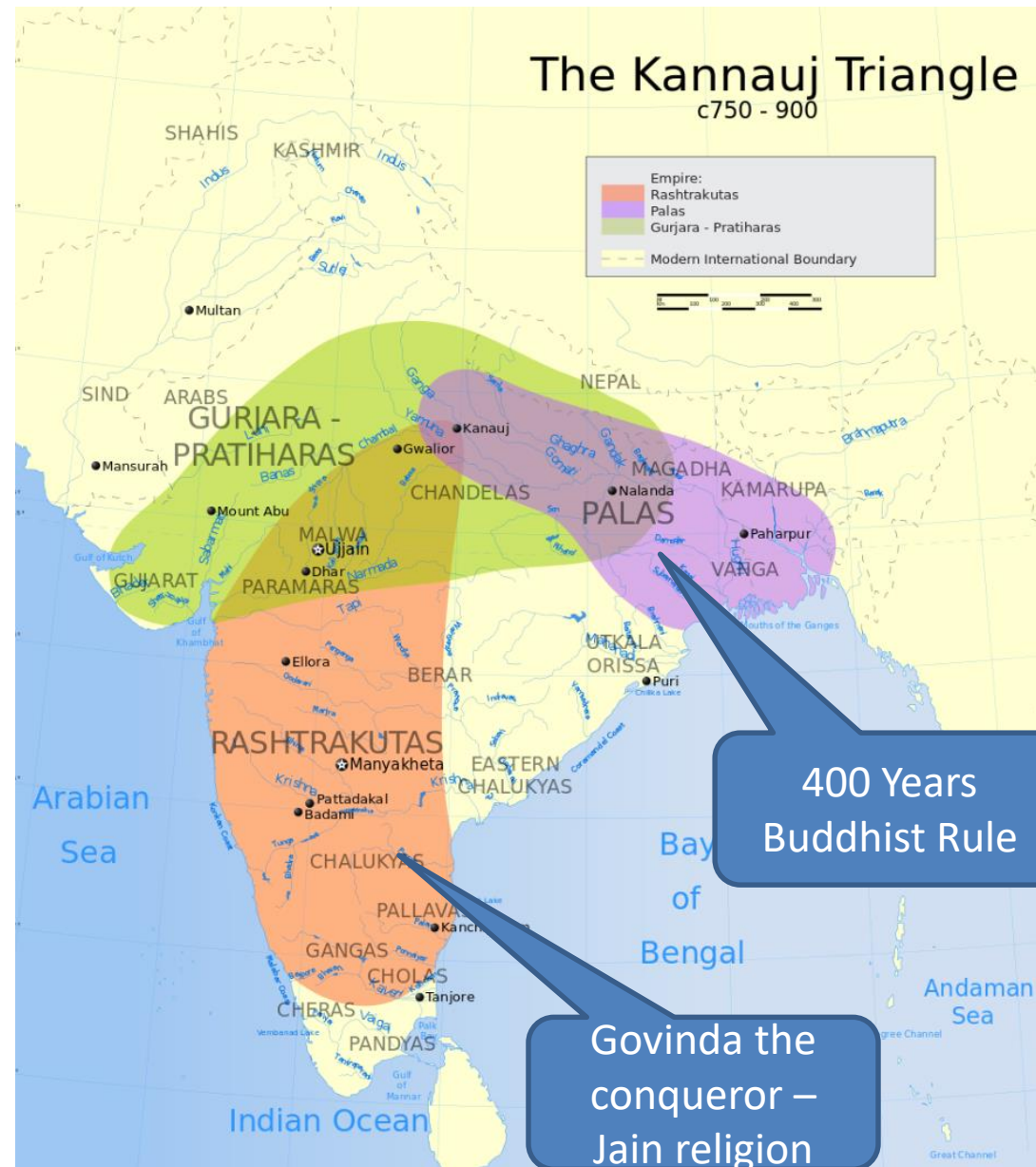
- Muhammad Bin Qasim arrived in India with a small army from Arabian peninsula by ships
- Islam spreads in western India
- No one rules the whole India
- Muslim rulers dominate for the next 1000 years



Gurjara Pratihara

Empire formed an Indian dynasty that ruled much of northern India 6th → 11th

Kannauj famous for distilling of scents is known as India's perfume capital and is famous for its traditional Kannauj Perfume



Sun Temple in Gujrat: 1026 AD

Konark Sun Temple at Konark, Orissa 1250 AD



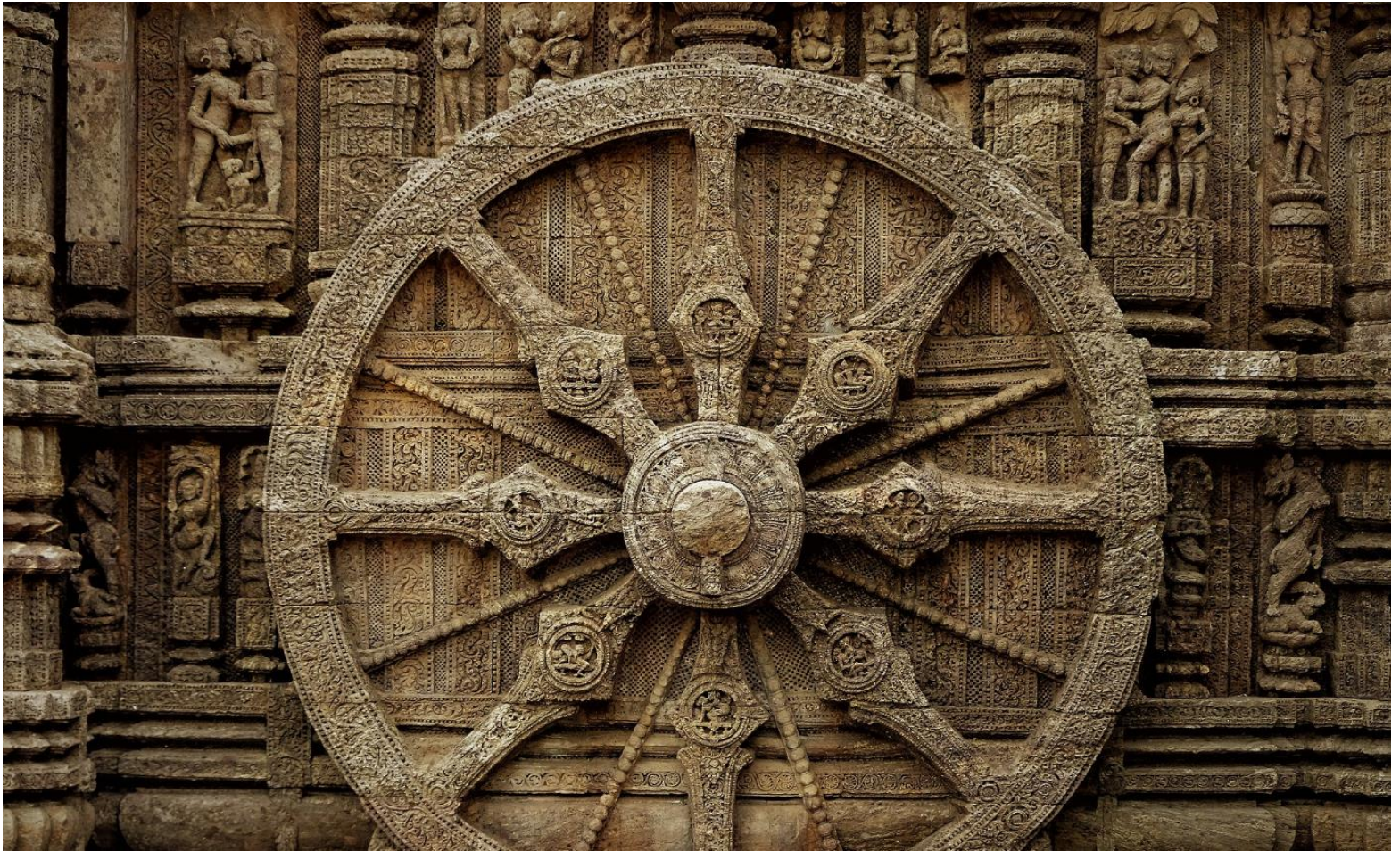
Temple: King Narasingha deva I of the Eastern Ganga Dynasty about 1250 CE





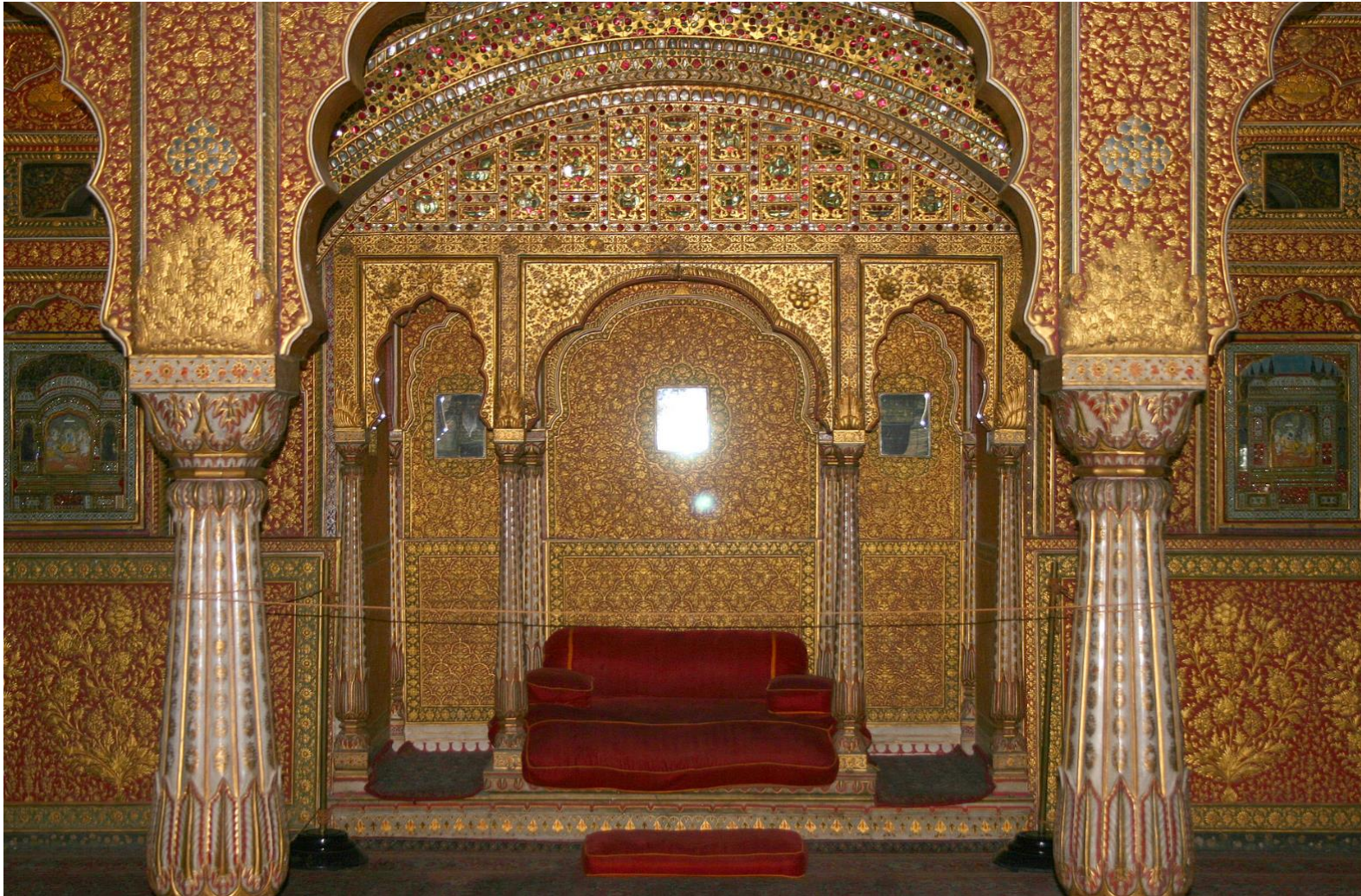
far (c) all rights reserved

Sun Dial



Sun Temple of Konark is renowned throughout the world for its stone sculptures. The temple was designed in the shape of a huge chariot drawn by 7 mighty spirited horses on 12 pairs (total 24 wheels) of gorgeously decorated wheels at its base. The size of the wheel is of 9 feet 9 inches in diameter

Royal Palace – Visitor's Room



Chola Empire Dominated South India

300 BC- 1279 AD

They traded, invaded
& promoted literature

Naval adventures into
Sri Lanka, Burma,
Malaysia Indonesia,
Maldives



Later Imperial Era & European Intrusion in China 1200 AD to 1800 AD

The Mongol Invasion

- Mongol conquest of China was a series of major military efforts over six decades
- The Mongol Empire under Genghis Khan started the conquest in 1205 - by 1279, the **Mongol leader Kublai Khan had established the Yuan dynasty** in China and crushed the last Song resistance
- *This was the first time in history that the whole of China was conquered & ruled by a foreign or non-native ruler*

Mongols Invade China 1205-1279



Yuan Dynasty: Late Imperial 1271

- Consolidation by Mongols to rule China
- Founded Beijing
- Introduced paper currency
- Welcomed Marco Polo & other adventurers
- Population drops from 120 million to 60m
 - Plague, Mongols ...

The Grand Canal

- Grand Canal: longest as well as the oldest canal or artificial river in the world
- Starting at Beijing to Hangzhou, linking the Yellow River and Yangtze River
- The oldest parts of the canal date back to the 400 BC, various sections were first connected during the Sui dynasty (581–618 AD)
- Yuan in 1271 significantly rebuilt the canal & invented the locks

1,114 Miles Long Grand Canal



Yuan dynasty banknote with its printing wood plate, 1287 AD



Ming Dynasty: 1368 to 1644

- Ming dynasty was founded by Zhu Yuanzhang – a peasant & Buddhist monk
- Capital Nanjing, later Beijing
- Focus on cross-border trade
- Last dynasty ruled by Han Chinese



Ming Era



Large urban centers, such as Nanjing & Beijing, also contributed to **growth of private industry**



Small-scale industries grew up, often specializing in **paper, silk, cotton, and porcelain goods**



Relatively **small urban centers with markets** proliferated around the country



Most of Wall was Fortified with Bricks Under Ming



Ming Dynasty

- A large navy was built, including four-masted ships displacing 1,500 tons
- A standing army of 1 million troops created
- The Chinese armies conquered and occupied Vietnam for 20 year
- Chinese fleet sailed the China seas & Indian Ocean, to east coast of Africa

Ming Era Industrialization



Over 100,000 tons of iron per year were produced



Many books were printed using movable type



Imperial palace in Beijing's Forbidden City reached its current splendor



Potential of south China came to be fully exploited



New crops were widely cultivated, industries such as those producing porcelain & textiles flourished



Ming Arts

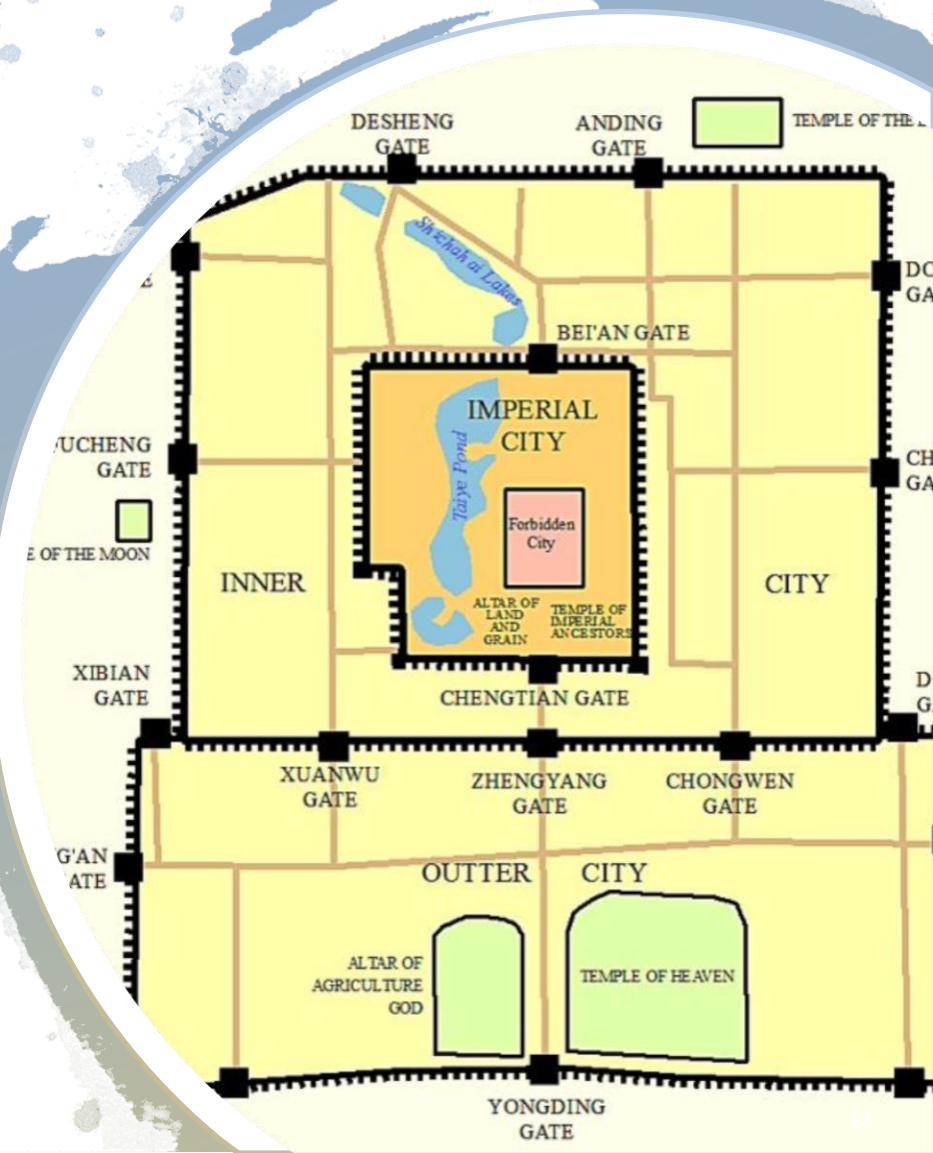
- Most of what remains of the Great Wall of China today was either built or repaired by the Ming
- The brick and granite work was enlarged, the watchtowers were redesigned, and cannons were placed along its length



Decadence of Late Ming Era



Forbidden City was the Imperial Residence from 1420 - 1924



Qing Dynasty: 1644 - 1911

Founded by the Manchus, it was the second conquest dynasty to rule the entire territory of China and its people

The Manchus were known as Jurchens, residing in the northeastern part of the Ming territory outside the Great Wall

Ming dynasty was overthrown by Li Zicheng's peasants rebellion, with Beijing captured in 1644 and the last Ming emperor, committing suicide



Qianlong Emperor

Qing Dynasty

- By the end of Qianlong's (6th emperor) long reign, the Qing Empire was at its zenith
- **China ruled more than one-third of the world's population, and had the largest economy in the world**
- By area it was one of the largest empires ever

Art Flourished



Qing Dynasty

- Increased delicacy of ceramics with western influence & multiple colors





Qing Era Vases (Lisbon Museum)



All rights reserved © Naem Zafar



Small Harbor Towns from Ming & Qing Era

Li Hongzhang

Chinese politician,
general & diplomat of
late Qing dynasty

- Created modern economy & was instrumental in shaping contemporary China
 - College education
 - Industrialization
 - Military manufacturing



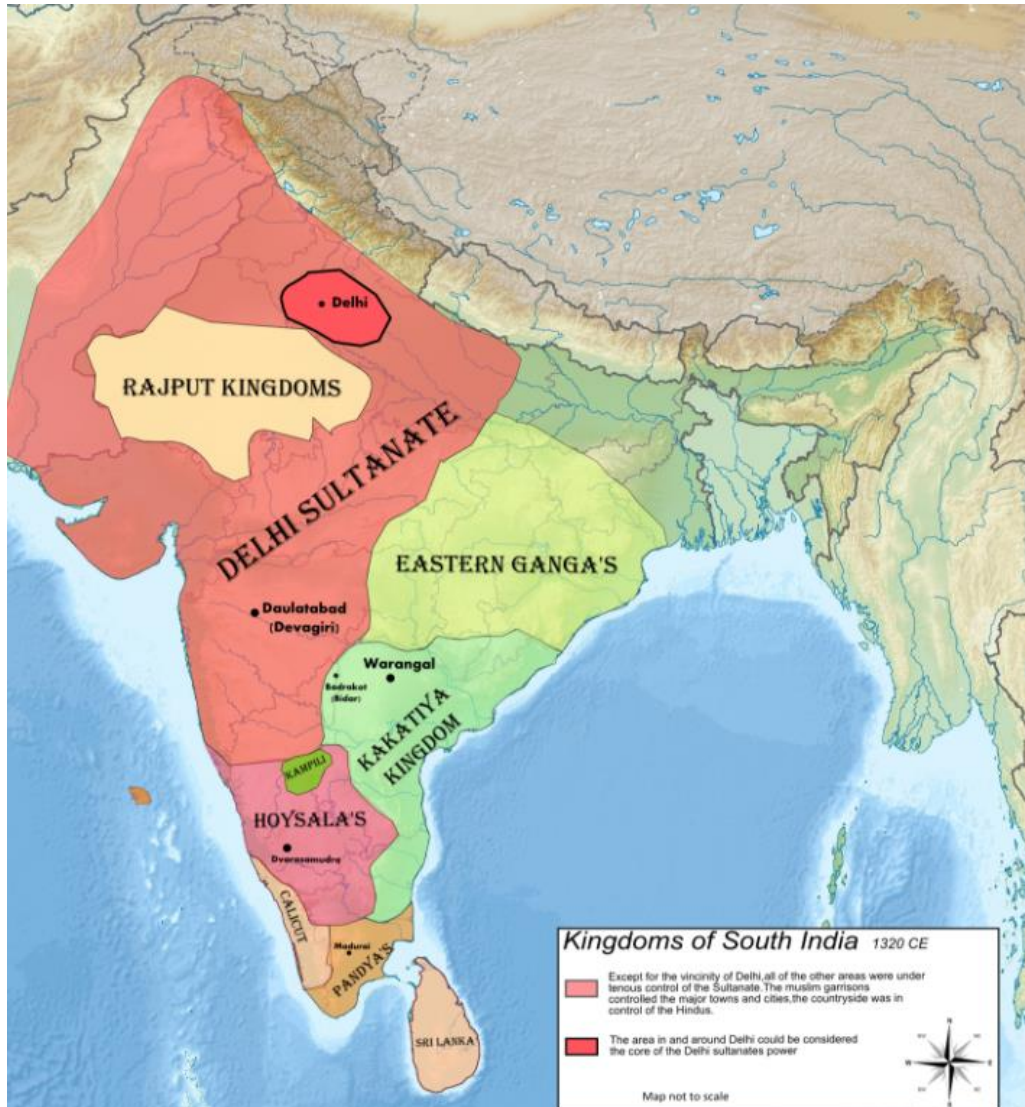
India: Muslim Rule Starts 1200-1858

The Turning Point ~1200 AD

- Hindu coalition was defeated by Muhammad of Ghor in 1192 & Islamic rule began over much of northern India
- At least two Muslim empires existed during this period: the **Delhi Sultanate** (1206-1526) and the **Mughal Empire** (1526-1858)
- Other prominent empires during this era include Vijayanagara in South India (1336-1646) and the Maratha Empire throughout most of South Asia (1674-1818)

Delhi Sultanate Emerges in the North

1206-1526 Sees Five Dynasties



Dynasties

2.1 Mamluk

2.2 Khilji

2.3 Tughlaq

2.4 Sayyid

2.5 Lodi

Alai Gate &
Qutub Minar
were built during the
Mamluk and Khilji
dynasty

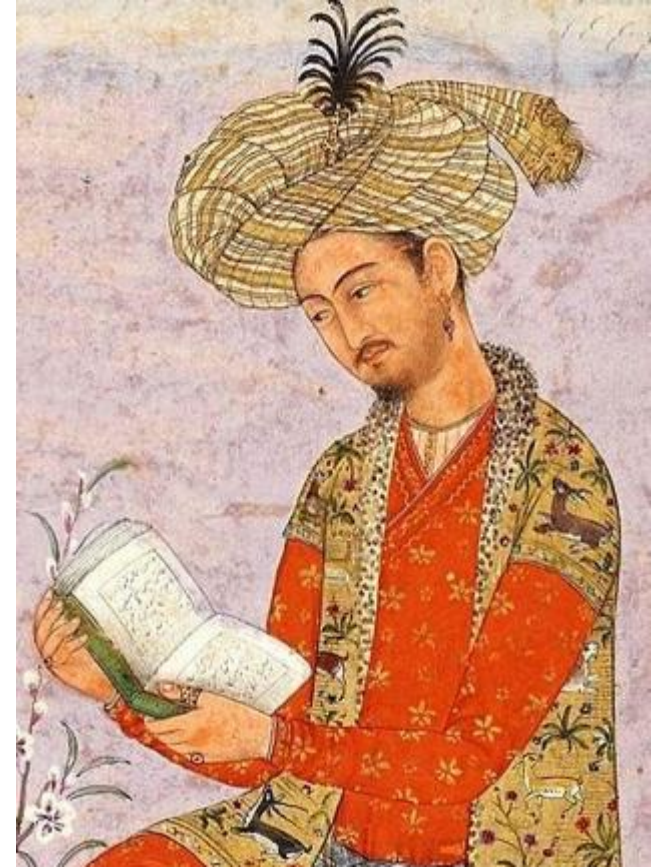




Chittor Fort is the largest fort on the Indian subcontinent; it is one of the six Hill Forts of Rajasthan.

Arrival of Mughals 1526 AD

- Turkic army arrives via Khyber Pass (Northwest)
- Great era of enlightenment
Mid-16th century to mid-18th century
 - Babar
 - Humayun
 - Akbar
 - Jahangir
 - Shahjehan
 - Aurangzeb



Prosperity, Arts & Architecture

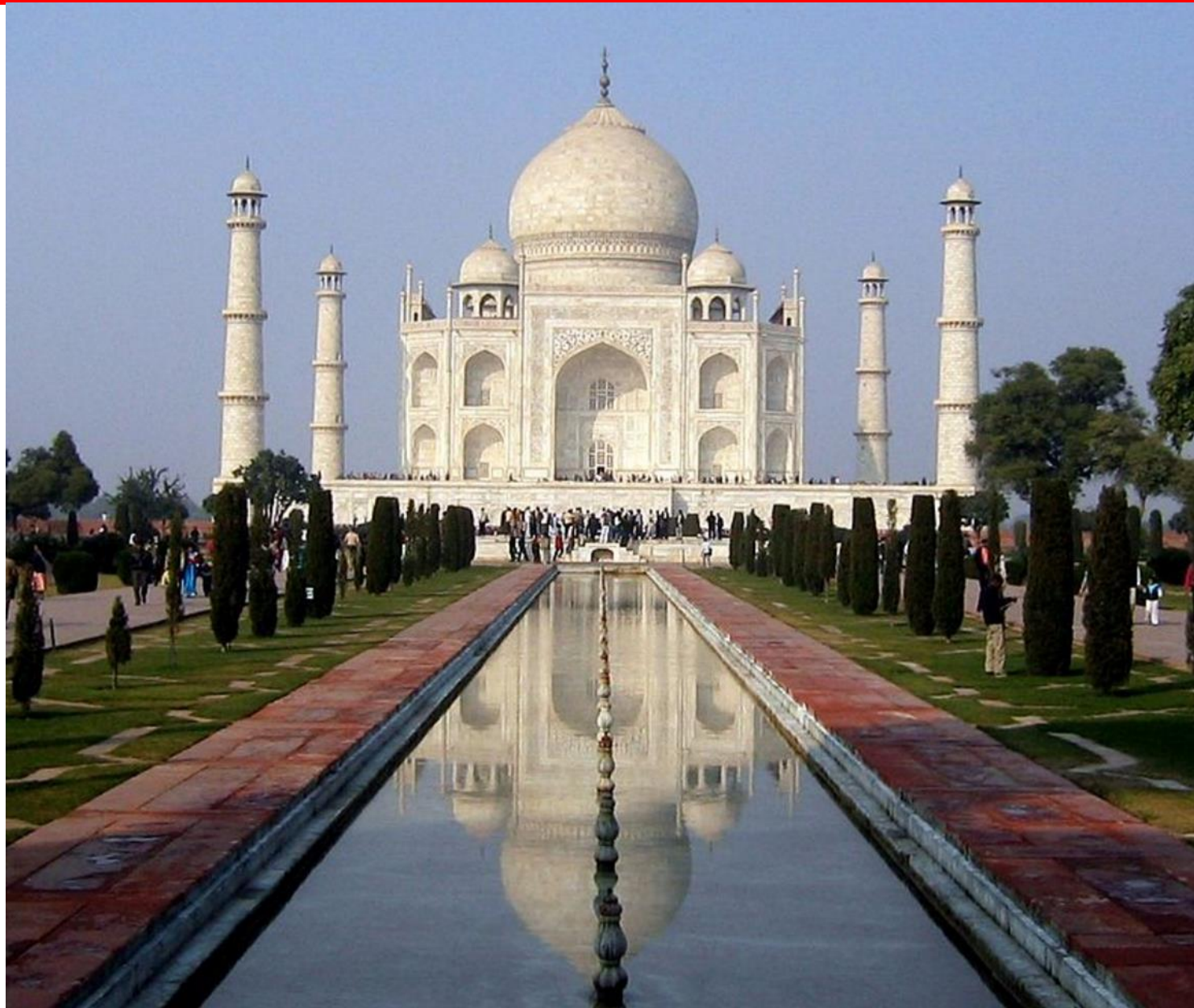


Jalaluddin Akbar



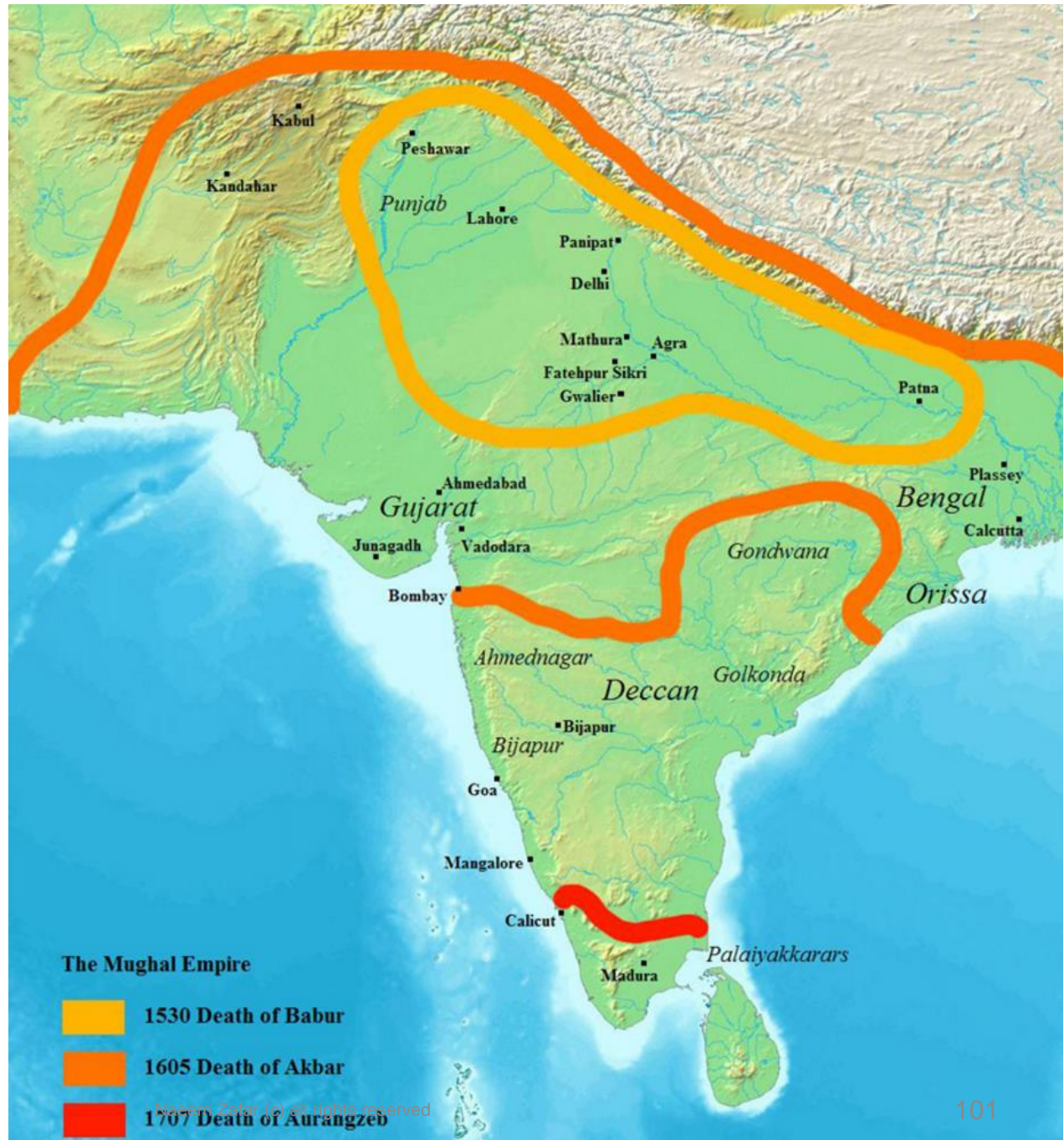
**Taj Mahal
1632- 1653**

**Emperor
Shahjehan**



Expansion of Mughal Empire

Aurangzeb

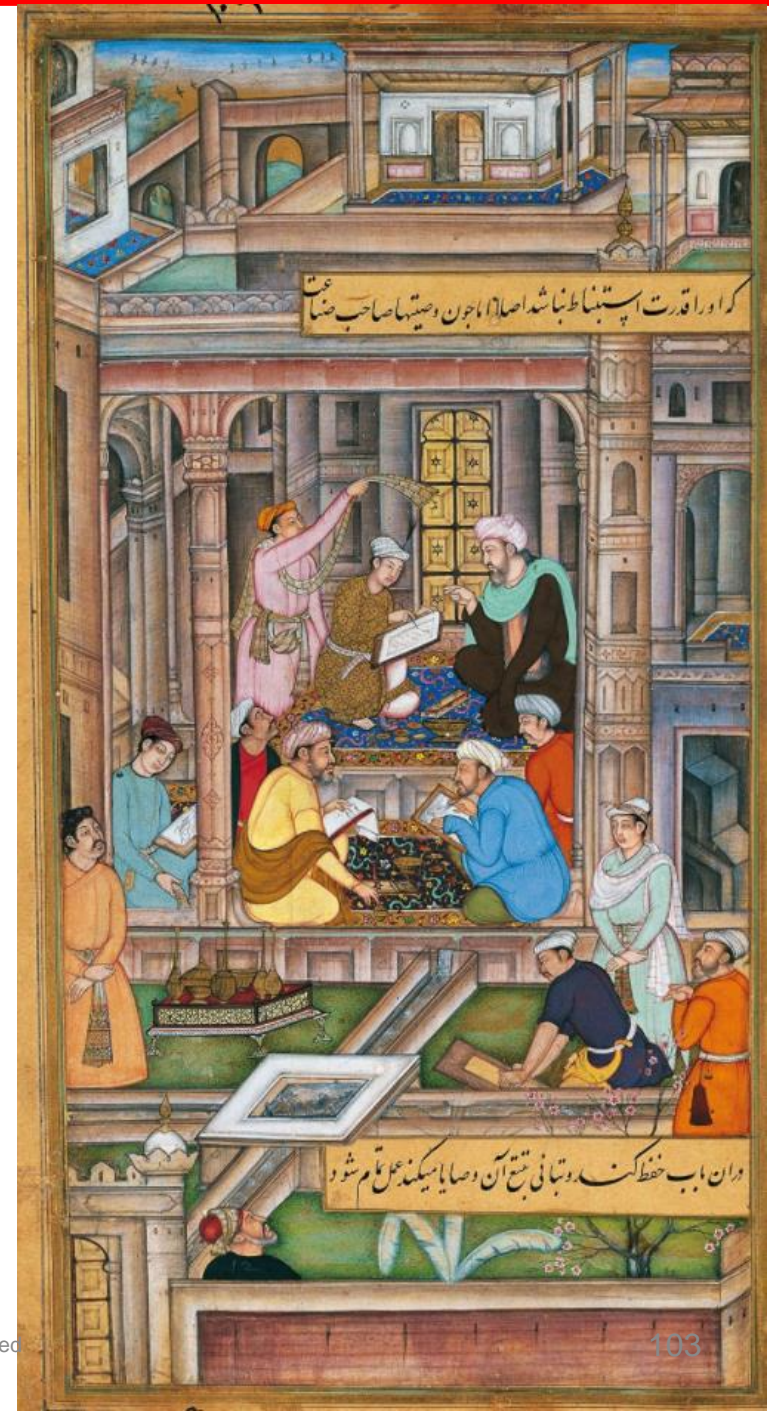


Badshahi Mosque, Lahore 1671



Royal Court of Mughal Emperors

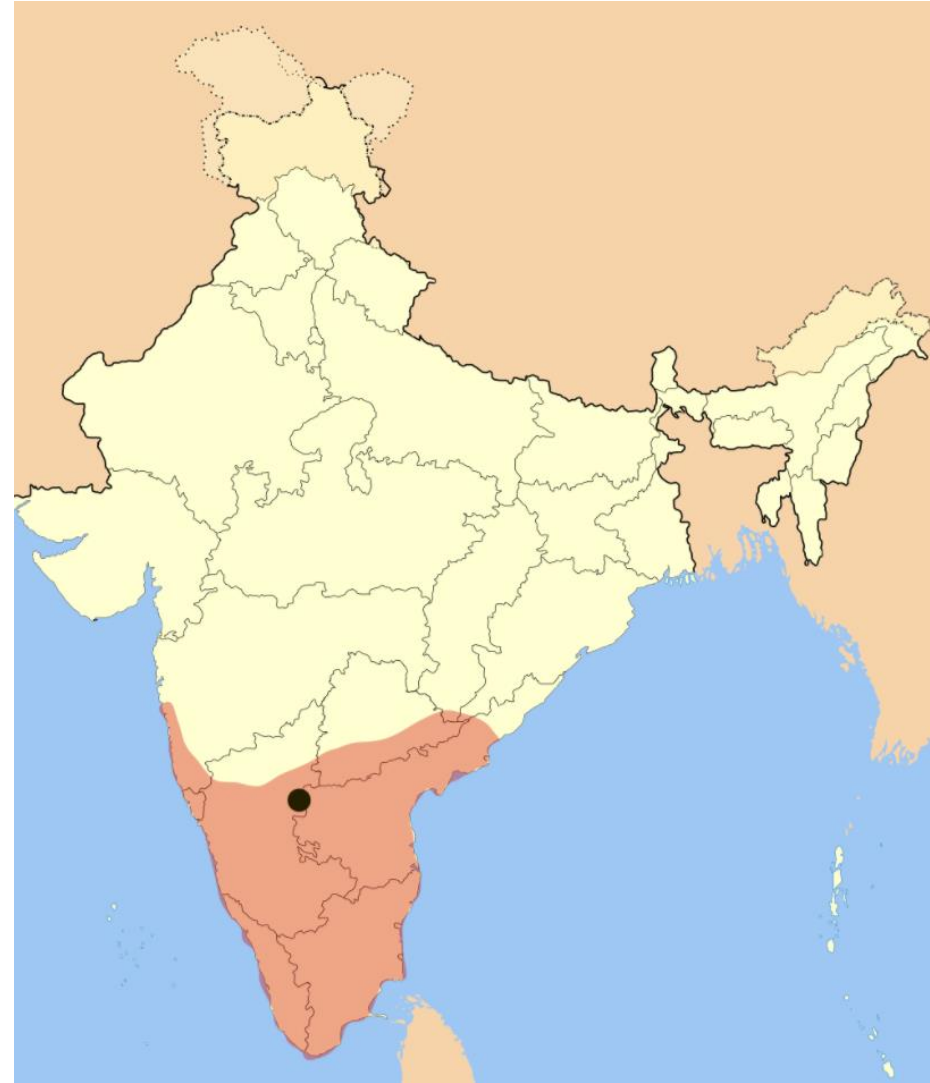
- Mughal Empire expanded to 3.2 million square kilometers (1.2 million square miles)
- Ruling over more than 150 million subjects, nearly one quarter of the world's population at the time
- With a combined GDP of over \$90 billion



In the South Vijayanagar Empire emerges

1336-1646

By 1500 CE, Hampi-Vijayanagara was the world's second largest medieval era city (after Beijing) and probably India's richest at that time, attracting traders from Persia and Portugal



Hampi (Karnataka) World Heritage Site



India Contributed 27% of World's GDP During Mughal Empire

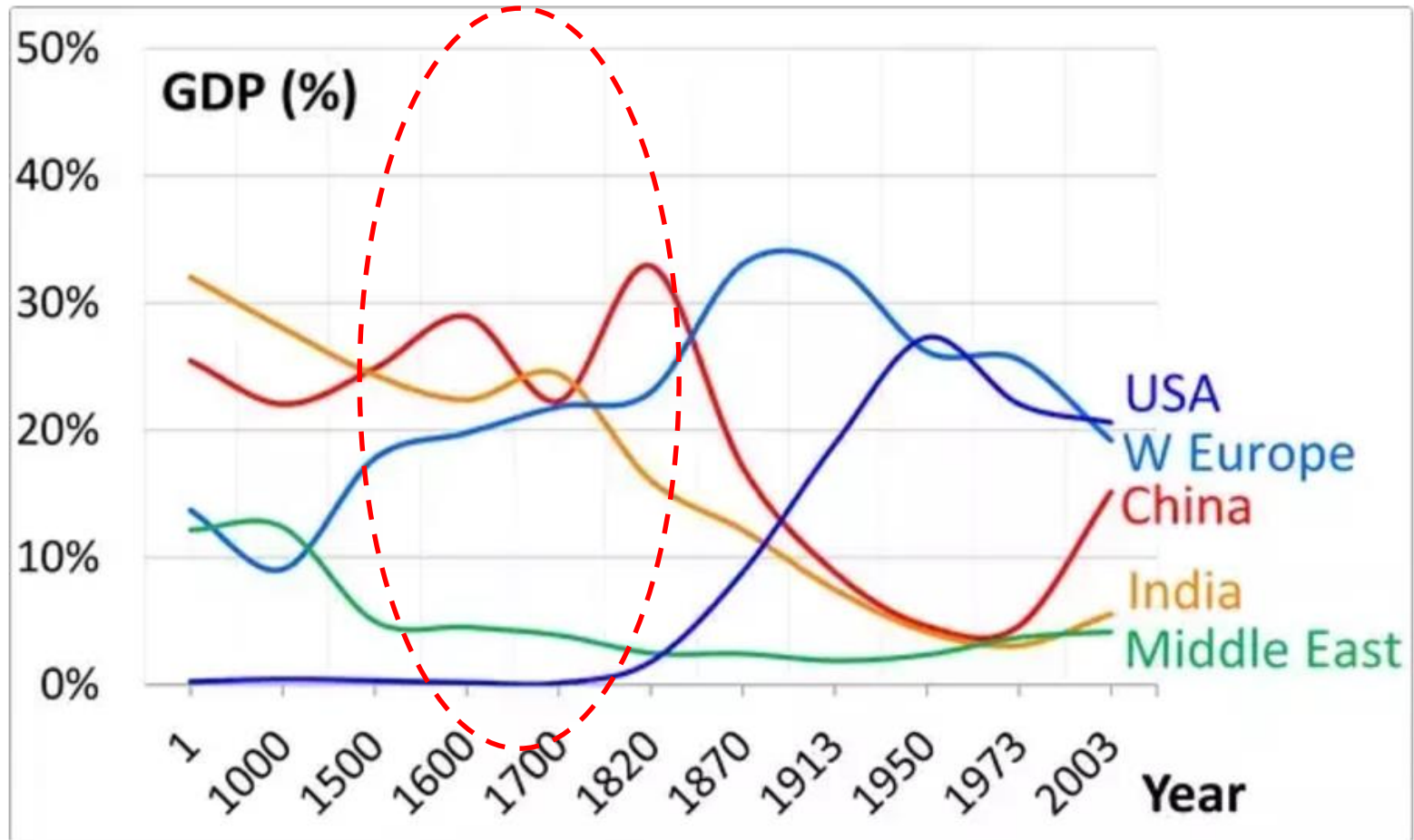


Image Link: [Angus Maddison](#)

How Did Europe Suddenly Rise Economically after 1600?

- Deep water navigation
- Technology → resulting from renaissance
- Spice trade

Start of colonization & the slave trade (cheap labor)



Vasco de Gama

5/20/1498 lands at Calicut



India (Slowly) Colonized

- Vasco da Gama landed in 1498
- East India Company 1612 began expanding its influence, fighting the Indian rulers and the French, Dutch, and Portuguese traders simultaneously
- Bombay, taken from the Portuguese, became the seat of English rule in 1687



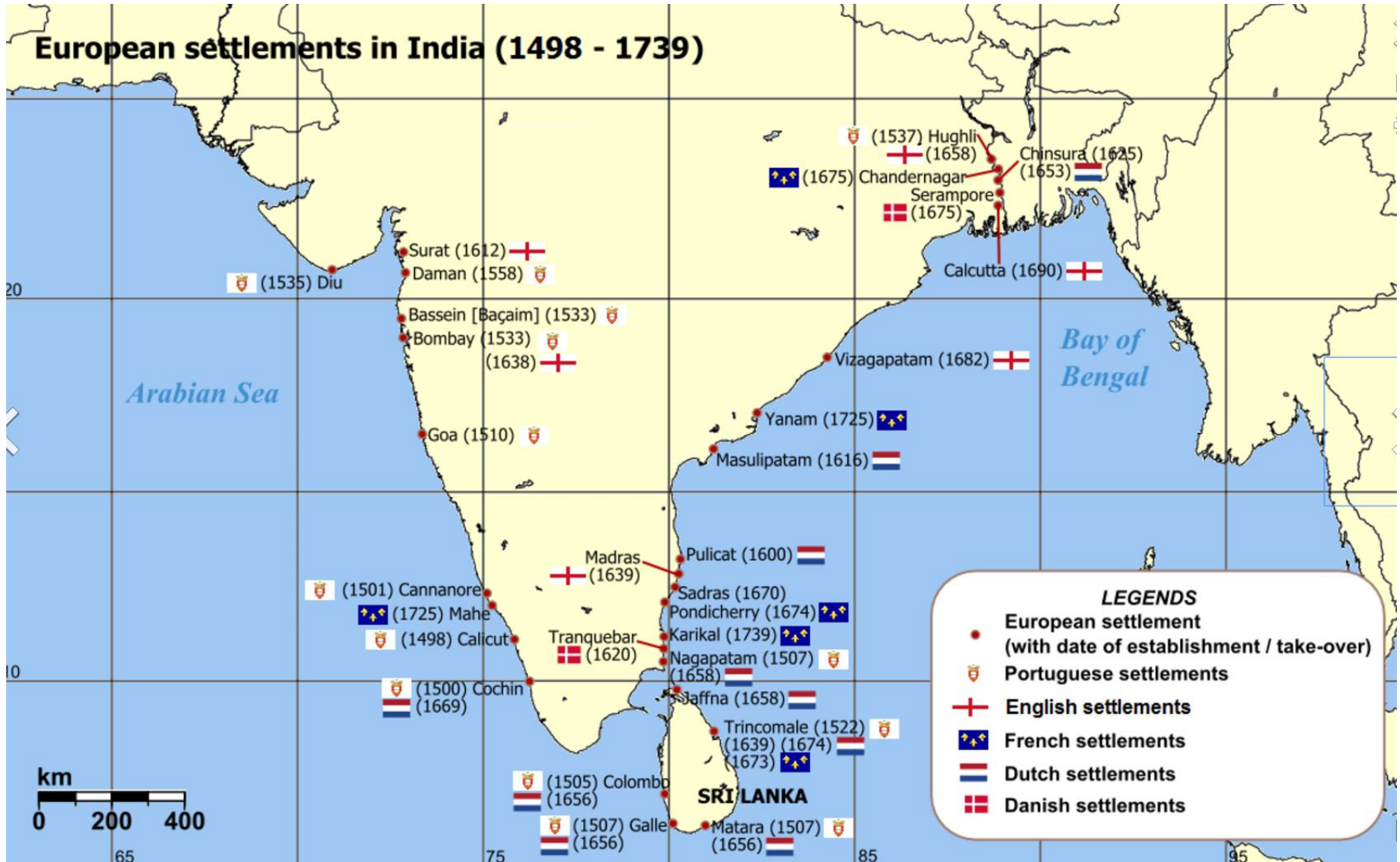
Portuguese Explorer: Vasco da Gama

Lord Clive Meets Mir Jafar

after battle of Plassey 1757



Invasion of the Colonizers



China: Modern Era & Fight for Independence ~1800 – 1949 AD

The Opium Wars

- Two wars in the mid-19th century involving China & British Empire over British trade of opium & China's sovereignty
 - First Opium War (1839–1842) → created 5 ports & gave Hong Kong Island to Britain
 - Second Opium War (1856–1860) → 80 ports were opened

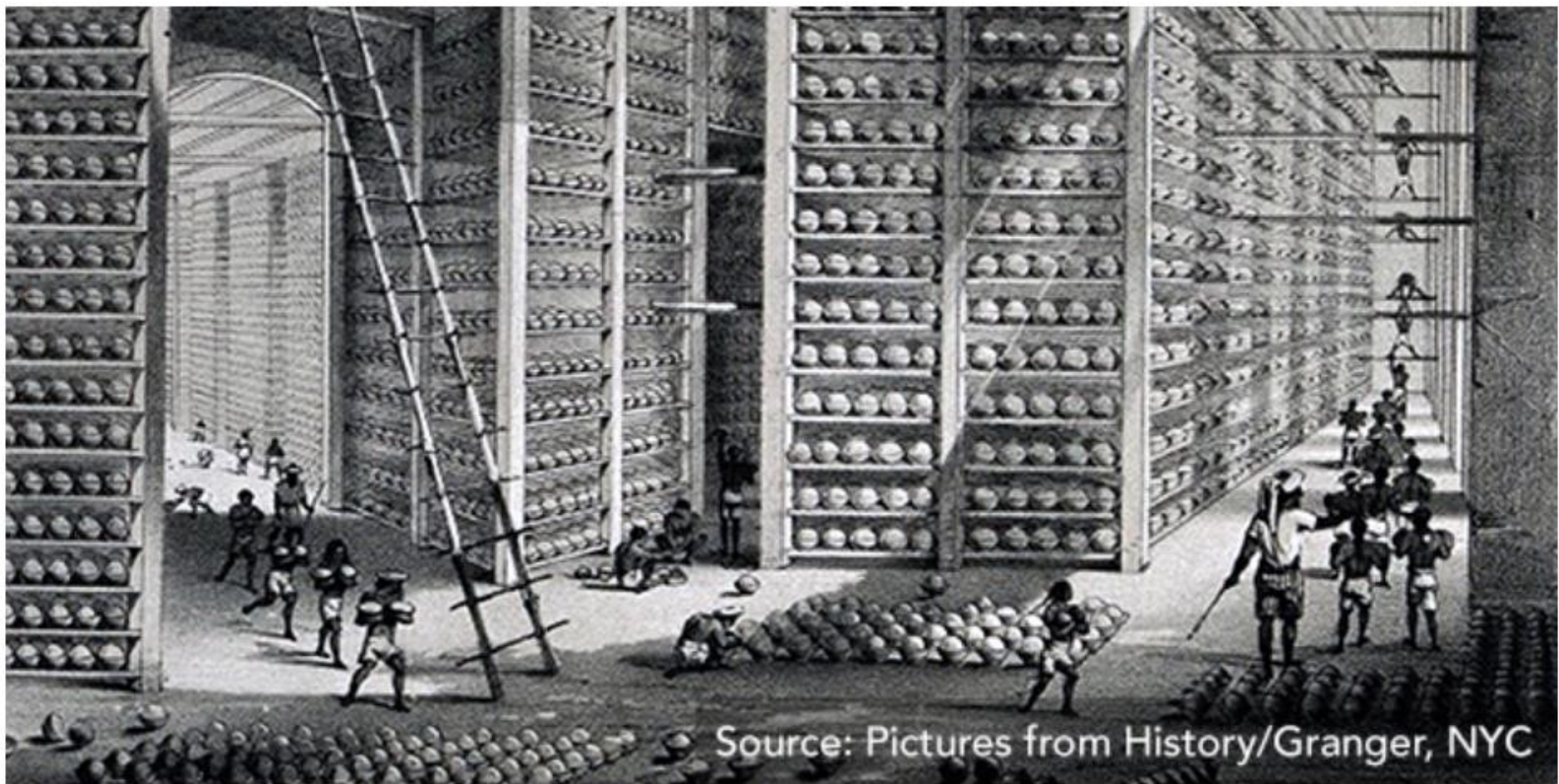
MAP 3: CHINA'S TREATY PORTS, 1860



Location of treaty port cities are approximations only. Present-day city names are used, with some commonly referenced alternative spellings/names listed in parentheses.

The Opium Wars

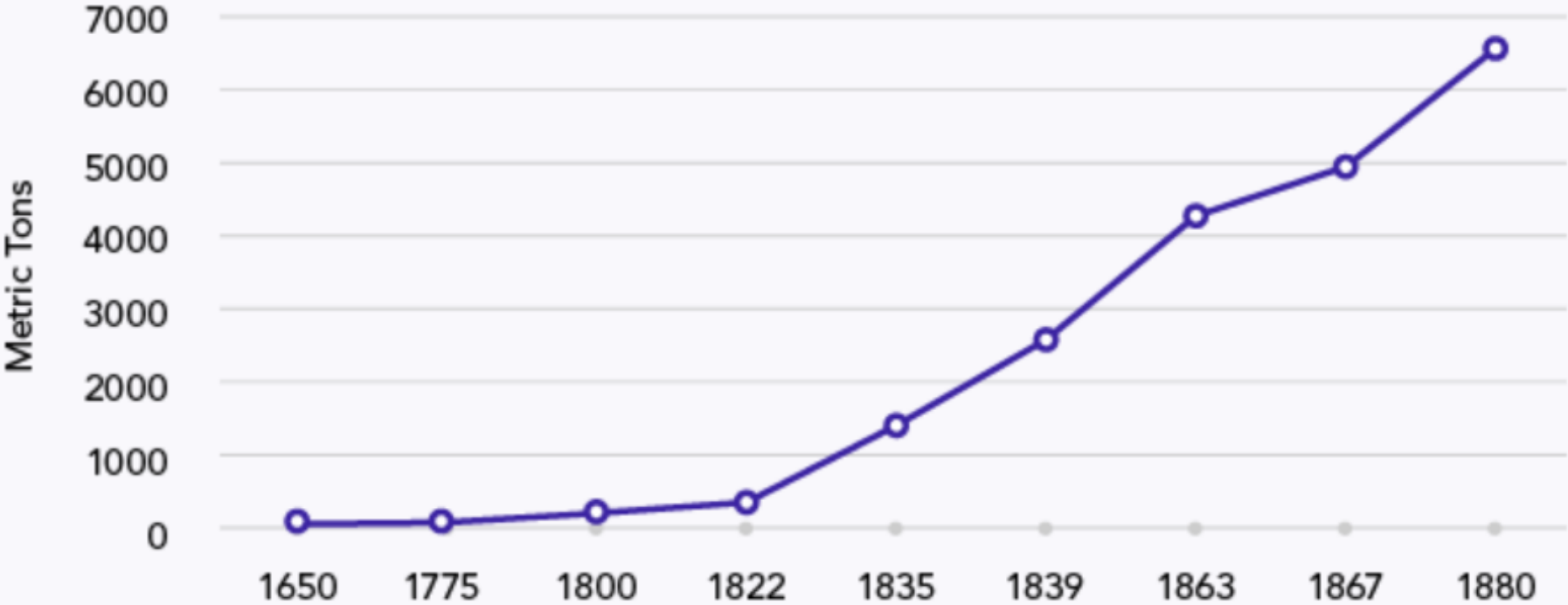
- The wars weakened Qing dynasty & forced China to trade with the others
 - 30,000 box of opium was being sold into China annually (170-lbs per box)
 - ~15 million Chinese became addicts
 - Chinese economy went from biggest in the world to half its size



Source: Pictures from History/Granger, NYC

Figure 1: A "stacking room" in an opium factory in Patna, India. On the shelves are balls of opium that were part of Britain's trade with China.

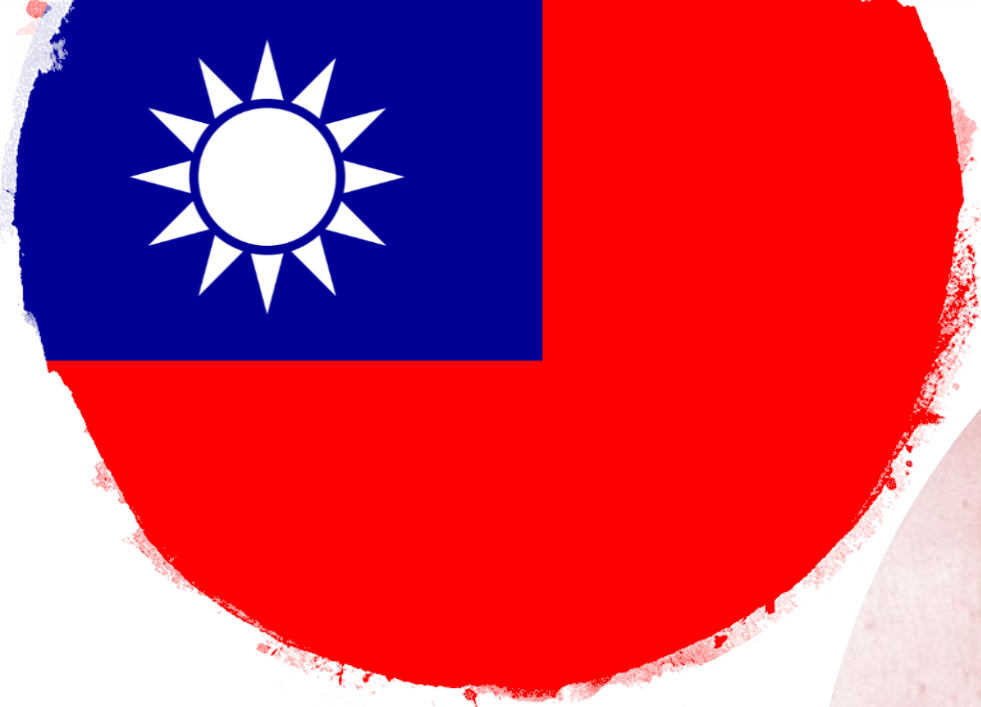
OPIUM IMPORTS INTO CHINA, 1650-1880



Source: UN Office on Drugs and Crime

**Political Cartoon
with Britain,
Germany, Russia,
France & Japan
Dividing China**





Sun Yat-sen leader of
the Xinhai Revolution
& first provisional
president of Republic
of China 1912



Chiang Kai-Shek

1887:1975

- The Chinese Civil War resumed in 1945, with the CCP (Chinese Communist Party)
- Chiang's government & army retreated to Taiwan, where Chiang imposed martial law & persecuted critics -- the "White Terror" era
- Chiang ruled Taiwan securely as President of the Republic of China and General of the **Kuomintang** until his death in 1975, just one year before Mao's death



Chairman Mao Zedong proclaiming establishment of People's Republic of China 1949.

10th Anniversary of PRC 1959



Cultural Revolution: 1966-1976



In 1966, Mao broke with Liu Shaoqi (right).

- Sociopolitical movement by Mao Zedong (power grab)
- Goal: to preserve Chinese Communism by purging remnants of capitalist and traditional elements from Chinese society, and to re-impose Maoism as the dominant ideology
 - Paralyzed China politically & negatively affected economy & society to a significant degree
 - Red Guard created – millions died, killed, persecuted



Enter the Era of Economic Growth

Deng Xiaoping 1904:1997

- Chinese politician who was the paramount leader of the People's Republic of China from 1978 until his retirement in 1989
- After Chairman Mao Zedong's death in 1976, Deng led China through far-reaching market-economy reforms
- One-child policy initiated
- Competitive college entrance exam

Modern India

Colonization & Independence

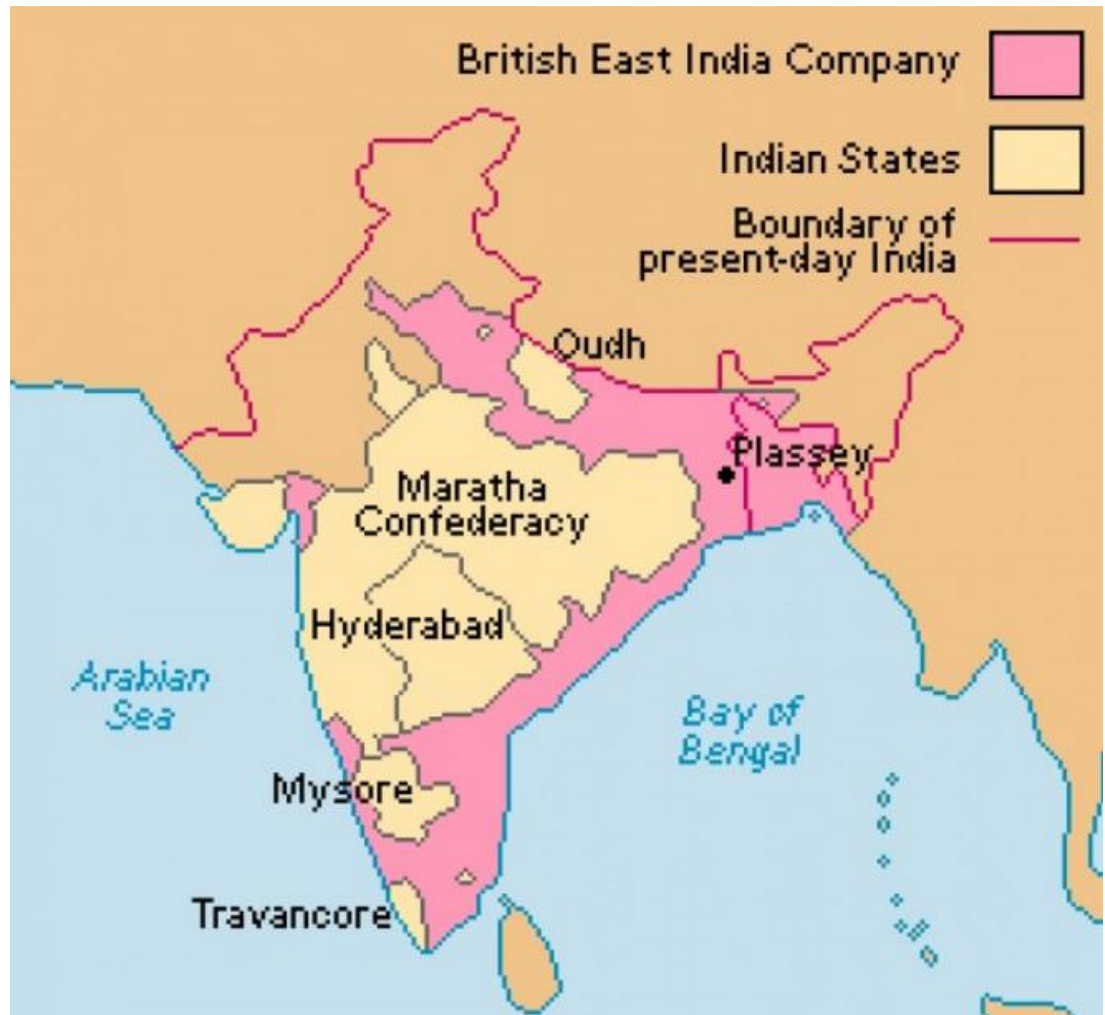
1858-1947

Turning Point for British in India: 1757 the Battle of Plassey



The Original Corporate Raiders

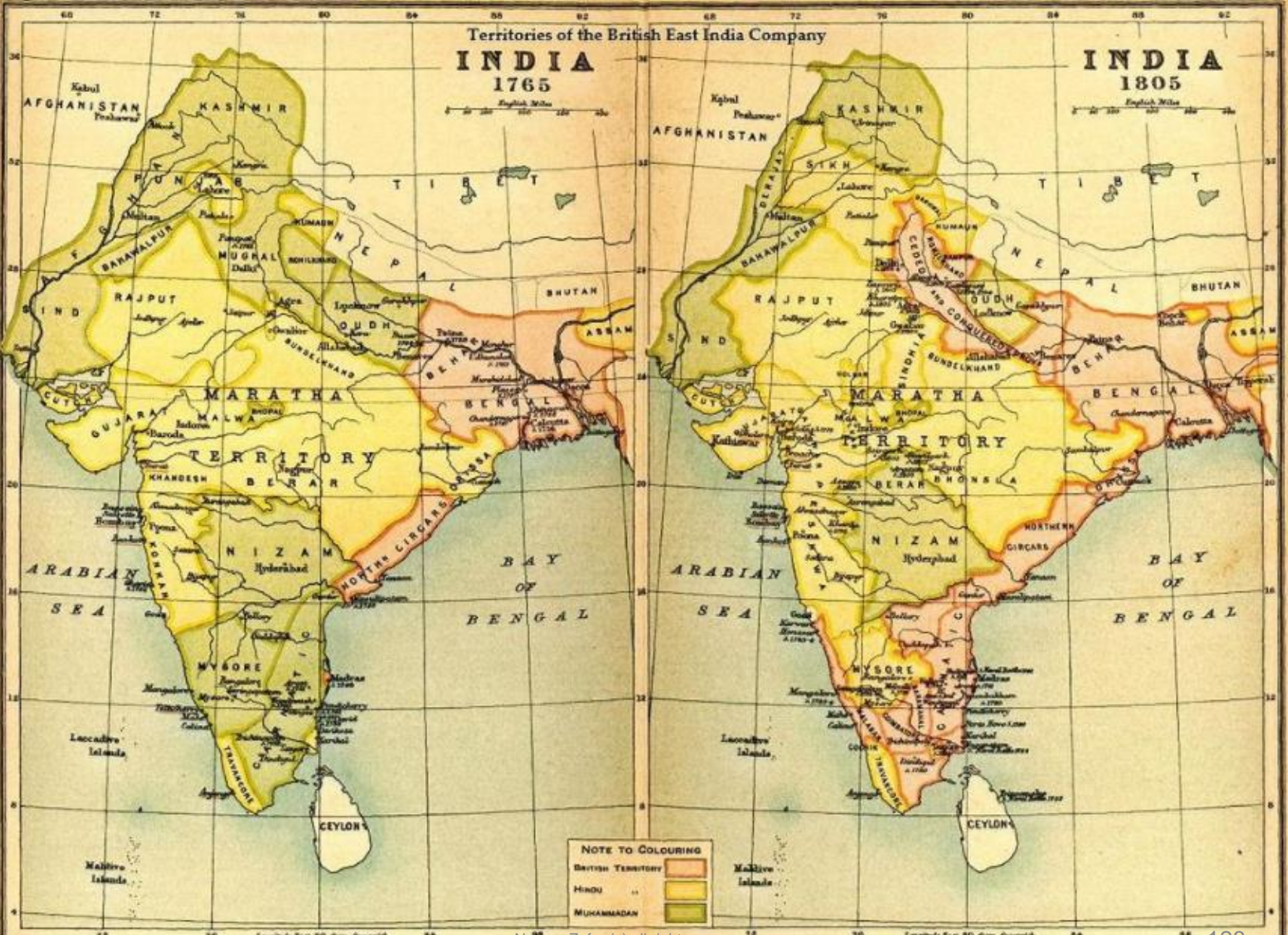
- British East India Company governed most of India from 1757 to 1857
- Dutch East India Company owned 3600 ships & became the most valuable company in history ~\$7 trillion



Territories of the British East India Company

INDIA
1765

INDIA
1805



NOTE TO COLOURING

| | |
|-------------------|--------|
| BRITISH TERRITORY | Orange |
| HINDU | Yellow |
| MUHAMMADAN | Green |



The “Mutiny” of 1857

- May 1857 Indian troops rebelled against their British masters
- The trigger point was having to bite on bullets before loading their guns laced with pig & beef fat!
- 300,000 sepoys deployed but limited means of communications



Capture of the last Mughal emperor Bahadur Shah Zafar and his sons by William Hodson in 1857

The British Raj Begins in 1858

- The war of independence
 - *British call it the Sepoy Mutiny of 1857*
- British Queen Victoria appoints Viceroys & Governors in India [Lord Canning]



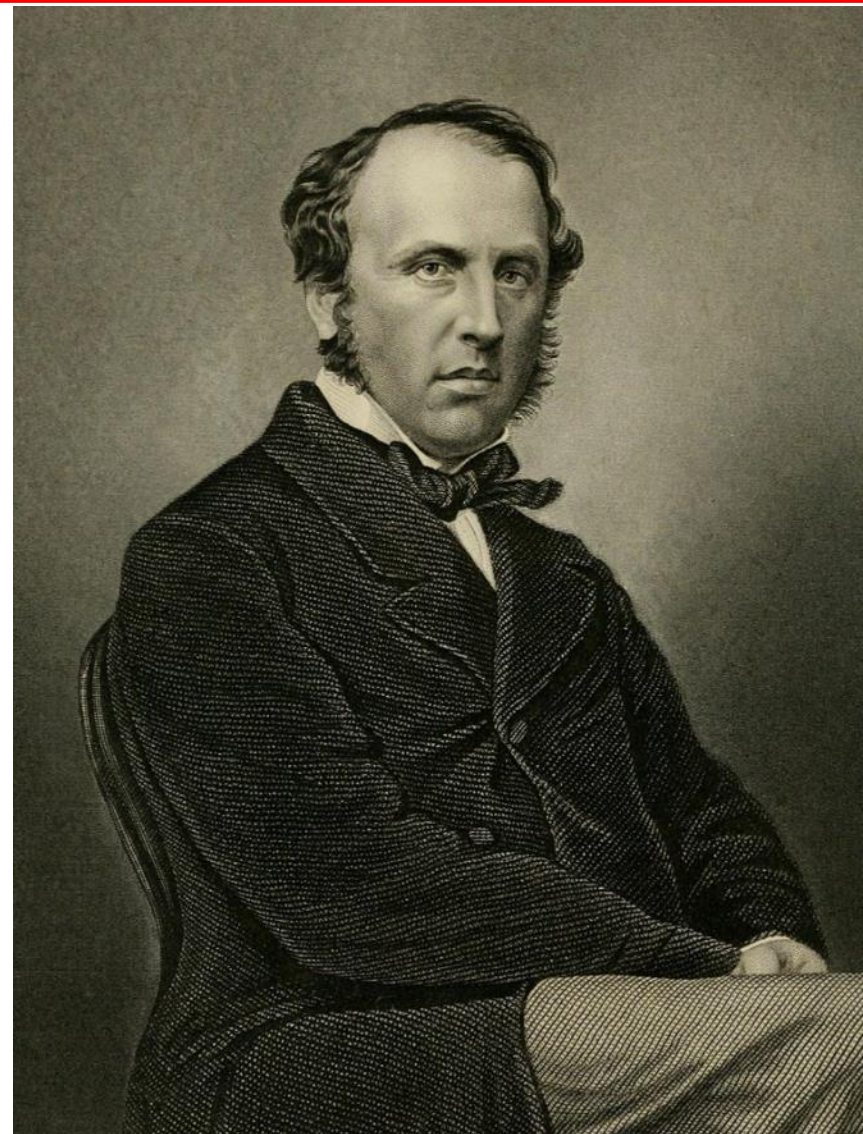
British Empire

Ruled over 412M people (23% of world), 24% of world surface by 1913



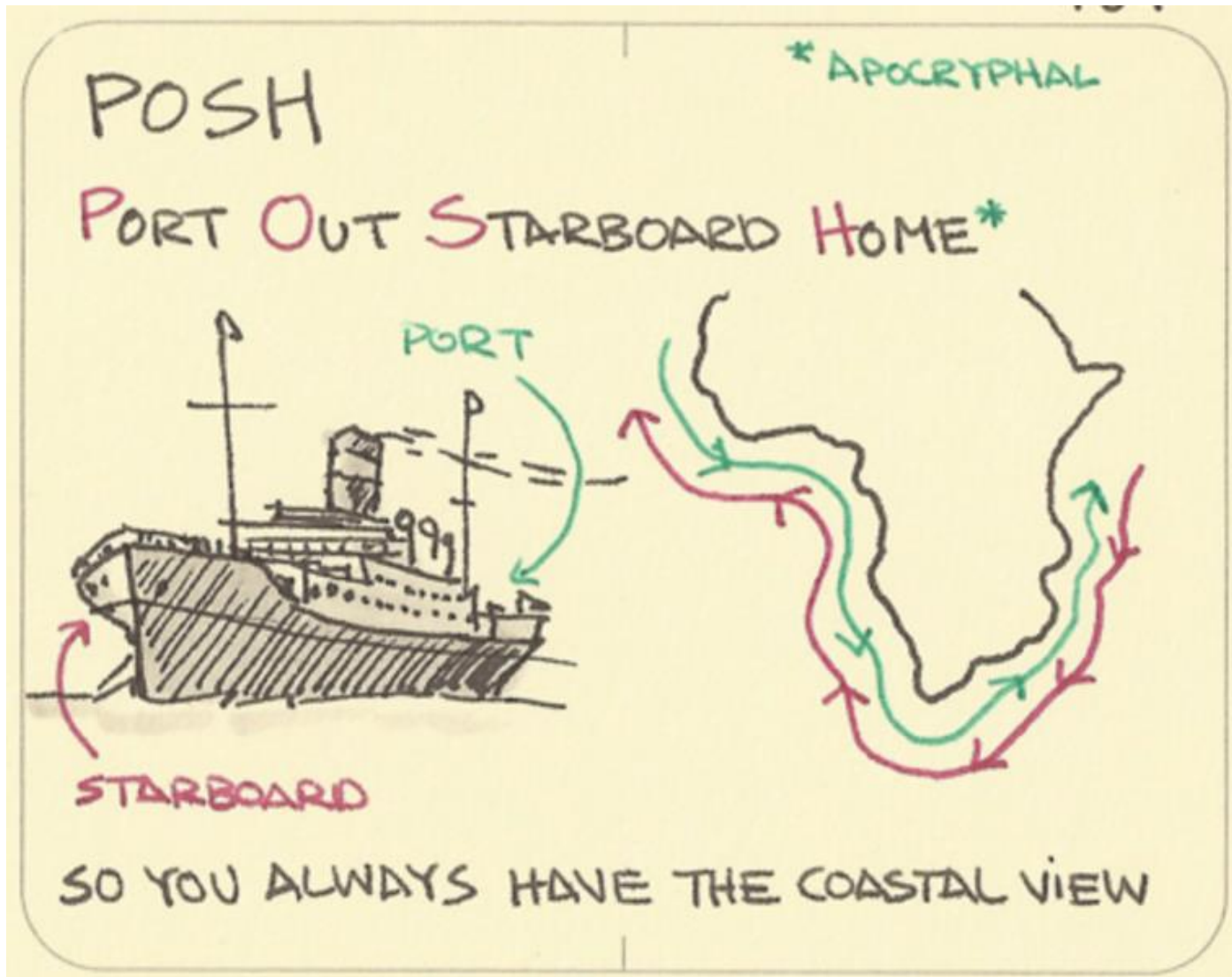
The British Rule

- Torturous occupation
 - 400 million natives ruled by 5,000 British for ~100 years!
- Indian independence movement started in 1906
- Atrocities & world wars accelerated the movement



Lord Canning: Last Governor General & First Viceroy 1857

Posh



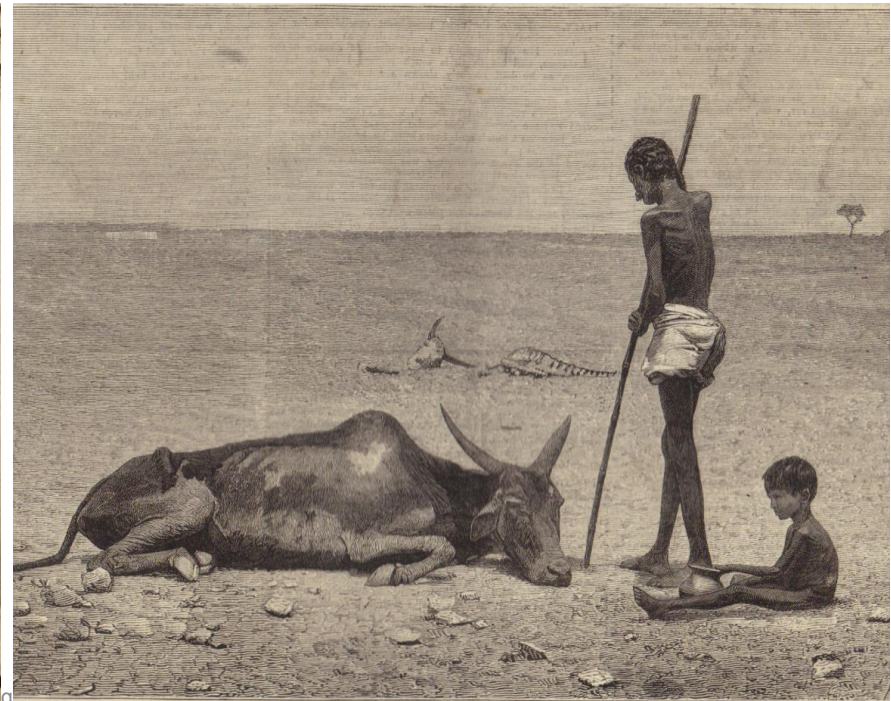
British Style: Divide & Rule

- Deep divides created between people based on religious (& cultural) differences
- Muslims vs. Hindu vs. Sikhs vs. other...
 - Customs, language, food differed



Plunder, Atrocities & Famine

- About one billion pounds of wealth transferred to England by 1901
- Great famine in India:
 - 1876-78 & 1901 & 1943 in Bengal (Churchill diverted food to British soldiers in Burma)



THE FAMINE IN INDIA — SCENES IN THE BELLARY DISTRICT, MADRAS PRESIDENCY

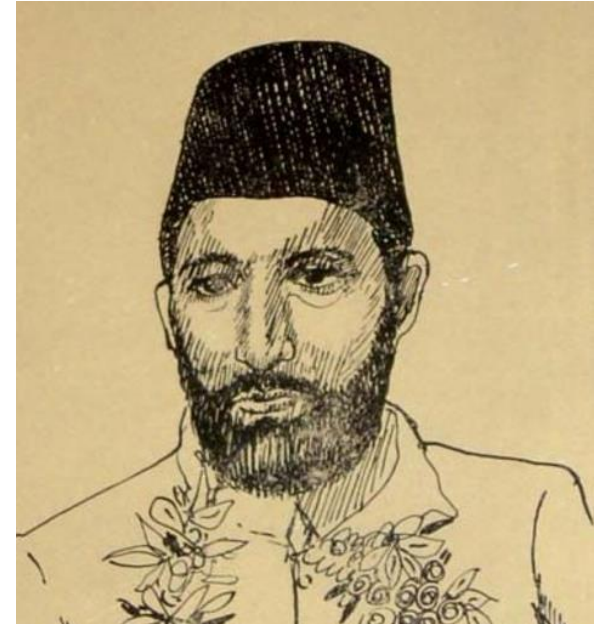
Movement for Independence: Formation of Political Parties



Sir Syed Ahmad Khan,
1885 wrote criticism of
British Empire, founded
Aligarh Islamic University



Gopal Krishna **Gokhale**
President of Indian National
Congress 1905



Hakim **Ajmal** Khan (founder
of Muslim League 1921

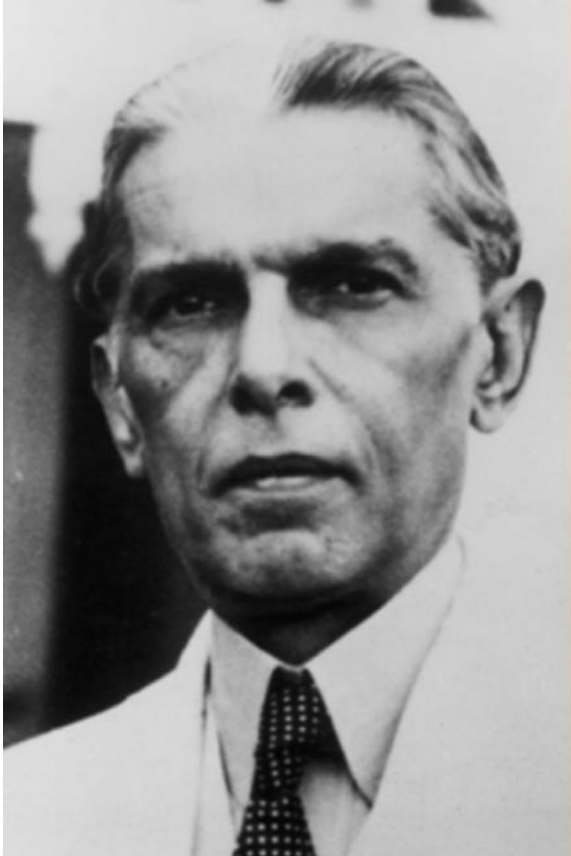
40 Years of Non-Violent Political Quit-India Movement



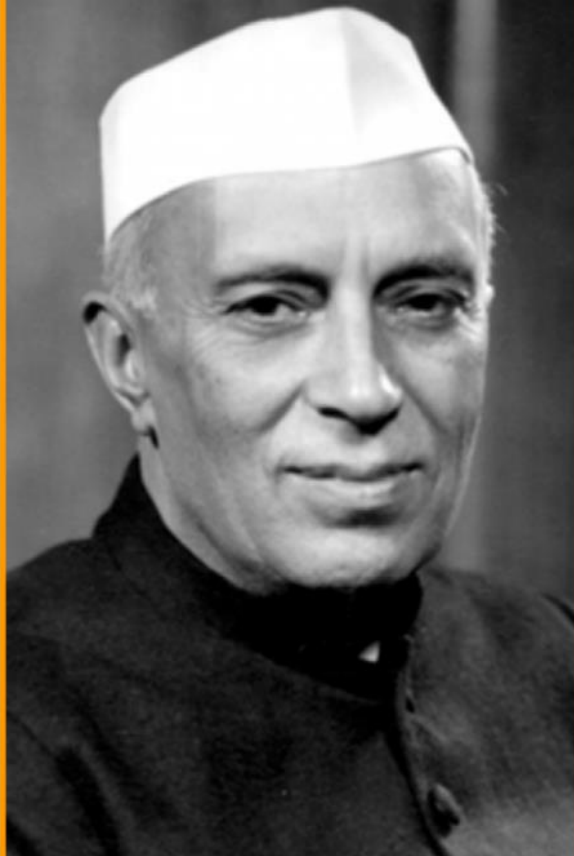
India Forced into 1st & 2nd WW



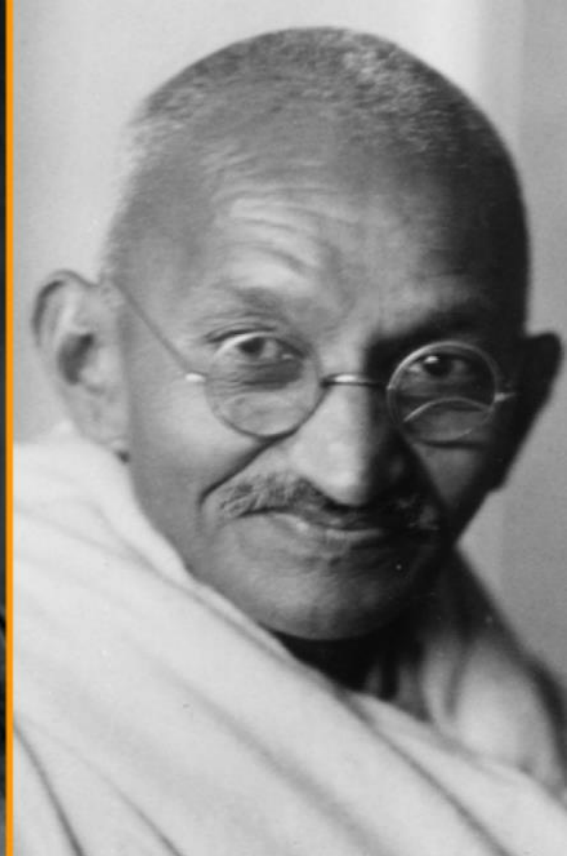
Independence Movement 1930-1947



Jinnah



Nehru



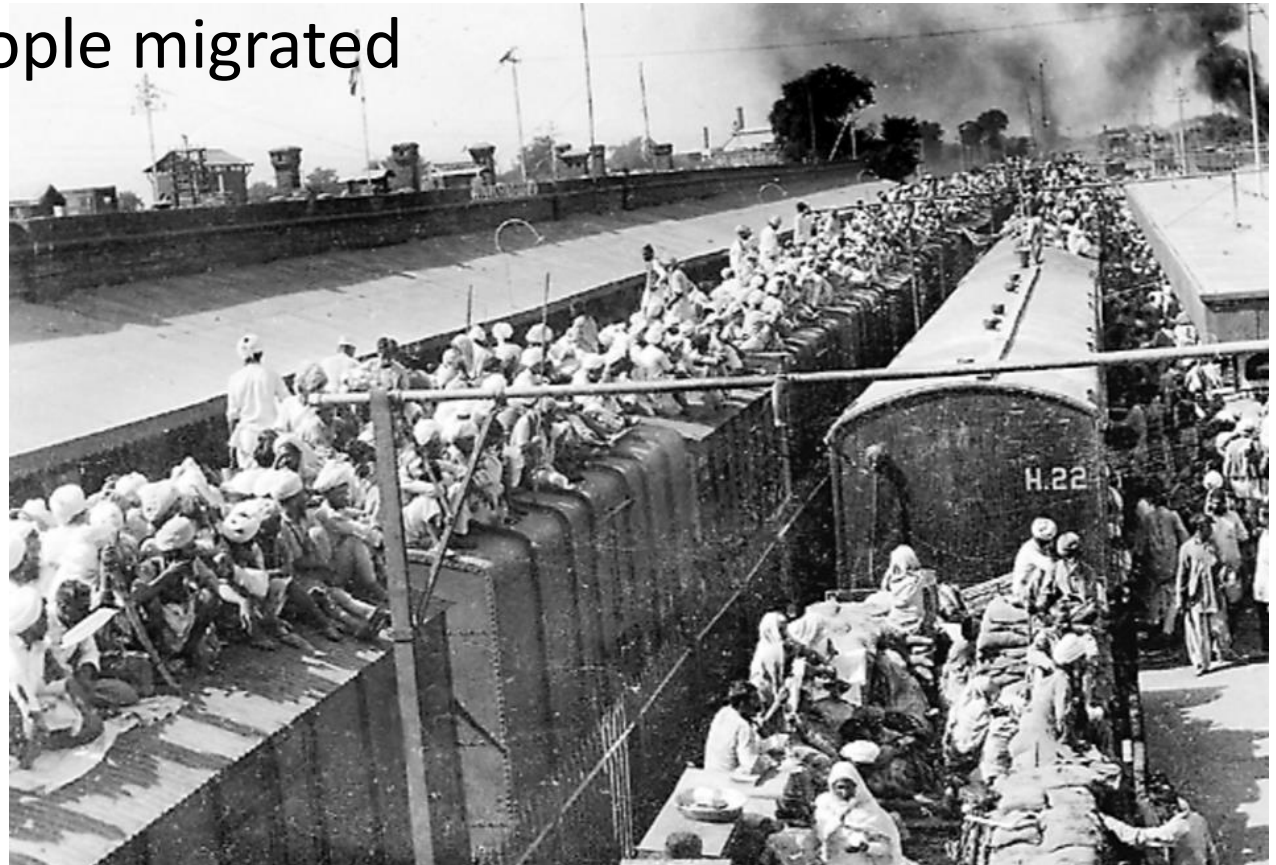
Gandhi

Creation of Two Countries

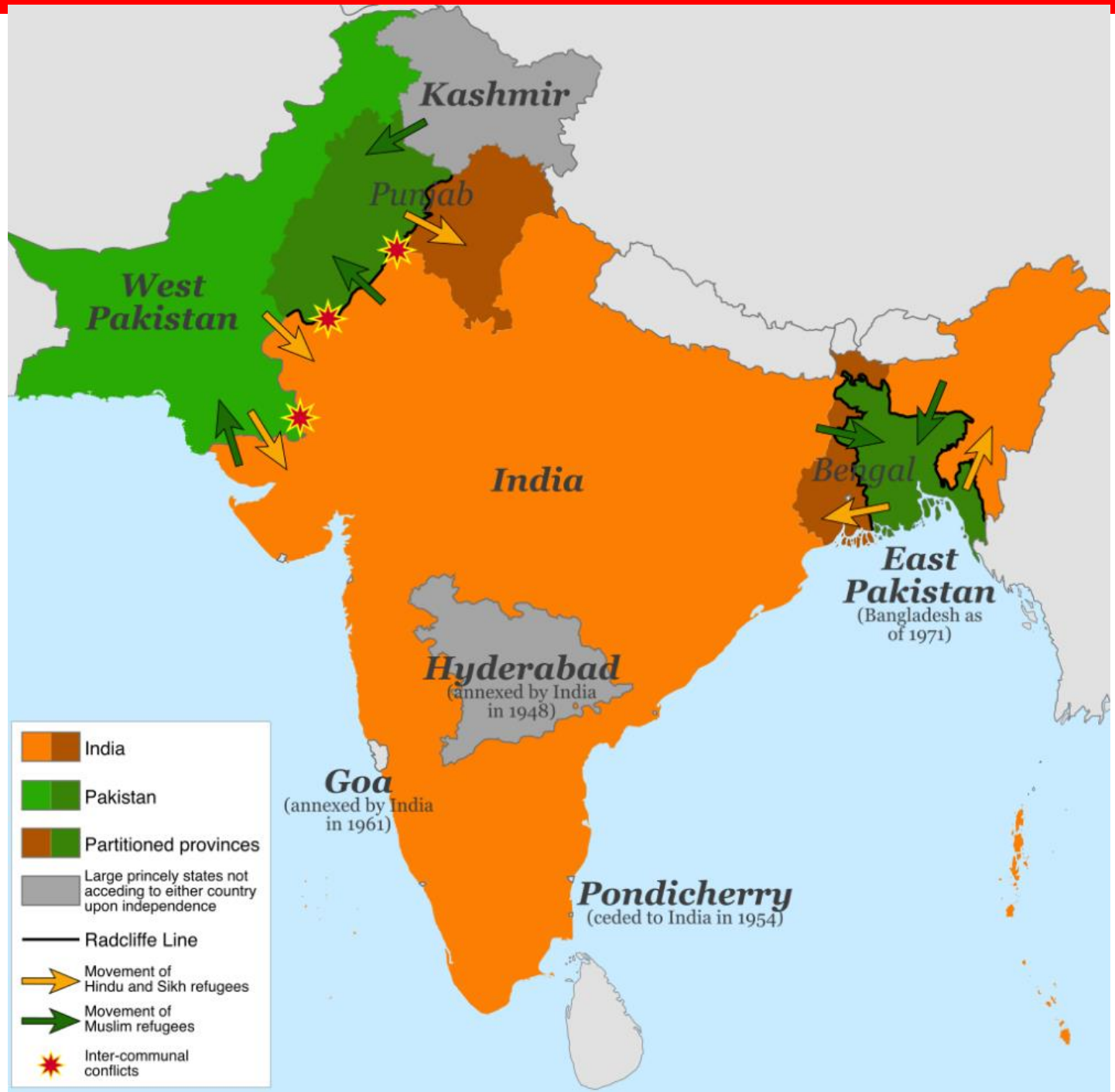
- August 14, 1947 Pakistan was born
- August 15, 1947 India became independent
- 10 million people migrated



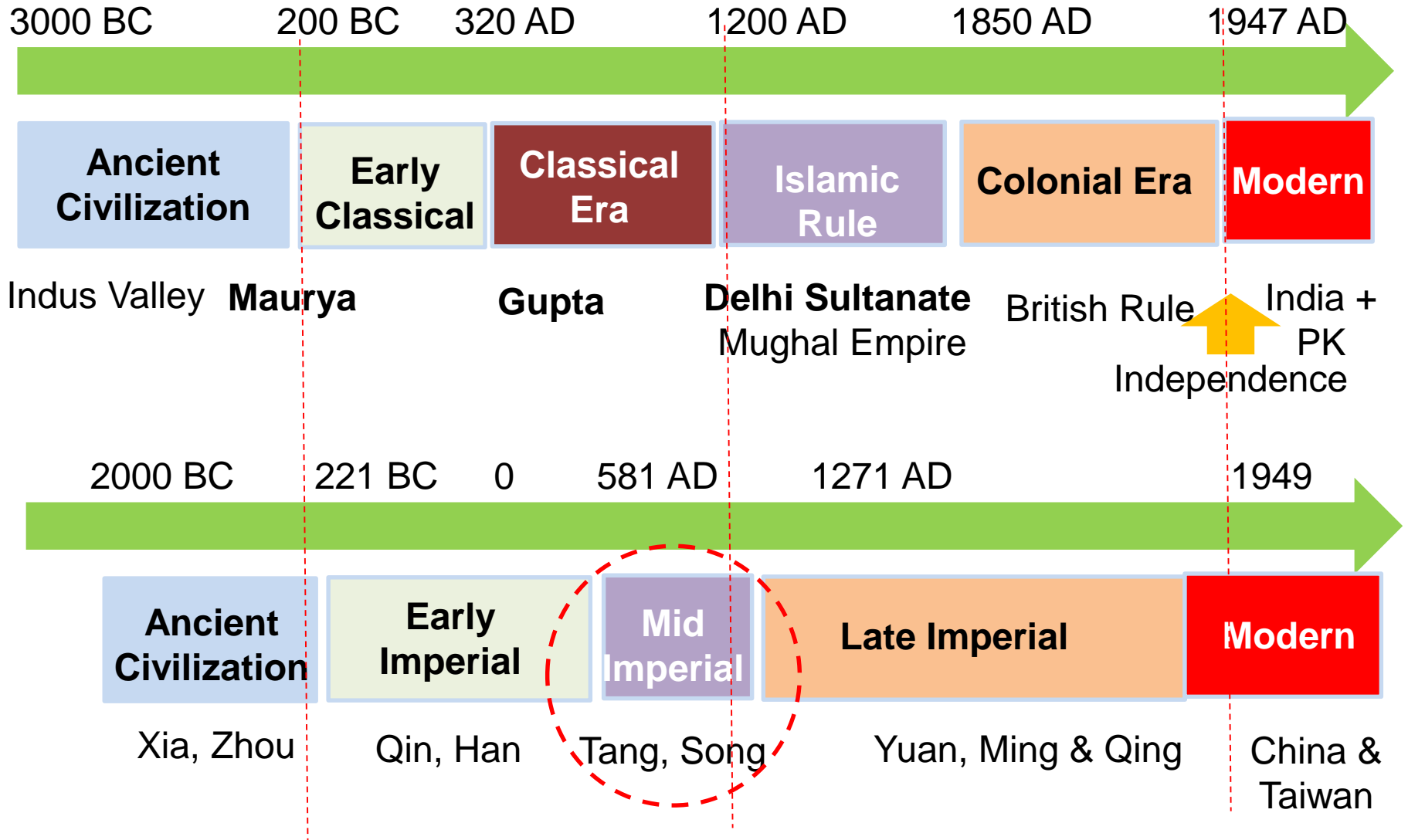
Lord Mountbatten
Last Viceroy of India



Sir Cyril Radcliffe created the partition maps in secrecy & published after the independence of two nations on 8/17/1947



History of Two Asian Giants



Geography, Economy & Demographics

China: Geographic View



Simple Map of China



Tibet



Chinese Countryside





**Tianmen Mountain, Hunan Province, 4,600 Ft. High
Glass Bridge**



**The Ferocious Yellow River (Huang He) 3,395 miles long
Since 602 B.C., the river has changed course 26
times & produced 1,500 floods killed millions**

The Chinese Geography

- China lacks the great fertile plains with river systems that US is blessed with
- The darn Yellow River is extremely flood-prone
 - Several times a year, large scale flooding
 - Unlike the Nile that flows in a valley, Yellow does not
 - Broad & flat flood plains causes huge population displacement
 - 1 million died in 1933 & also in 1997
 - Huge maintenance projects since 1997
- This impacted development of political system

World's Largest Construction Project (In Han Dynasty)?

- Construction of river levees around the Yellow
 - To protect the population & agriculture
- The silt problem
 - All rivers carry silt, Yellow's unusually heavy
 - Unable to dump this silt to floodplain, Yellow is essentially a “managed canal”
 - Steady accumulation of sediment raised the river-bottom
 - needed higher & higher levees
- It now an “aqueduct” where bottom is above the ground → broken levee → huge flood

Impact on Agriculture

- Northern Chinese Planes (NCP) are extremely fertile & large (158,000 Sq. Miles)
 - Equal to Nebraska, Iowa & Illinois combined
- All Yellow lower watershed is in NCP making it hard to maintain & control for consistent irrigation → requiring armies of people
- Flat plains means no individual barriers or political centers → warring factions

The Fragmented Plains

- Yellow is not navigable (due to heavy engineering)
- Capital-poor nature of North-Western China makes it hard to invest in infrastructure
- Eastern-West is also a problem
 - Holding the river in place saps all manpower



Lack of Local Political Centers

- Most of manpower applied to feeding people
 - Taking away from building armies to protect
- Successful Chinese government must be tightly manage
 - So that masses can be hurled, if needed, to engineering problems
 - Millions have died over the centuries
 - (7-million in Mao's war of independence alone)



Wheat vs. Rice Cultivation

- Wheat requires sowing, harvesting & thrashing
- Rice paddy requires:
 - Prep before planting
 - Plant stalk by stalk in specially prepared clay beds
 - Clay beds must hold water, can be fertilized, flooded, emptied, flooded again & dried
 - Harvested stalk-by-stalk, threshed, threshed again
 - Re-flooding & re-fertilization of the clay beds
- All this busy work leaves little time for political powers, industrialization or capital accumulation

Rice Farming Leaves no Manpower for other Industrialization

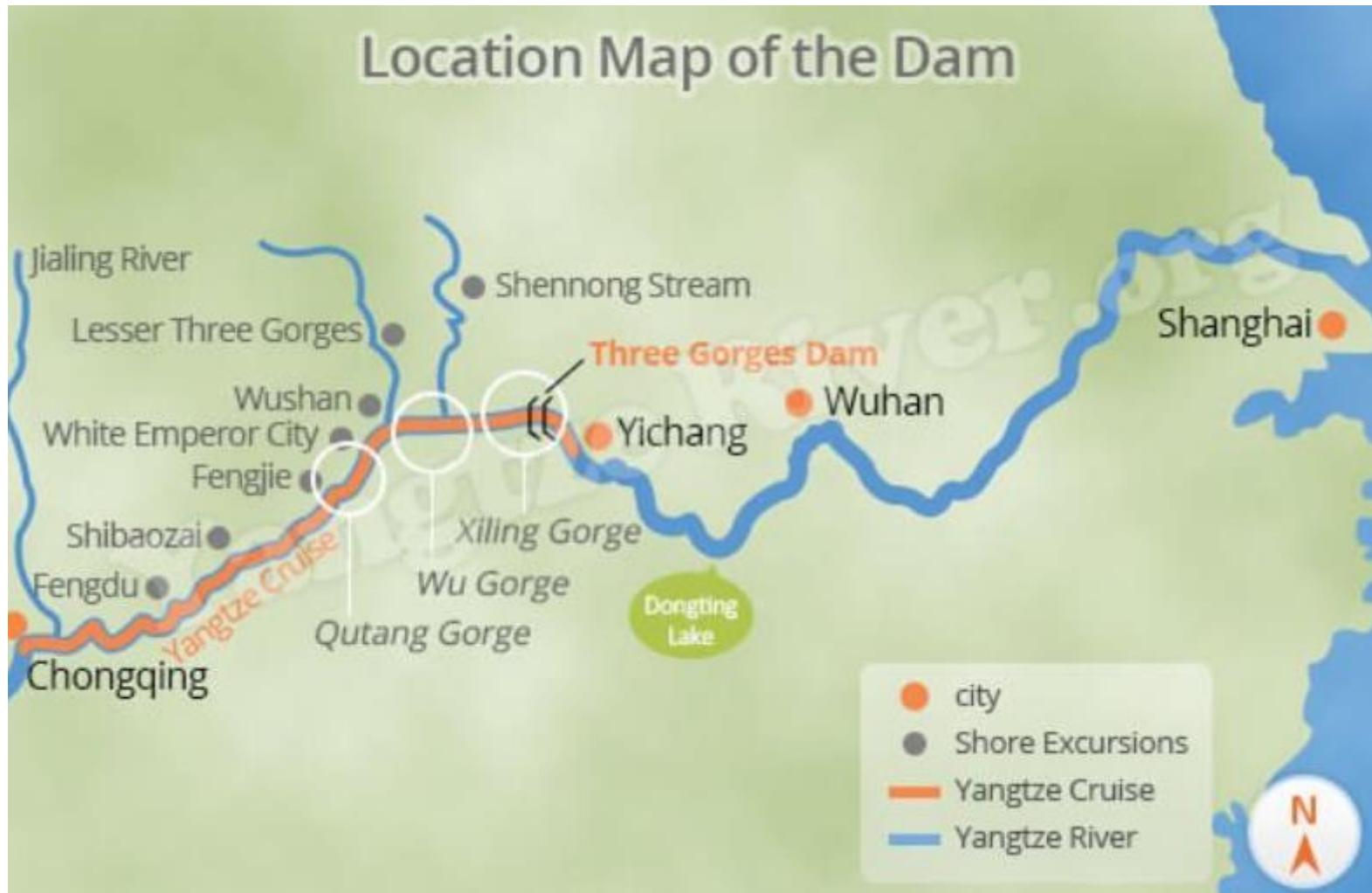


Central China is Capital Rich but not Integrated with Politically Strong North

- Yangtze river is sole navigable river (1,700 miles out a total 9,000 miles in system)
- But it cuts through mountains & creates fractured parcels of land



Three Gorges Dam: World's Largest: 22.5 Gigawatt [Hoover Dam is 2GW)

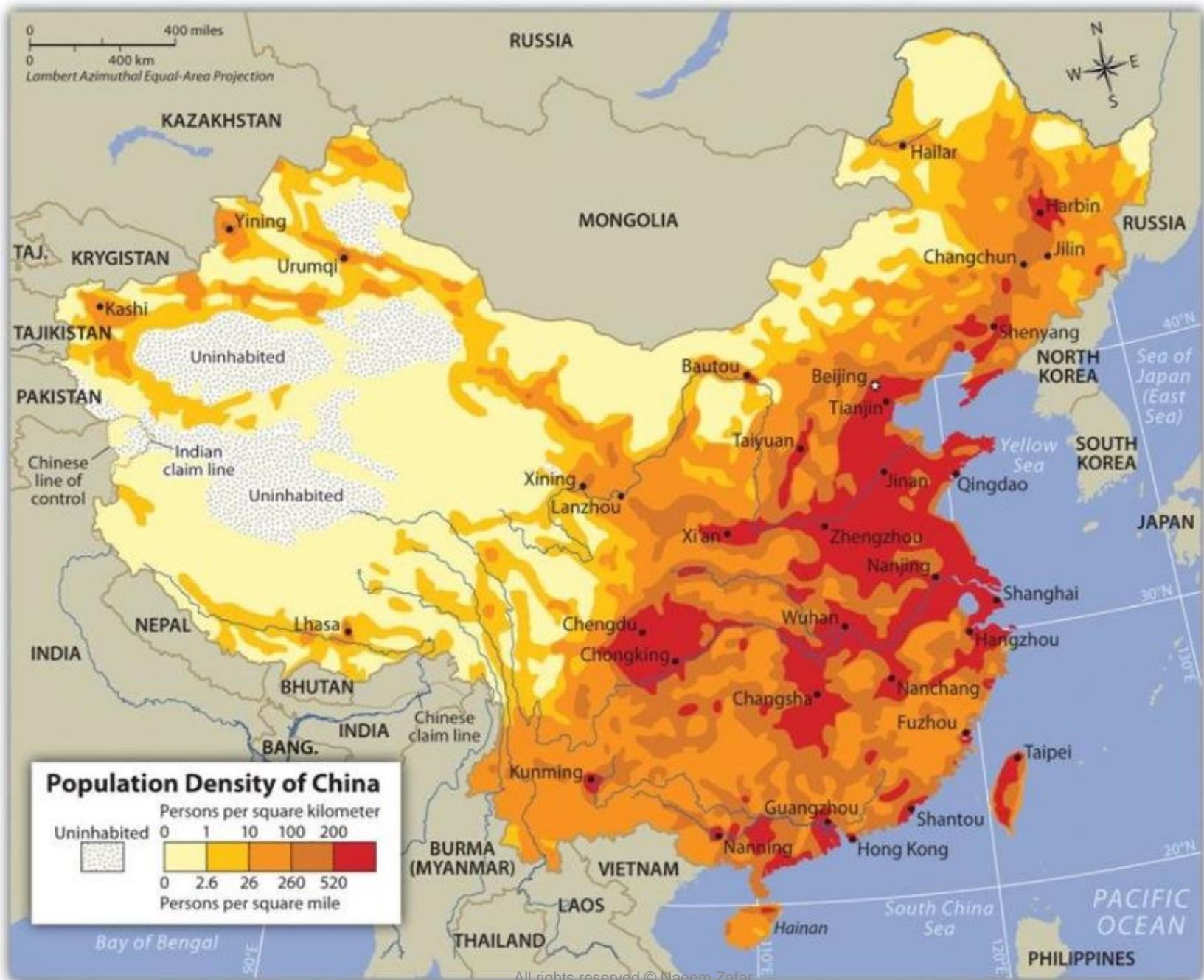


Central China More Aligned with its Trading partners

- Trading from Shanghai to Tokyo, London, San Francisco
- Northern China aligns with the wealth of central China
 - Power alternates between North & Central every 10-years

Southern (Coastal) China

- Tropical south is socially & politically disconnected with the North
- Have deep water & functioning ports (very rugged mountainous coast)
 - North's coast is sandy & not conducive to shipping
 - China has not been a naval power
- Coast attracts sea-faring foreigners
 - But hard for northern & interior regions to access



Uncommon prosperity

China's GDP per person, 2015



\$'000

- Over 14
- 12-14
- 10-12
- 8-10
- 6-8
- Under 6

Sources: CEIC; World Bank

Extreme Poverty in Western China





Shanghai

Holding it an a “Unified Country” is a Fulltime Job

- Local power centers emerged: 56 ethnic groups
- Remoteness forces a need to align local warlords
- Full time effort needed by the leaders to squash decenters & hold power



Geography of India

India



29 States of India



Kanchenjunga, the world's third highest mountain, in the Great Himalayas



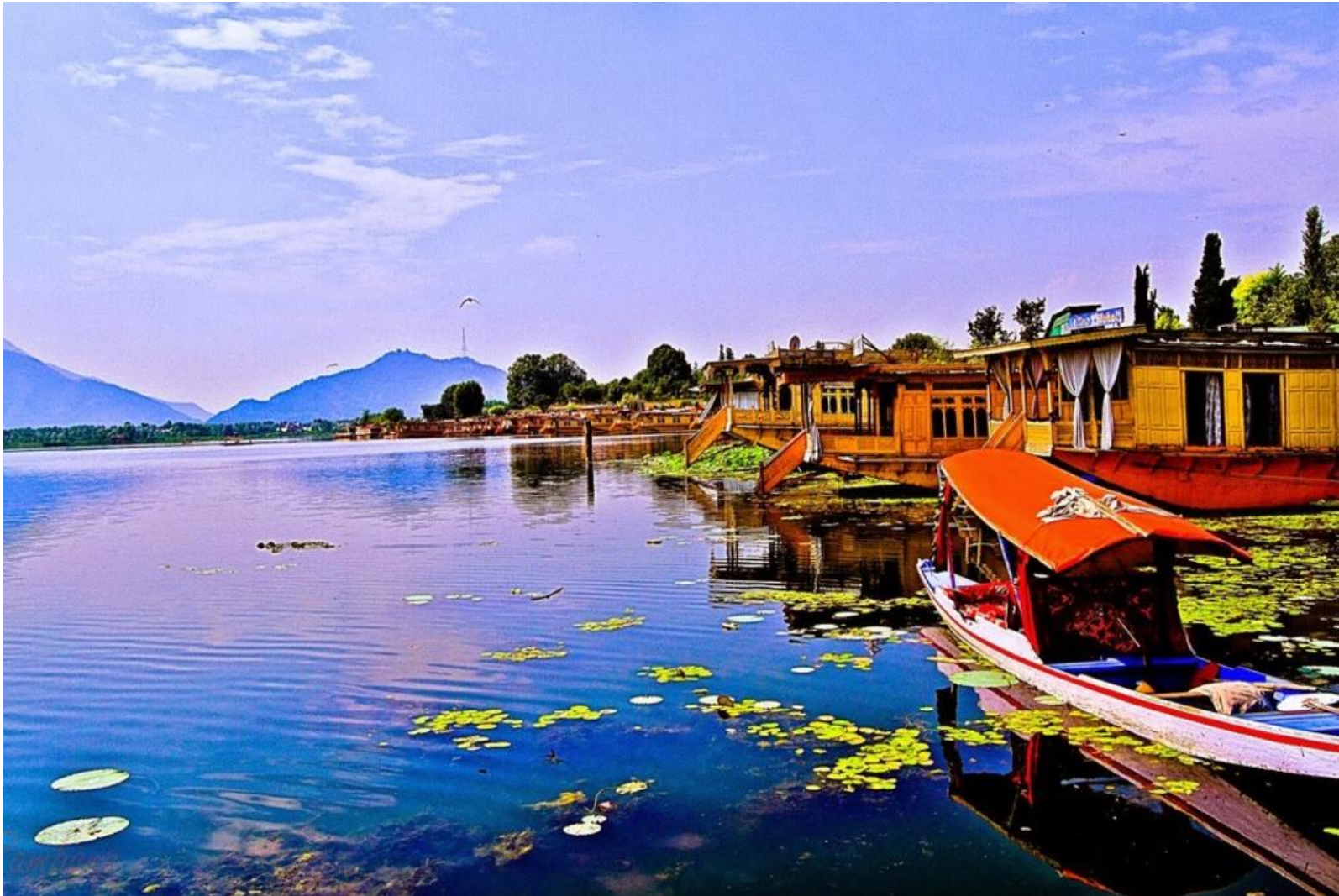
Kedar Range of the Greater Himalayas



Northern India: Jammu Kashmir



House Boats on Lake Dal (Kashmir)



Kashmir



Central India: Taj Mahal in Agra



Banaras on River Ganges



Rice Paddies in Eastern India



High-tech Center in Bangalore



Kerala: South India



South India: largest Elephant Population



Western India: Agricultural



Extensive Railway System

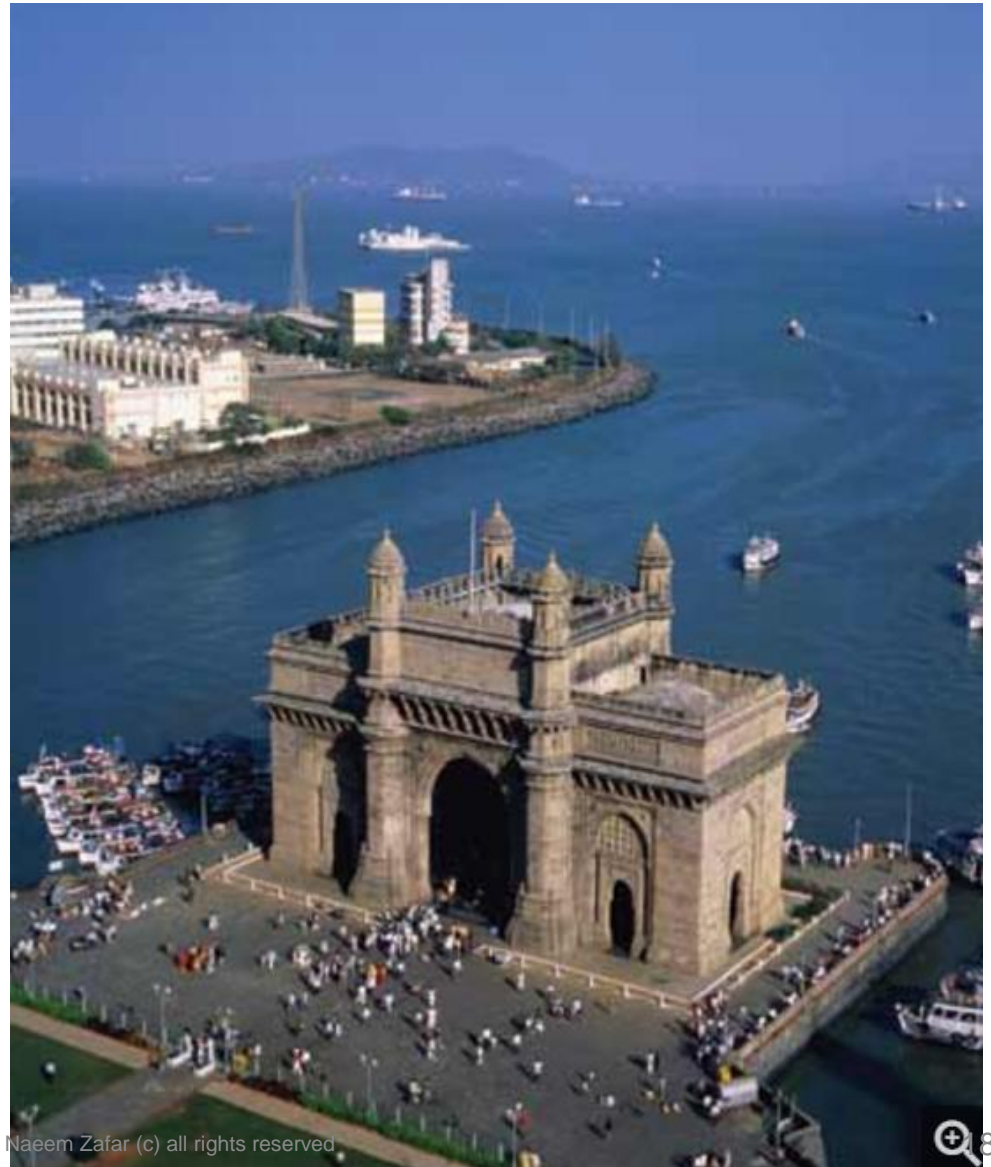


Mumbai (Bombay) Financial Capital



Mumbai Harbor Entrance

Gateway to India
monument near
the entrance to
Mumbai
(Bombay) Harbor



Karnataka (South India)



Rajasthan (West India)



Uttar Pradesh (North Central)



Maharashtra: Richest State



Future of China

The Big Bad Panda?

- Almost everyone is afraid of China
 - Largest population
 - Soon to be largest economy
 - Most powerful military?

But Why Now?

Why after 3500 years since Han Chinese first emerged as a nation is the Chinese dominance is obvious & inevitable?

Is this About the American Psyche?

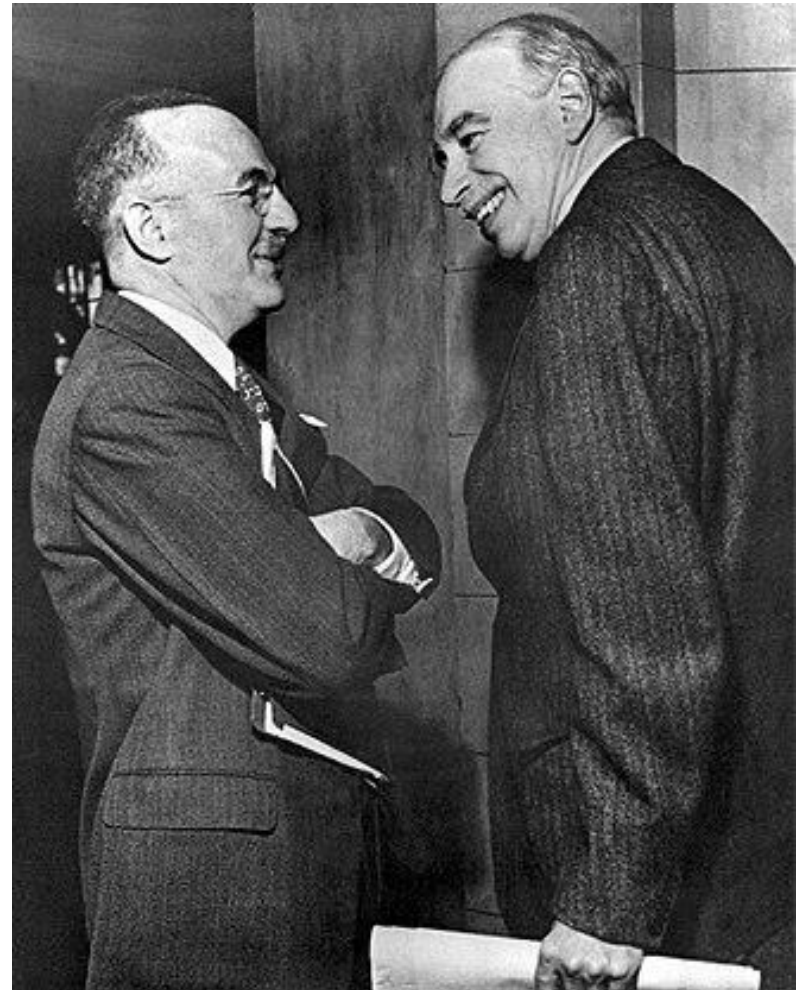
Remember:

- Rise of USSR! In 1952, 1960s & 1970s
- The inevitable rise of Japan in 1980s

So why now?

Deciding the Post WWII World

- 730 delegates from 44 allied countries gathered in **Bretton Woods** New Hampshire
- Delegates expected US to impose tariff & duties on all trade, post administrators to all European allies & their colonies & empires



Harry Dexter White (left) with John Maynard Keynes at the Bretton Woods Conference

American Proposal Stunned the Audience

1. No Pax Americana, no tariffs on trade, property or income, no quotas, no tax, no customs restriction, instead America will open its markets for all to see to & hoping to see others open their markets to USA
2. Americans will use *their naval power to guarantee the security of all maritime trade* regardless of who was trading with whom
3. Set up IMF & World Bank

Why Did China Unite & Became Economically Powerful: **WWII**

1. American eliminated their biggest rival & threat after WWII: Japan
2. American **Bretton Woods** agreement stopped European colonizers west of India
3. Bretton Woods opened global markets to China which it had not enjoyed ...ever!

But Can It Last?

China has three major problems

1. Economy: artificially propped
2. Demographics
3. American dependency

Chinese Economy is not About Profits – It is About Employment

- China's four regions do not coalesce naturally – they need a strong adhesive: Money!
- Lacks robust western-style banking system
 - All citizen's money flows into 4 state-owned banks
 1. The Bank of China
 2. Agricultural Bank of China
 3. Construction Bank of China
 4. Industrial & Commercial Bank of China

Bank's mandate is to lend money to anyone for anything just to keep employment going

This Persistent Subsidy Model Created Amazing Growth

- Loans essentially translate to subsidy
- ~9% growth for last 30-years created world's 2nd largest economy to date
 - *Thanks to Bretton Woods & WTO for creating a bottomless demand for subsidized goods worldwide*
 - *Especially if you do not need to care about quality, debt, output, reputation, or profits*

This creates extreme collusion between the Communist party leadership & bank management

Lending Problem is Huge

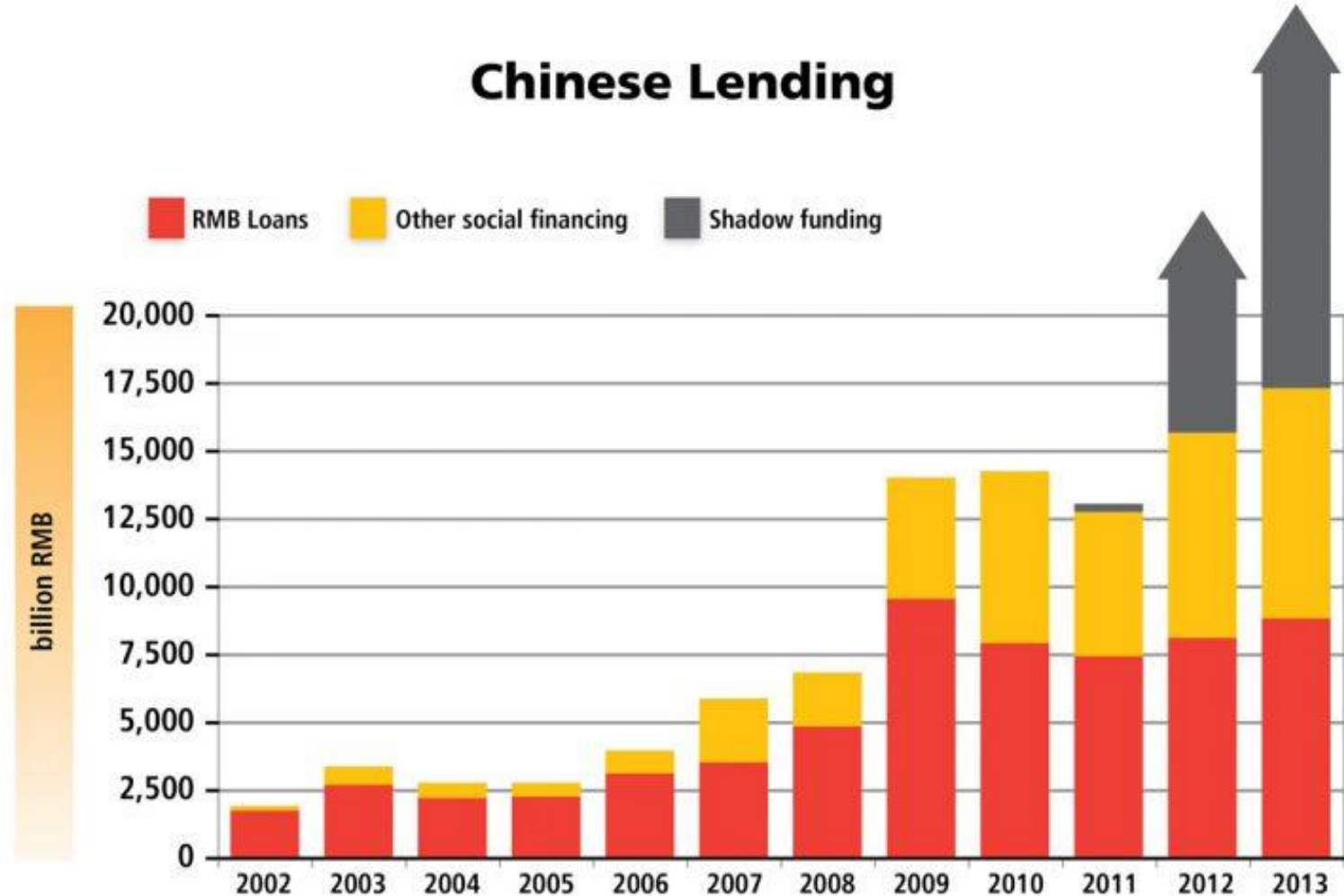
- Chinese lending in 2007 topped 3.6 Tr. RMB
 - That is \$600B
 - more than total lending in USA during height of subprime era) for an economy one third that of USA (in 2007)
 - Instead of seeing a drop in demand due to the financial crisis & shutting down factories – they supersized the loans
 - The borrowing tripled in the next two years!
 - The banks started to issue each other bonds to keep the credit flowing

Monthly Quotas Imposed on Lending by Central Bank to Fix the Problem

- In many cases monthly quotes were reached quickly & government had to pump emergency funds
- And the banks, retail investors & firms created parallel system (with much less due diligence & quality controls) as shadow lending to lubricate the system
- By 2013 this exceeded all other forms of lending combined!
 - *Total financing reached \$5 trillion is 7X more than US lending (for an economy that was ~\$8 trillion)*

This is equivalent to Obama stimulus package (\$800B over 2-years) every 29-days!

This makes the whole Chinese system sub-prime



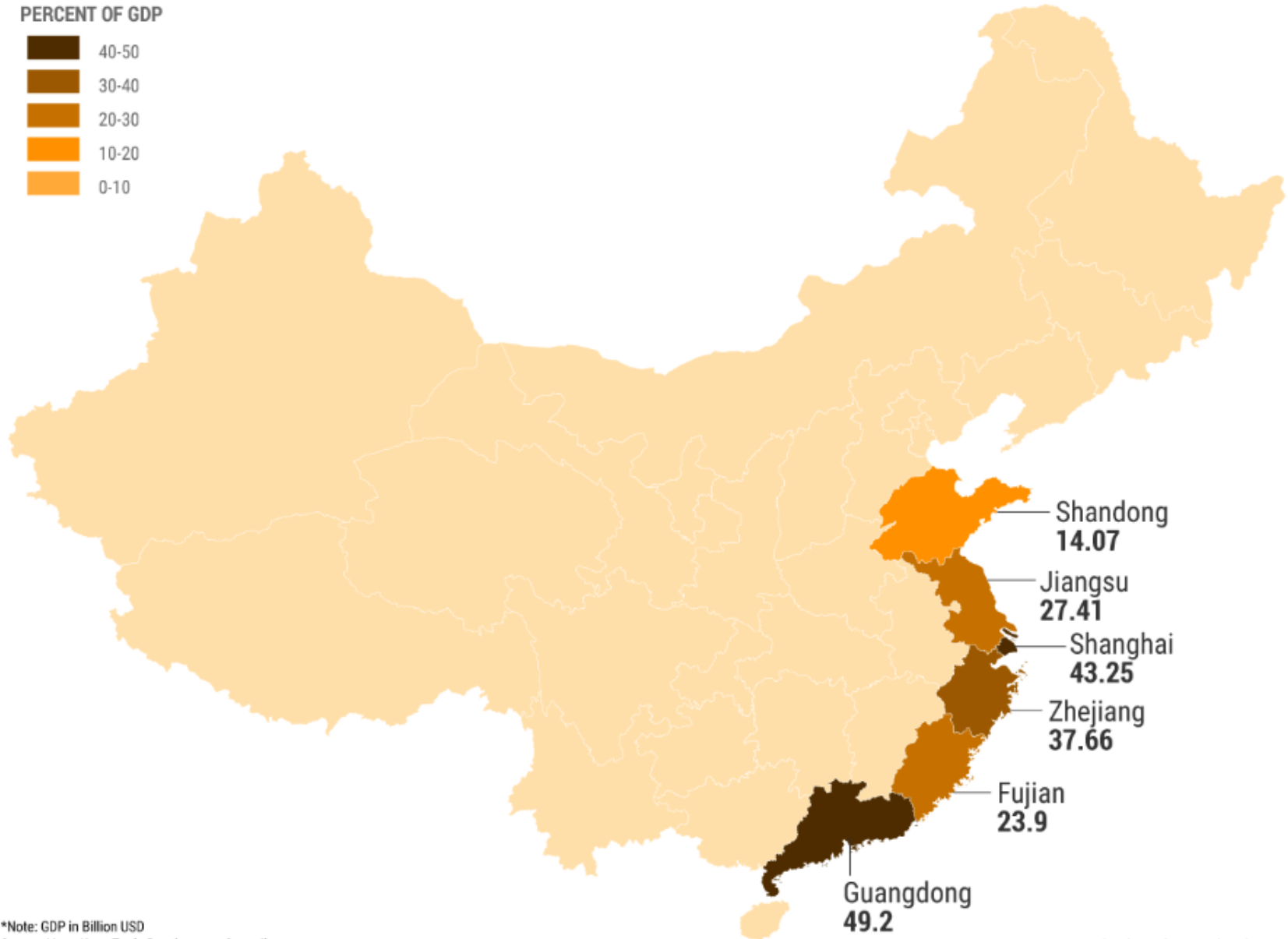
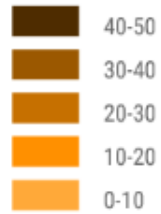
© 2014 Zeihan on Geopolitics

Japan 1950-1980s & USA

- *US tried this (throughput & growth, not profit) and resulted in sub-prime crisis of 2008!*
- Japan tried this model & eventually it collapsed in 90s
- Japanese banking system has yet to recover since 25-years → stagnation!
- Japan is ethnically unified (98% are Japanese) & 80% of the population lives in Honshu island
 - *Chinese are anything but ethically, spatially & regionally unified*

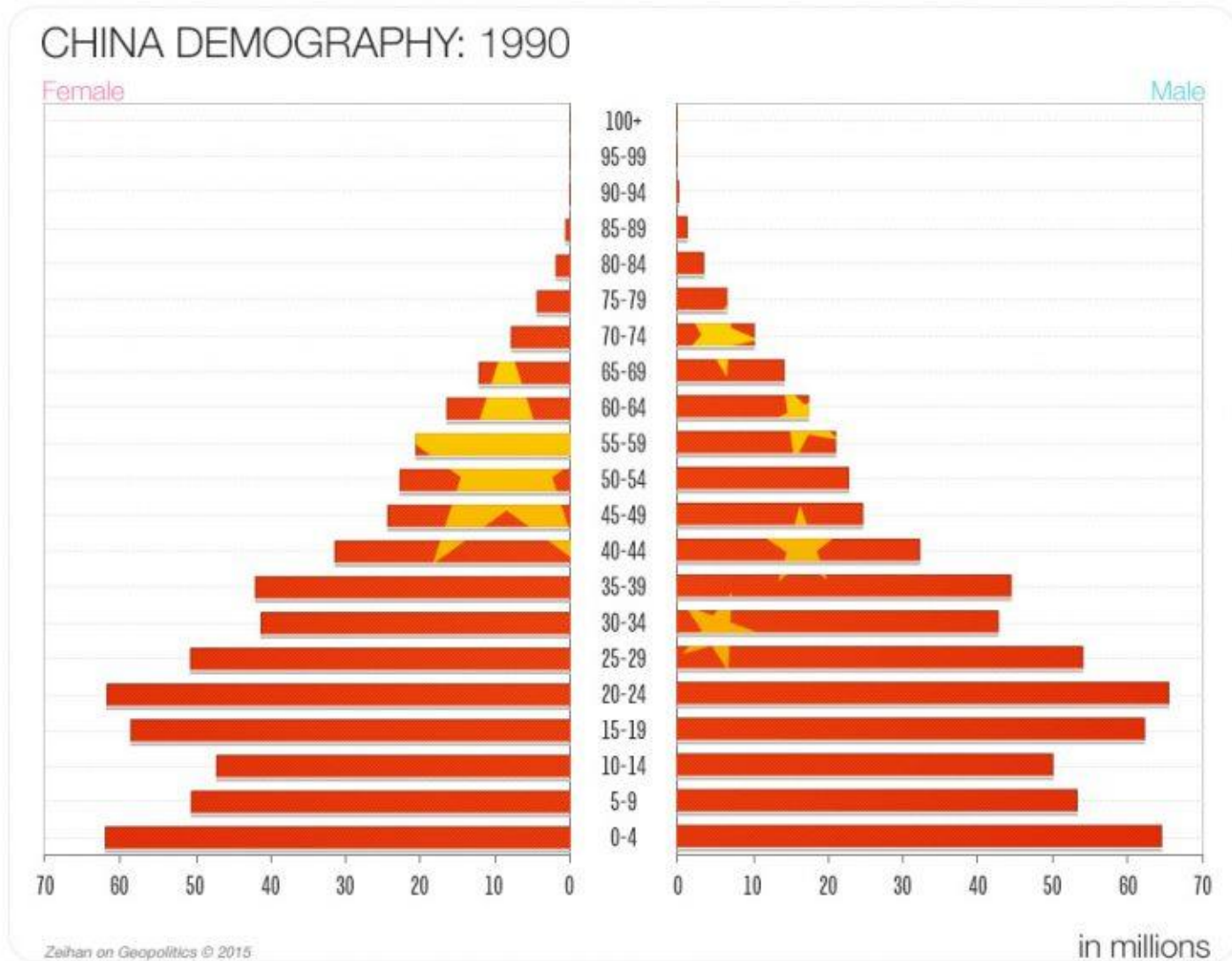
Select Chinese Provinces Export Value as Percent of GDP

PERCENT OF GDP



*Note: GDP in Billion USD
Source: Hong Kong Trade Development Council

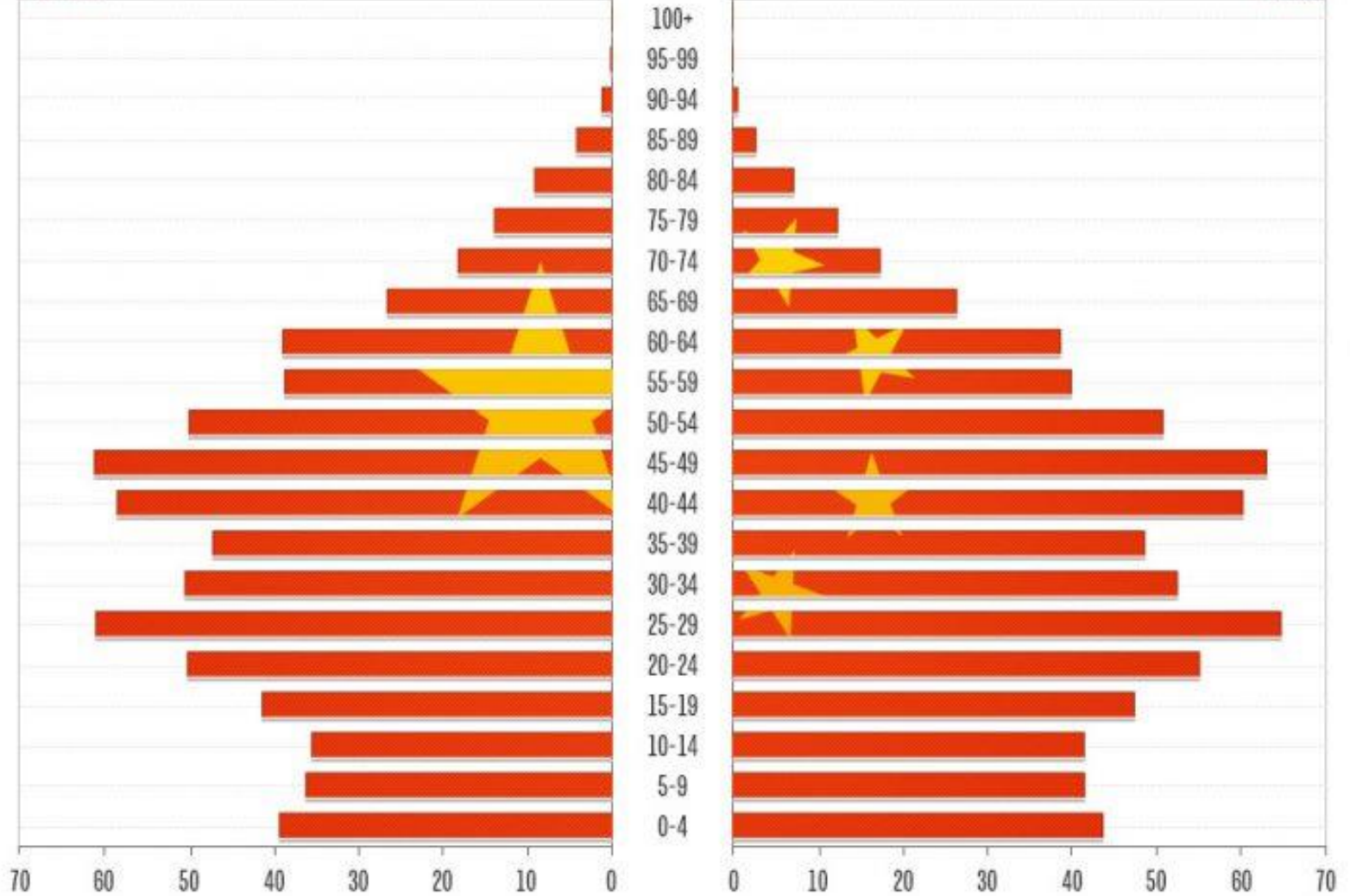
2: Demographics



CHINA DEMOGRAPHY: 2015

Female

Male



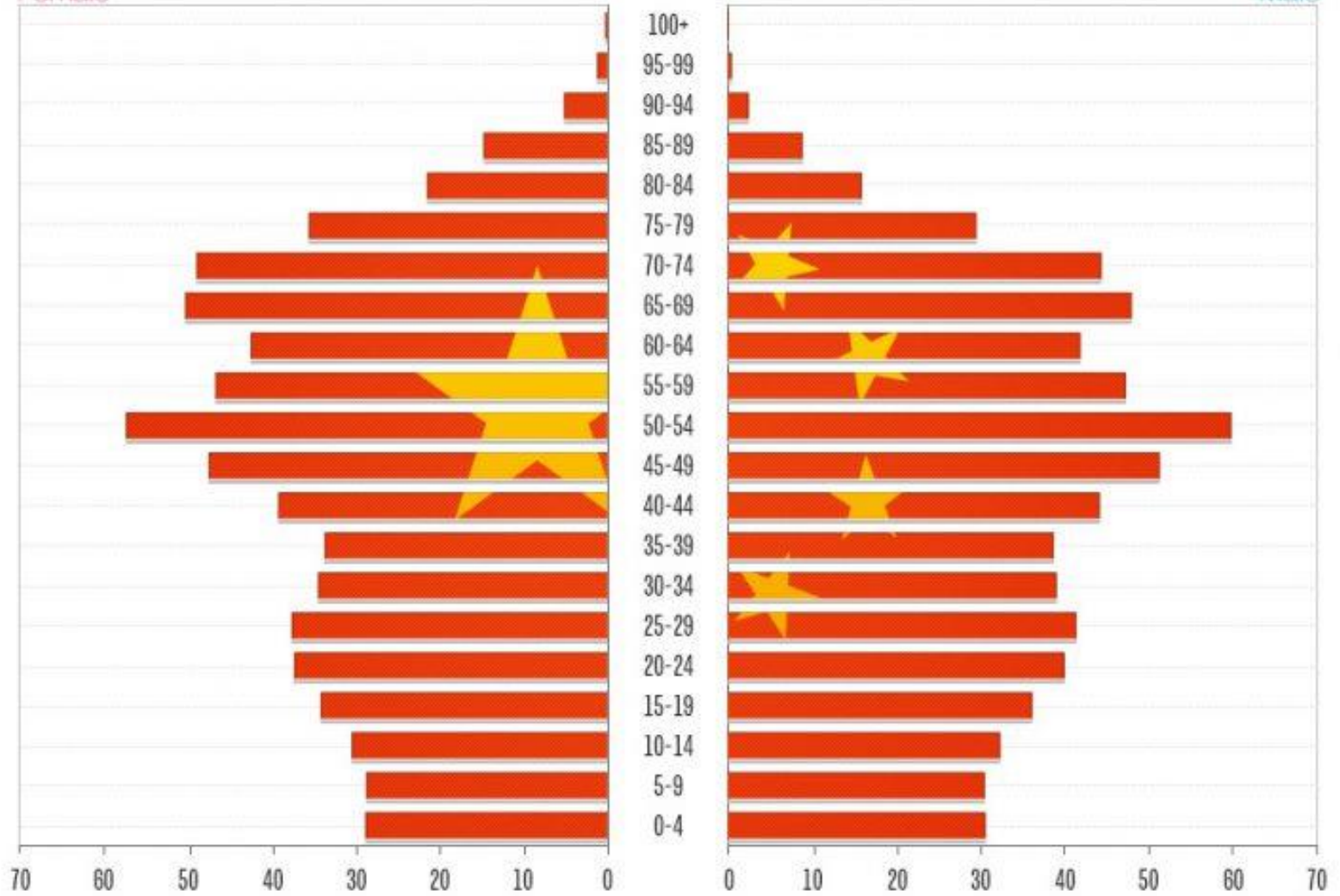
Zeihan on Geopolitics © 2015

in millions

CHINA DEMOGRAPHY: 2040

Female

Male



Zeihan on Geopolitics © 2015

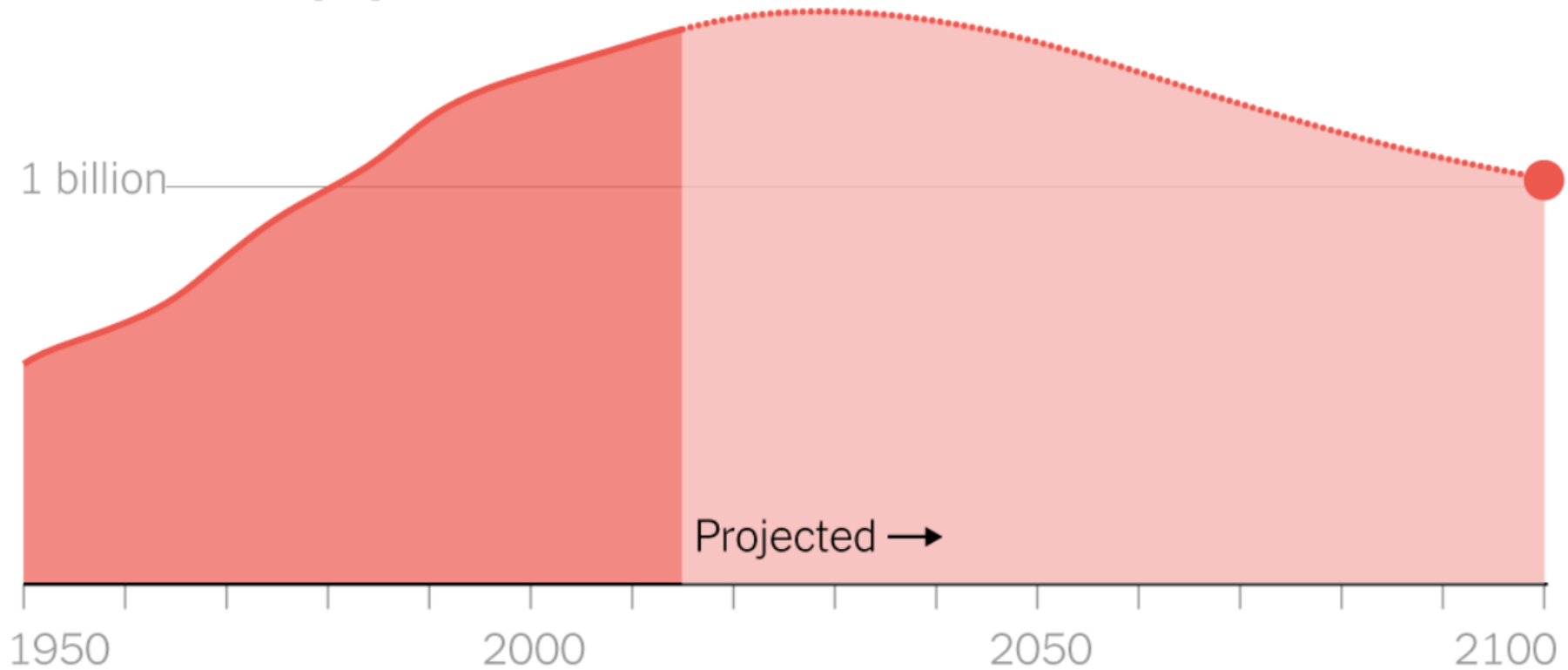
in millions

The 4:2:1 Problem

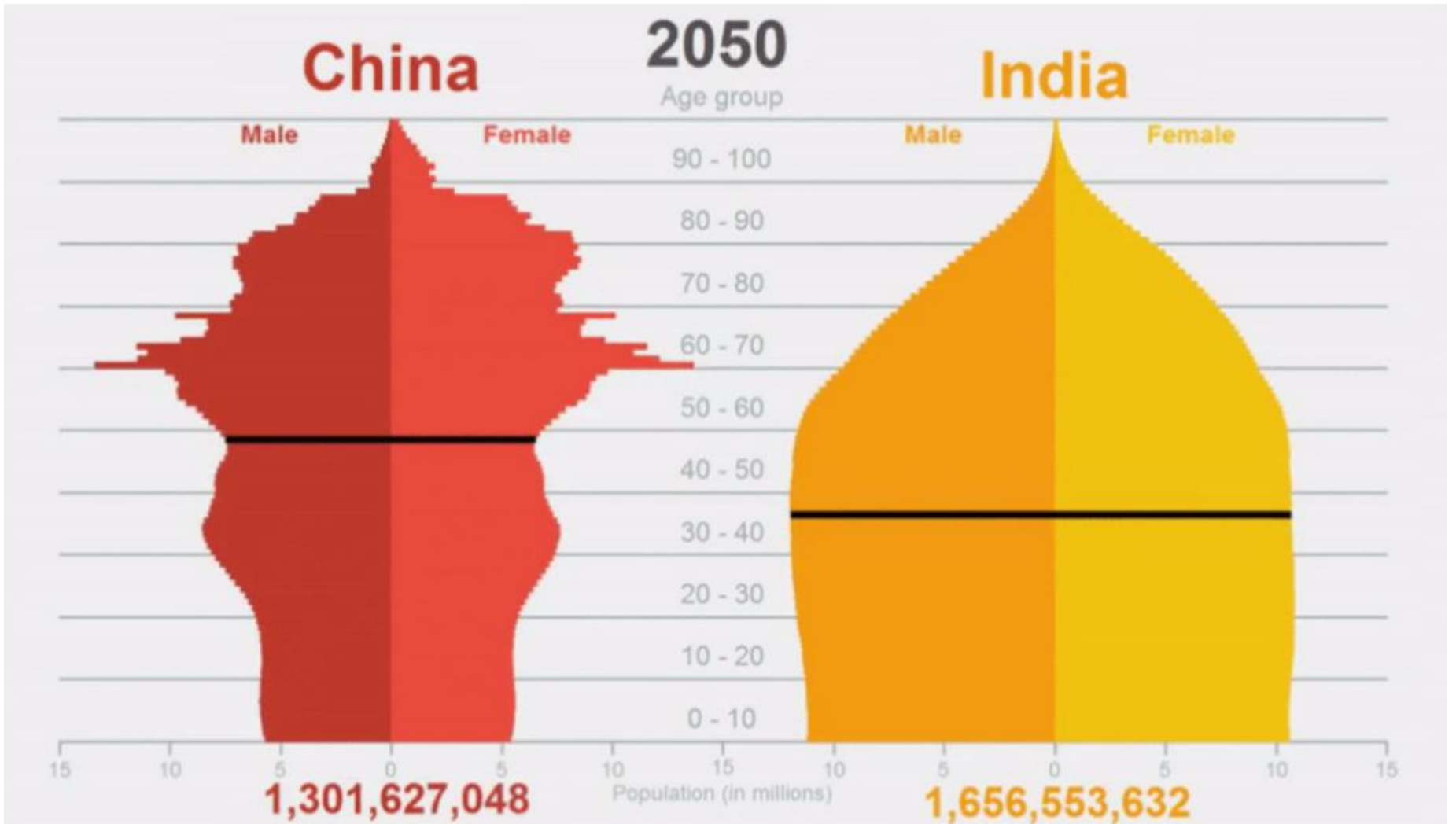
- Average age went from 24.9 in 1990 to 37 in 2017 –to 42.9 in 2030 (American will be at 39.6)
- No social security style system in place → so children must shoulder the burden
 - 2x bigger problem than boomer's retirement in US
 - Not enough young labor (prices are 6X since 2002)
 - End of cheap, low-cost labor to drive exports
 - And export-led to consumption-led economy will be hard

Even changing the 1-child policy now will take 20+ years before one can have enough working bodies

China's total population



China's financial system is darker than the Europe's & demographic future is much darker than Japan's

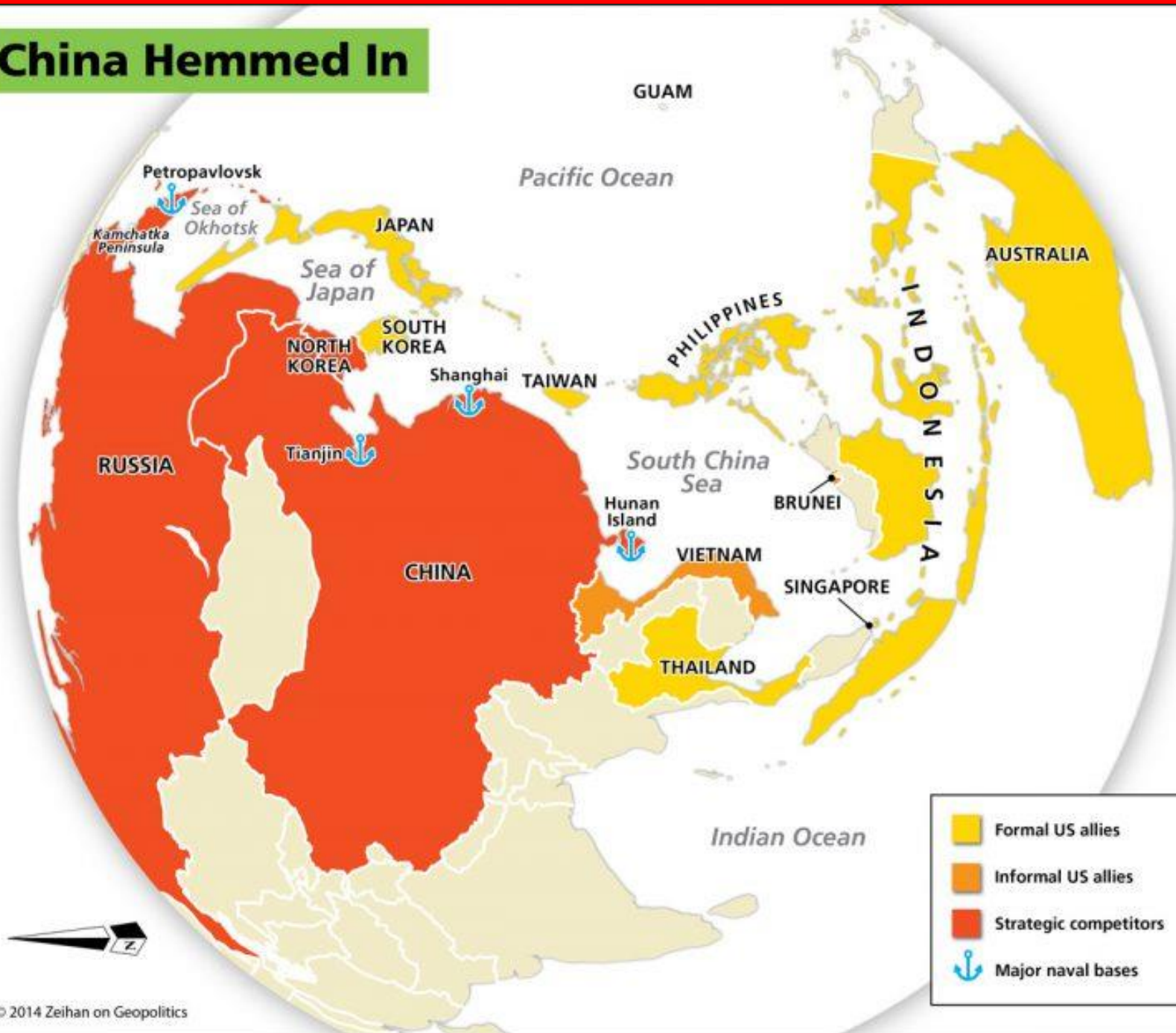


3: Dependency on America

- China's unification, industrialization, export-led economy & military build-up was all made possible by Bretton Woods (by USA)
 1. 33% of Chinese economy is export-based (15% to US alone) – any hiccup in this access can cause Great Recession x 3
 2. Whole economy relies on import of oil (just about all raw materials) – without protection this can be interrupted – Big Time!
 3. Japan will also be impacted but has most powerful Navy unlike China
 4. Taiwan (& other countries around Taiwan) have SAMs & can thwart Chinese excursions into the blue ocean

And US has already started to pull back from Bretton Woods as it becomes a net oil exporter

China Hemmed In



Anyone of These Things Can Derail China's Momentum

- The Northern militarists
- The Central trader
- The Southern secessionists
- Chinese financial system
- Demography
- Dependence on America

*Collectively they are more than enough to return
China to the fractured, self-containing mess that
it has been for centuries*

Scenarios of the Future

- Internal tensions are mounting
 - Numerous ethnic clashes in Tibet & Xinjiang
 - 100,000 events were recorded by government in 2011
- American withdrawal can create extreme shortage on raw material & mass unrest
 - Lights can go out literally, triggering mass movement & lack of food

Start of a Dark, Hungry & Harsh Future

(Same as the last 3,000 years!)

- China's ability to provide employment will end
 - Interior will suffer the most as it relies on the coastal regions for money, even fertilizers & electricity → food shortage, famine & protest, mass exodus to cities
- American withdrawal can create extreme shortage on raw material & mass unrest
 - Lights can go out literally, triggering mass movement & lack of food
 - Coastal central & southern regions will align with trading partners & rebel against Beijing – seeking military protection?

Start of a Dark, Hungry & Harsh Future

(Same as the last 3,000 years!)

- Beijing must focus on keeping the northern plains unified
 - Should it be fighting the interior refugees
 - Or defend against the Japanese aggression
 - who will find northern plains as a source of food
 - Or the secessionist states from Shanghai to Hong Kong?

Impact of Chinese Fall

- Low labor costs destroyed industries in other countries who could not compete on price
 - Toys, concrete, steel or textiles, all sectors died slow death elsewhere
 - A huge hiccup but will take time before SE Asia & Mexico fill demand
- Plunging demand for raw material: Huge impact
 - Brazil, Africa seriously impacted, prices will plunge
- Food supply impacted internally – foodstuff import will rise
 - If government cannot afford to pay for food or supply food then it is no longer a government
- The only standing safe currency will be US dollar

- “Except for the US Treasuries, what can you hold? Gold? You don’t hold UK government bonds or Japanese bonds. US Treasuries are the safe heaven. For everyone, including China, it is the only option.
- We hate you guys. Once you start issuing \$1T or \$2T in new debt, we know that the dollar is going to depreciate, so we hate you guys, but there is nothing much that we can buy’”

Luo Ping

Director General

China Banking Regulatory Commission

2009 *(when things were still good)*

How to Get Out of this Mess?

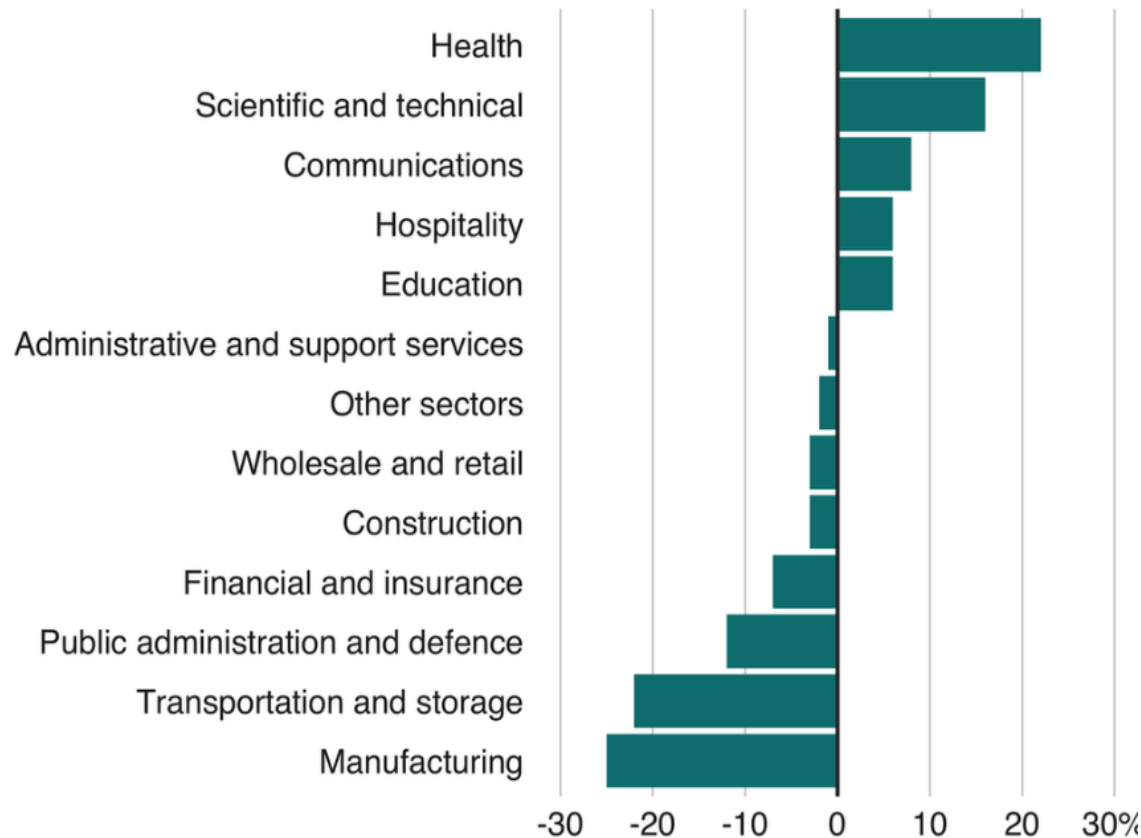
Two large bets:
Artificial Intelligence (AI)
Re-build the Silk Road

AI Will Change Labor Markets & Societies over the next 20 Years

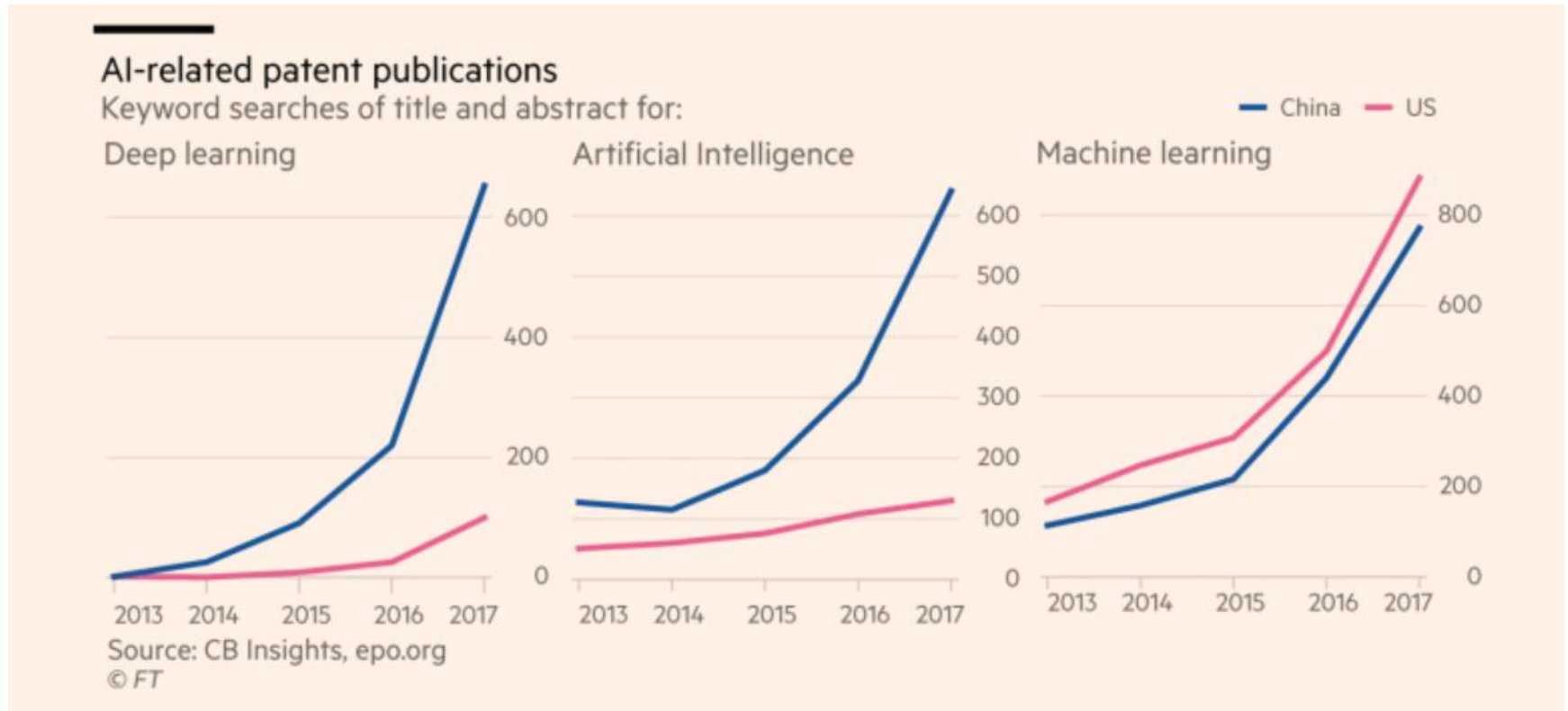
- President Xi Jinping has made AI one of the central pillars of the **Made in China 2025 plan**
 - To transform the country's economy
 - Goal set of being world leader in technology by 2030

How AI could change the job market

Estimated net job creation by industry sector, 2017-2037



China Sputnik Moment: AI Initiative

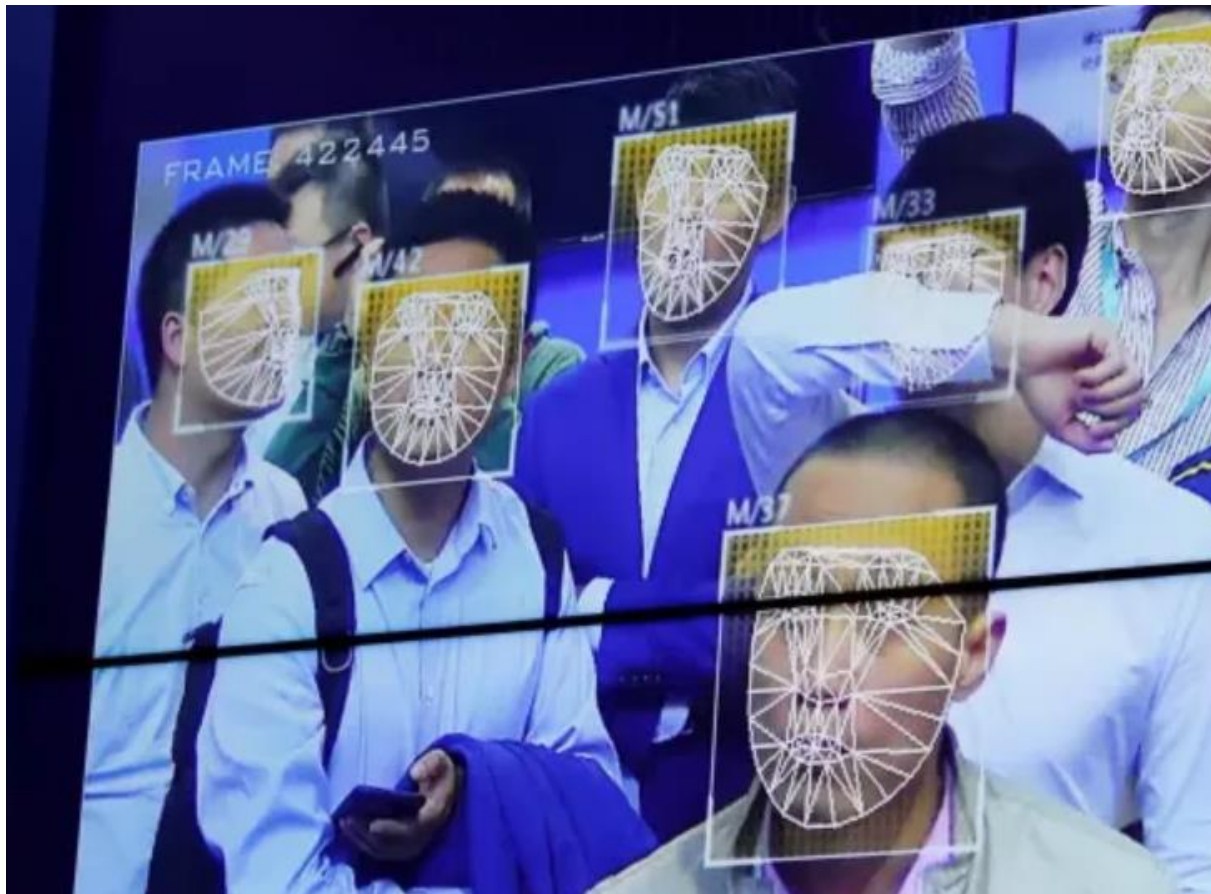


AI Boom Driving China's Strategy



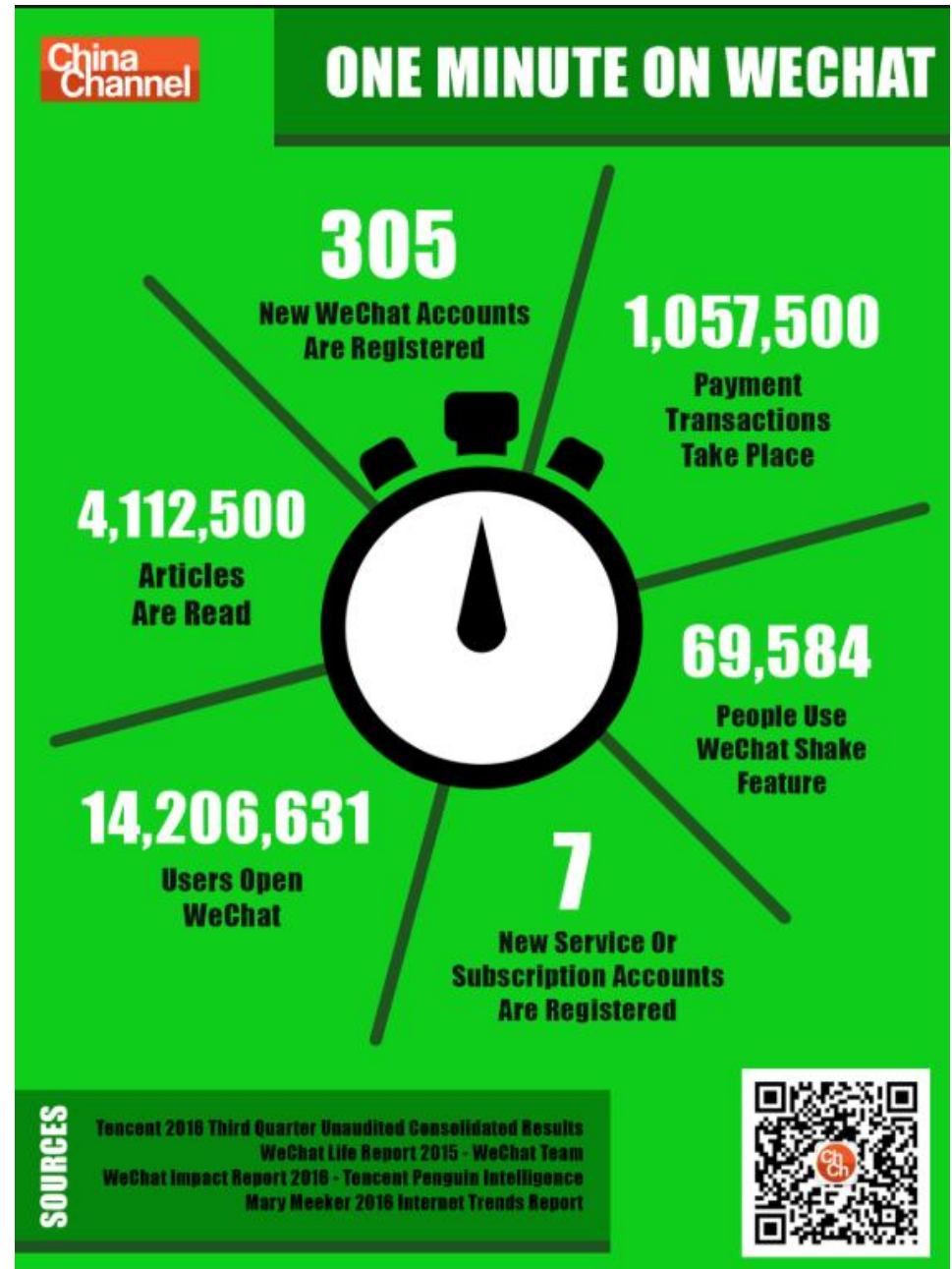
A Chinese police officer wears a pair of smartglasses with a facial recognition system in Zhengzhou, Henan province © AFP

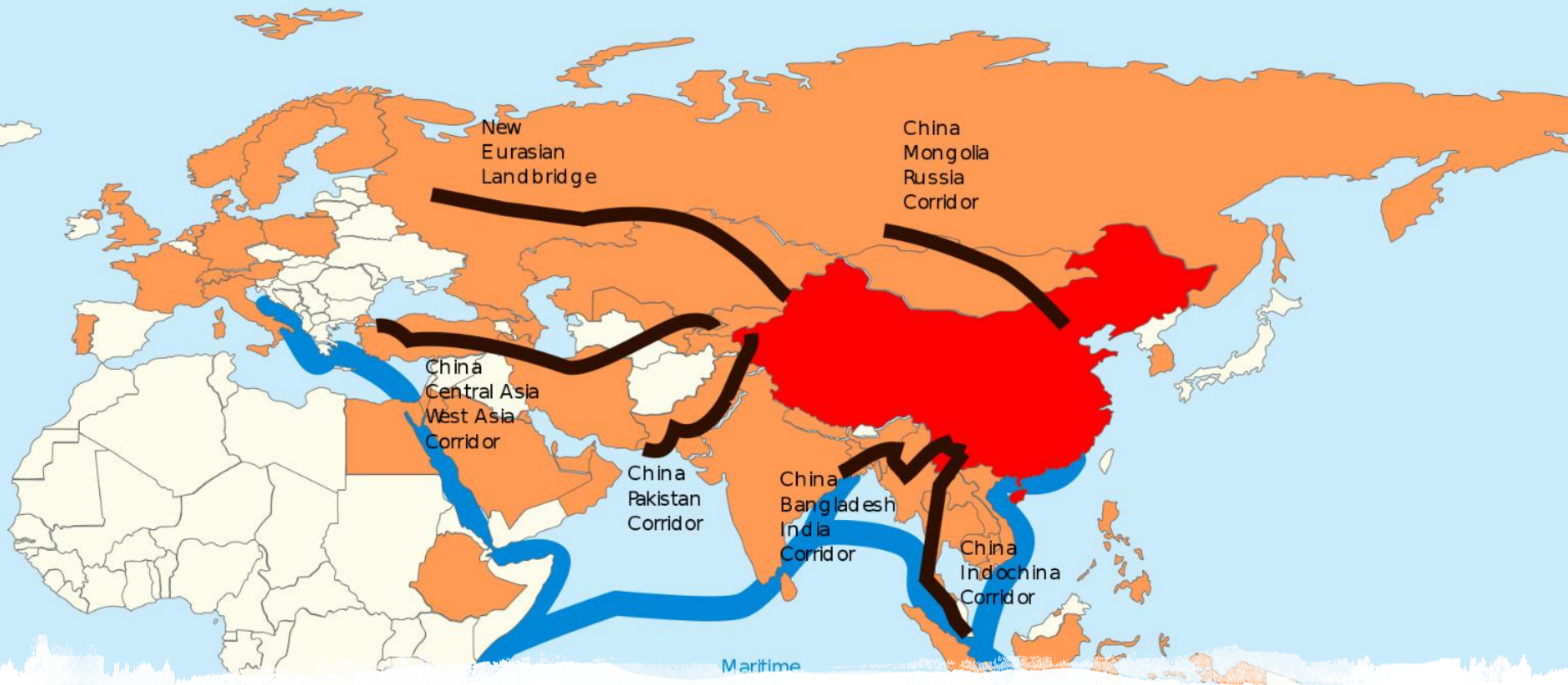
- Chinese politics make it much easier to collect data on all aspects of citizens, creating a huge boon to the AI algorithms & research





- WeChat is a Chinese multi-purpose messaging, social media and mobile payment app developed by Tencent
- Released in 2011, it is now one of the world's largest standalone mobile apps by monthly active users, with **over 1 billion monthly active users**





Chinese Bets on the Future

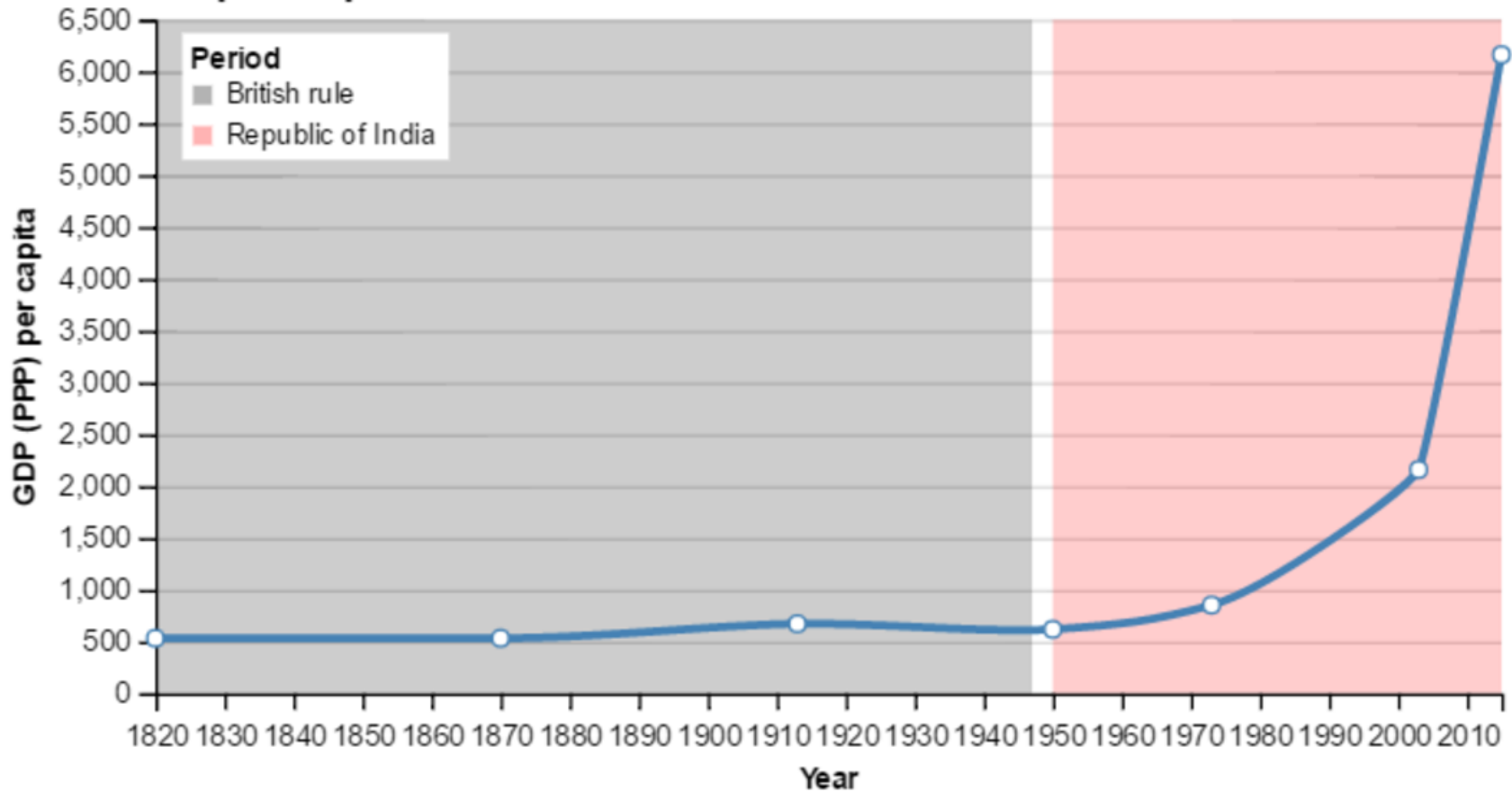
- One Road One Belt initiative
- \$900B infrastructure project

One Belt, One Road Initiative

- Connect China with the world – open new markets through new partners
- The initial focus has been infrastructure investment, education, construction materials, railway & highway, automobile, real estate, power grid, & iron & steel
- The Belt & Road Initiative as one of the largest infrastructure & investment projects in history, covering more than 68 countries, including 65% of the world's population & 40% of global GDP as of 2017

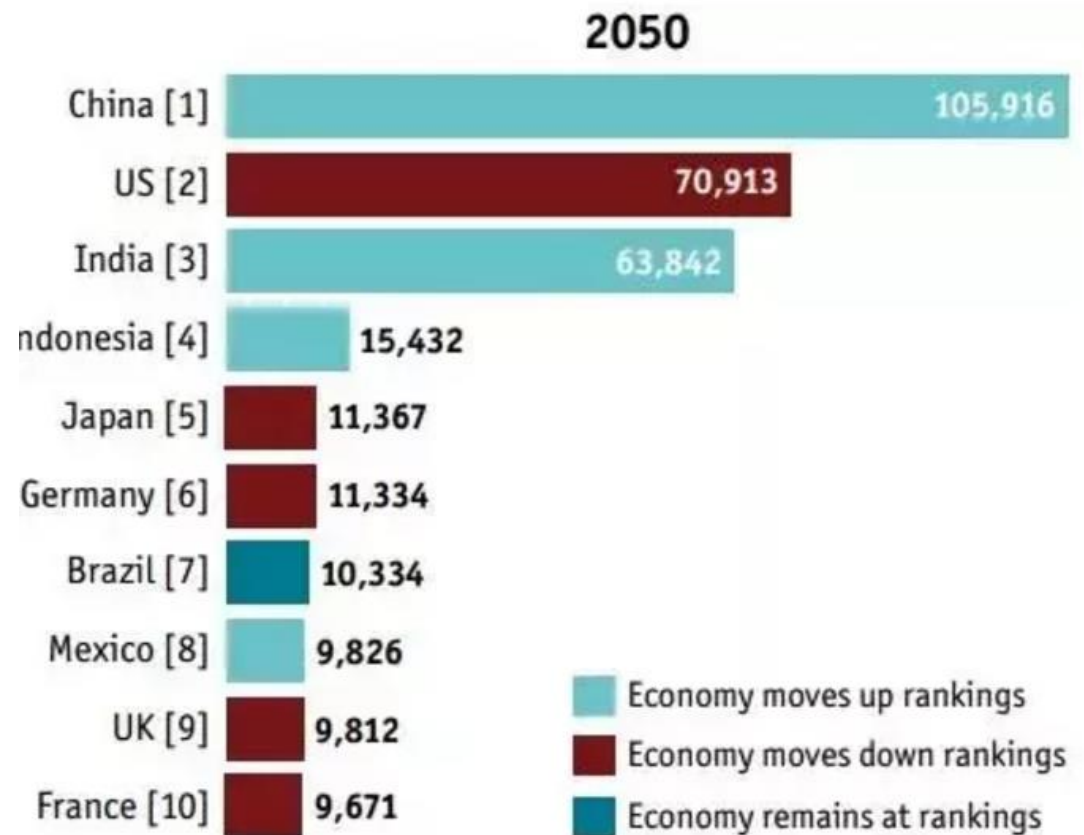
Future of India

GDP per capita of India in 1990 International Dollars from 1820 to 2015



Future Seems Bright

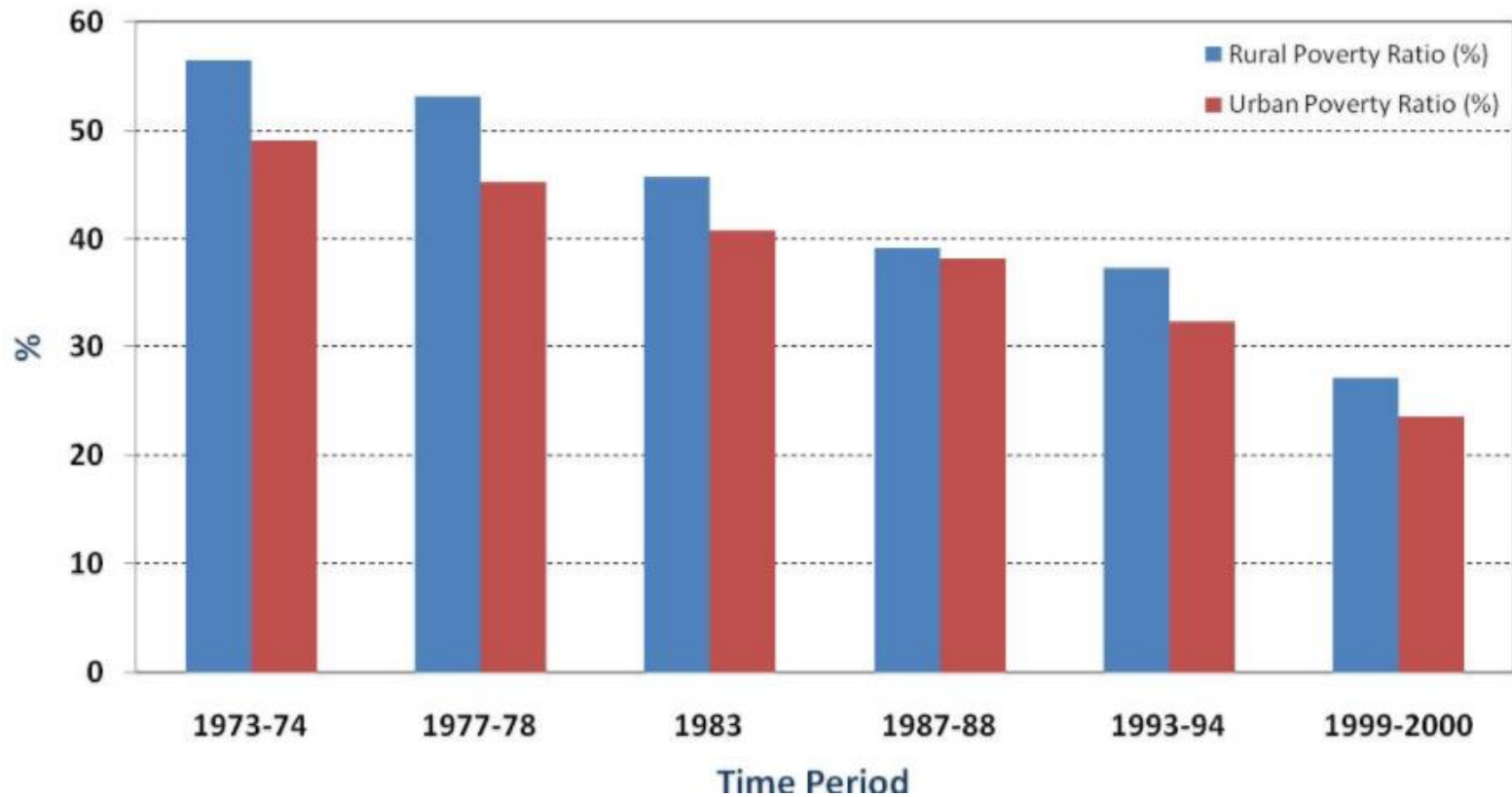
- Young population
- Savvy in English & the Internet
- Vast emerging middle class



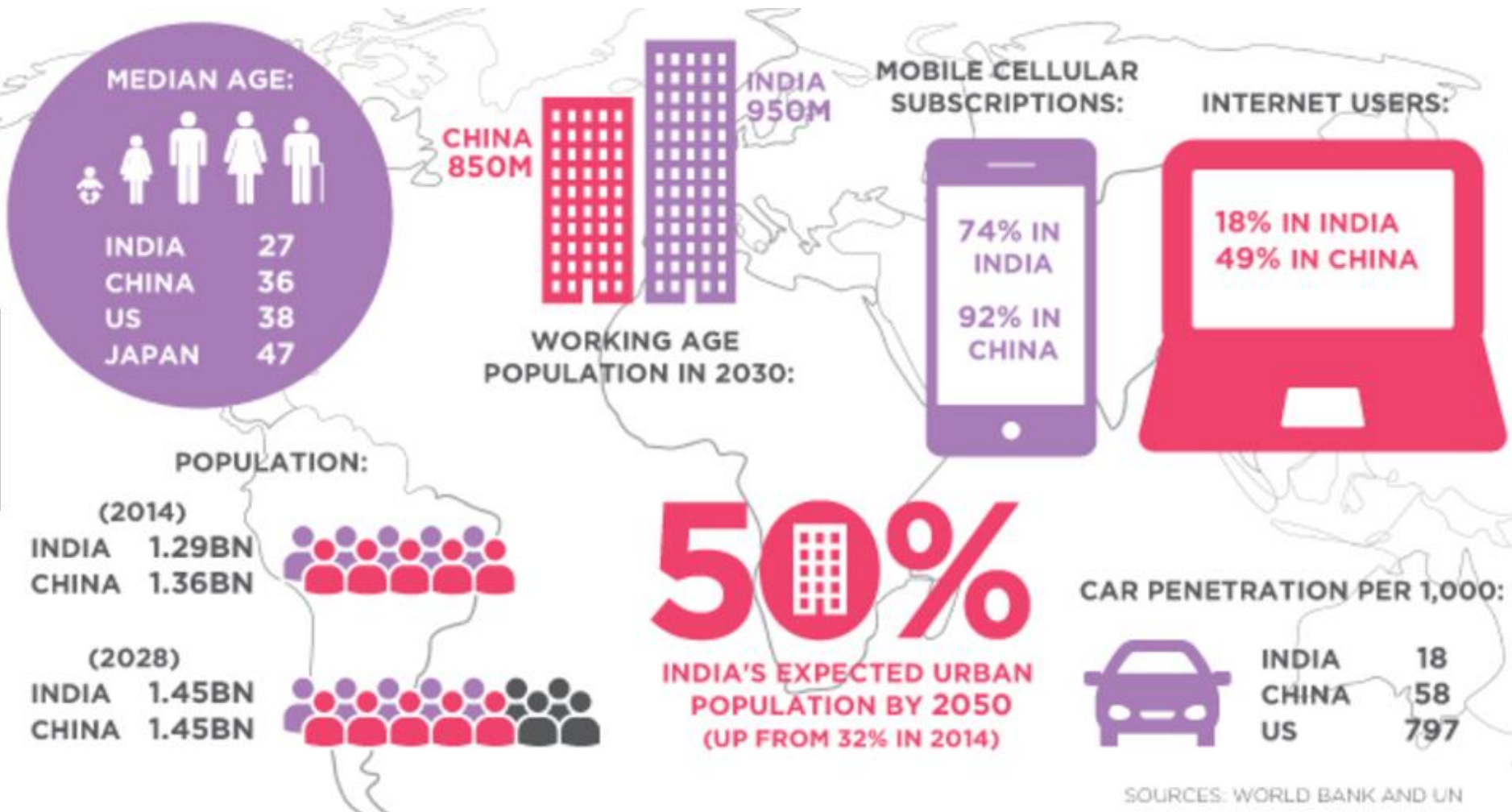
Poverty Has Been Declining

Official Poverty Estimates for India

Planning Commission Data from A. Panagariya, "India: The Emerging Giant", 2008, p. 137



Economic Potential is Huge!



India's economy at a glance

GDP per capita
\$1,627 USD

GDP growth (2005-2014)
6.3% average

Output per worker
\$10,249 USD

Employment rate
55.5%

Poverty rate (\$2/day)
2001 **85.1%** ↓ 2011 **68.7%**

Middle class (\$10-50/day)
2001 **1.7%** ↑ 2011 **3.5%**

Top-Notch Science & Engineering Talent (IIT)

ONLY THE BEST

Even with ten new campuses established since 2000 (green), the Indian Institute of Technology system accepts only around 2% of the 300,000 who apply.



What Drove Indian Tech Economy: Y2K

Exhibit 6: Indian IT-BPM exports and growth





THE INDIAN STARTUP SCENE



10 THINGS TO KNOW ABOUT INDIAN START-UPS

28

The average
age of start-up
founders

\$5 billion

Estimated total
funding for start-ups
in 2015

110

Number of incubators
and accelerators
in India

4200-4400

Number of start-ups in India
(third highest in world after
US and UK)

80,000-85,000

Number of people employed
in start-ups

3-4

Number of
start-ups born
every day

**\$2.5-2.7
million**

Average valuation of
start-ups

13-15%

proportion of start-ups
in e-commerce, the
highest in any segment

65

Number of M&A deals and exits
involving start-ups seen in the
first three quarters of 2015

292

Number of active angel
investors in 2015-10-13

Indian Startup Ecosystem

**3rd Largest In The
World
Fastest Growing**

800 Startups Setup Every Year

11,500 Startups by the end of 2020

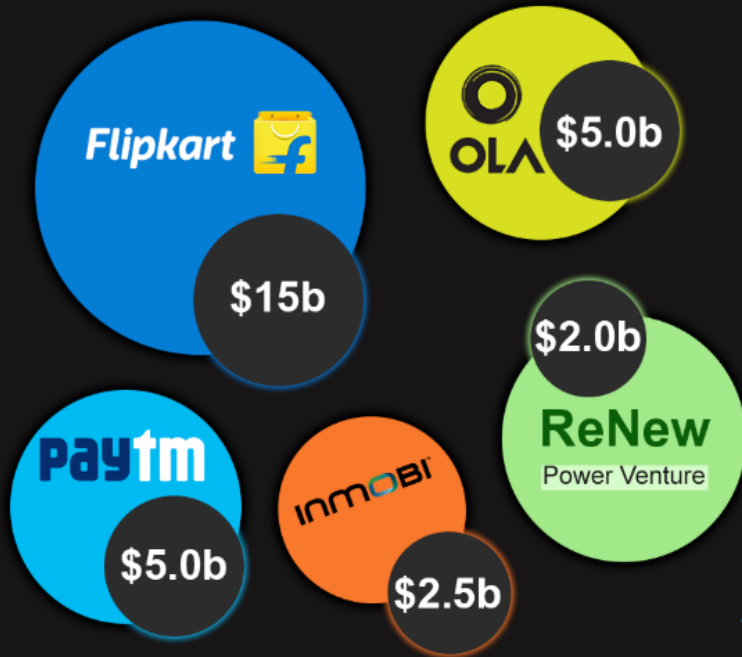
**250,000 people in Startups by the end of
2020**

Over 70 VS/PE Investments in 5 Yrs

3,100 start-ups in India at present

270% Increase In Startups In 6 yrs

Indian Unicorn List



| | |
|--|--------|
| Quikr <small>Assam hai badala</small> | \$1.0b |
| zomato | \$1.0b |
| ShopClues.com | \$1.1b |
| uO Mu Sigma | \$1.5b |
| hike messenger | \$1.4b |
| zeta | \$1.0b |
| BYJU'S CLASSES | \$1.0b |

Billion \$ Club

2017



Summary

Bet on the Next Generation to Create Growth
Aided by Technology & Geography & culture

**It is not China & India that will play the
Important role in the 21st century – it is
Japan!**

How the average American sees the World

A Stereotype Map

