



# 40 Years of China's reform and development

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# Chinese Economy

- Since 1978, China has been the best performing economy in the world
- China's GDP has grown faster, longer than that of any other country in the history of the world
- Now, Chinese economy is huge, comparable in size and global impact to USA
- China is in the driver seat because it has benefited enormously from the wave of globalization of the past four decades

# Chinese Economy – context

- China has faced developmental problems that today's rich countries never had to face
- Massive poverty, geographic and resource limitations had to be overcome
- Technology, institutions, rule of law were developed over centuries in rich countries to support their sophisticated market economies
- Yet China dismantled a socialist command system, created a dynamic market economy and has become an upper middle income country in four decades
- How did China achieve this miraculous growth and what are the challenges?

# Economic Development

- Economic Development is made of two fundamental processes
  1. Structural Change – real changes in distribution of resources and activity , movement of labor and capital from agriculture into cities
  2. Institutional transformation – changes in organizations, information and incentives that guide economic decision makers such as households, businesses and government – from a command economy to a market economy
- Structural and institutional changes lead to productivity improvements and income growth and thus economic development

# Enabling Conditions

1. Extraordinary human resources
  - enterprising, value education, relatively healthy and literate
2. Global division of labour
  - dis-aggregation of global manufacturing
3. Enormous catch up potential
  - the farther away the country is from technology frontier, more rapid is the potential growth during catch up period – Solow model
  - Telecom and internet technology revolution
4. Government with capacity to learn
  - Incremental and adaptive program of economic reform

# Economic indicators

- Growth has made China a great economic power but its not yet a rich country
- China's PPP adjusted GDP per capita is close to world mean value due to its high population
- It's a typical upper middle income country as per world bank definition
- Urbanization at 57% is slightly more than the global average
- Life expectancy at 76 is more than global average of 71.7 years
- Overall, China is fairly representative of world average development level – its no longer poor but still a long distance from being rich
- GDP per capita is 25% of US in PPP terms

# Is China in the middle income trap?

- 2.5 billion people live in countries with GDP per capita in PP terms in the range of \$ 10,000 to \$ 18,000 – China, Brazil, Mexico, Iran, Egypt and Indonesia
- Only 400 million people live in countries with GDP per capita in PP terms in the range of \$ 18,000 to \$ 30,000 – mostly former Soviet Republics that have joined EU and Chile, Turkey and Malaysia
- The small number of countries in the above range reflects the difficulty of countries to break into above \$ 18,000 range
- While it is relatively straightforward for a country to develop the skills to industrialize, urbanize and move out of poverty, it is more difficult to find a path to high income
- Reaching higher income needs stronger technical capabilities, better institutions and more innovation

# Is China in the middle income trap?

- All the high income countries ( per capita above \$ 30,000) are in there categories
  1. Europe and US, Canada, Australia and New Zealand
  2. Oil Producers
  3. East Asian high-performance economies – Japan, South Korea, Taiwan, Hong Kong, Singapore and Macao – these are more like china except in size
- Growth miracle China experienced from 1978 to 2010 is similar to East Asian economies – similar demographic and structural changes – adopted related programs of opening and market reform
- Can China adopt its institutions and policies for the slower growth period so that it can avoid the crisis and disruption?



# Is China in the middle income trap?

- In 2007 – We expect China's rapid growth to continue for another decade and then moderate as labour force growth slows down and rural-to-urban shift winds down – This is what happened
- Today, the period of most rapid structural change is over and market reforms are not being pursued as vigorously – growth will come down to new normal
- As labour force growth is moderating, output per worker will still be high even though output slows
- Slower growth is compatible with a highly productive and successful economy and a steadily improving standard of living

# Features of growth miracles

- GDP growth above 8% or GDP per capita growth above 6% for 20 years
- China, Japan, Korea, Taiwan, Hong Kong, Singapore, Malaysia, Thailand and Indonesia
- Common features
  1. Rapid labour force growth – demographic dividend
  2. Rapid structural change - workers moving from agriculture to higher productivity urban based industry and services
  3. High investment rates that provide the infrastructure required to help this transition
  4. Open economy that allows rapid growth of labour intensive, export oriented manufacturing

# Features of growth miracles

- Growth miracles can't go on forever and end when structural and demographic conditions conducive to miracle growth are exhausted
- Demographics, migration, investment and trade policy interact in complex ways to end the miracle growth
- Historically, growth transition happen quite abruptly and with significant economic disruption
- Japan : 1950 to 1973 growth rate 10.4% ; post that never grew at more than 6% and from 1993 onwards growth rate is close to zero
- Korea grew robustly till mid 1990s and Asian Financial Crisis of 1997 brought it to halt

# Multiple turning points

- Labour force growth has been robust as late as 1990 but has been declining after 2011
- Rural to urban migration was 11 million new migrants in 2005-10 period but has dropped to less than 5 million in 2010-15
- Exports as a share of GDP increased for three decades till 2006, and have declined to half of their peak level
- The share of manufacturing in GDP peaked in 2007 at 33% and is now declining
- The share of investment in GDP peaked in 2013 at 45% of GDP and has now declined
- Both manufacturing and investment share are the highest ever attained by any economy in the world
- Inward FDI was one of the largest in the world for several years and now outflows surpassed inflows in 2016
- Income inequality reached a peak in 2008 and is declining now

# Growth acceleration and slowdown

- From 2005 to 2016 is the end of miracle growth period
- After 2005, economy first accelerated and only then slowed down
- 1995 to 2005, GDP grew at 9.2% and was expected to remain at that level
- However, it accelerated to 11.2% from 2005 to 2010 and as population growth dropped from 0.8% to 0.5%, per capita GDP accelerated from 8.4% to 10.7% despite the impact global financial crisis in 2008 – One of the most extraordinary outcomes of modern times

# Why did economy accelerate after 2005?

- System reform played a major role
- Reforms of 1990 – cut back the state sector, released factors of production for more productive use and reduced government subsidies – Zhu Rongji reforms
- China's entry to WTO lead to access to world markets
- Urban housing boom as a result of privatization of existing housing units owned by work units and development of long term use rights in urban lands
- Growth acceleration was the deferred gift of the Zhu Rongji reforms to the Chinese economy

# Why did economy accelerate after 2005?

- Rapid expansion of exports and housing boom, lead to inflation above 5% in 2007
- Due to fixed exchange of RMB and US \$, large export surplus began in 2005 and finally in 2007, China started faster appreciation but soon after GFC happened
- Collapse of Lehman Brothers in October 2008 started the GFC
- China unleashed an enormous wave of domestic spending by opening of credit spigots, which have never been fully closed
- China growth rate bounced back after a quarter of slowdown
- The secular decline started after GFC crisis was averted in China – Growth declined from 10.6% in 2010 to 6.7% in 2016

# Responding to new normal

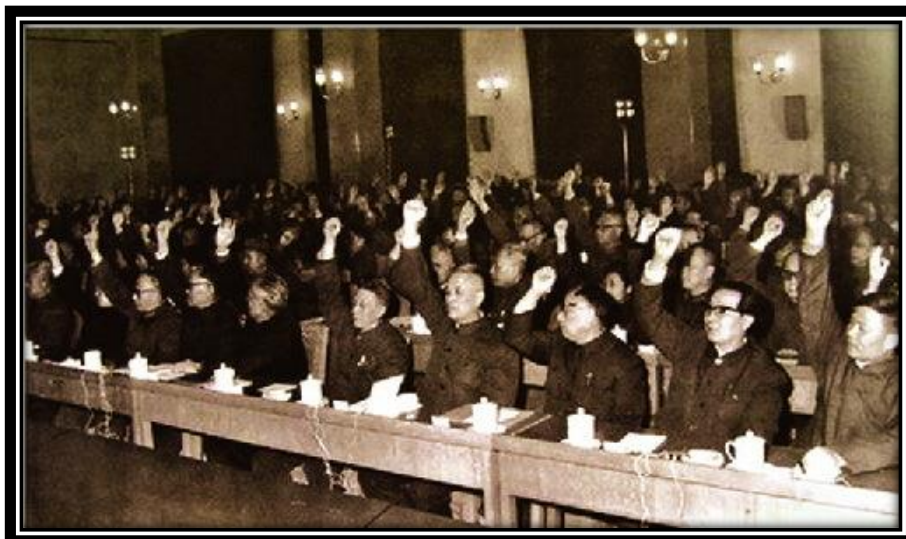
- Structural change and institutional transformation will continue to be the drivers of change
- Development side, China has come farther and faster than expected
- The factors which have driven earlier growth will not have the same level of impact
- The necessary transitions are now multiple: demographic, technological, macroeconomic and institutional
- Can China avoid the middle income trap?
- Can it make the leap to an innovation driven society?



To seek truth from facts



11<sup>th</sup> CPC – Third plenum in December 1978



18 farmers of Anhui agriculture revolution



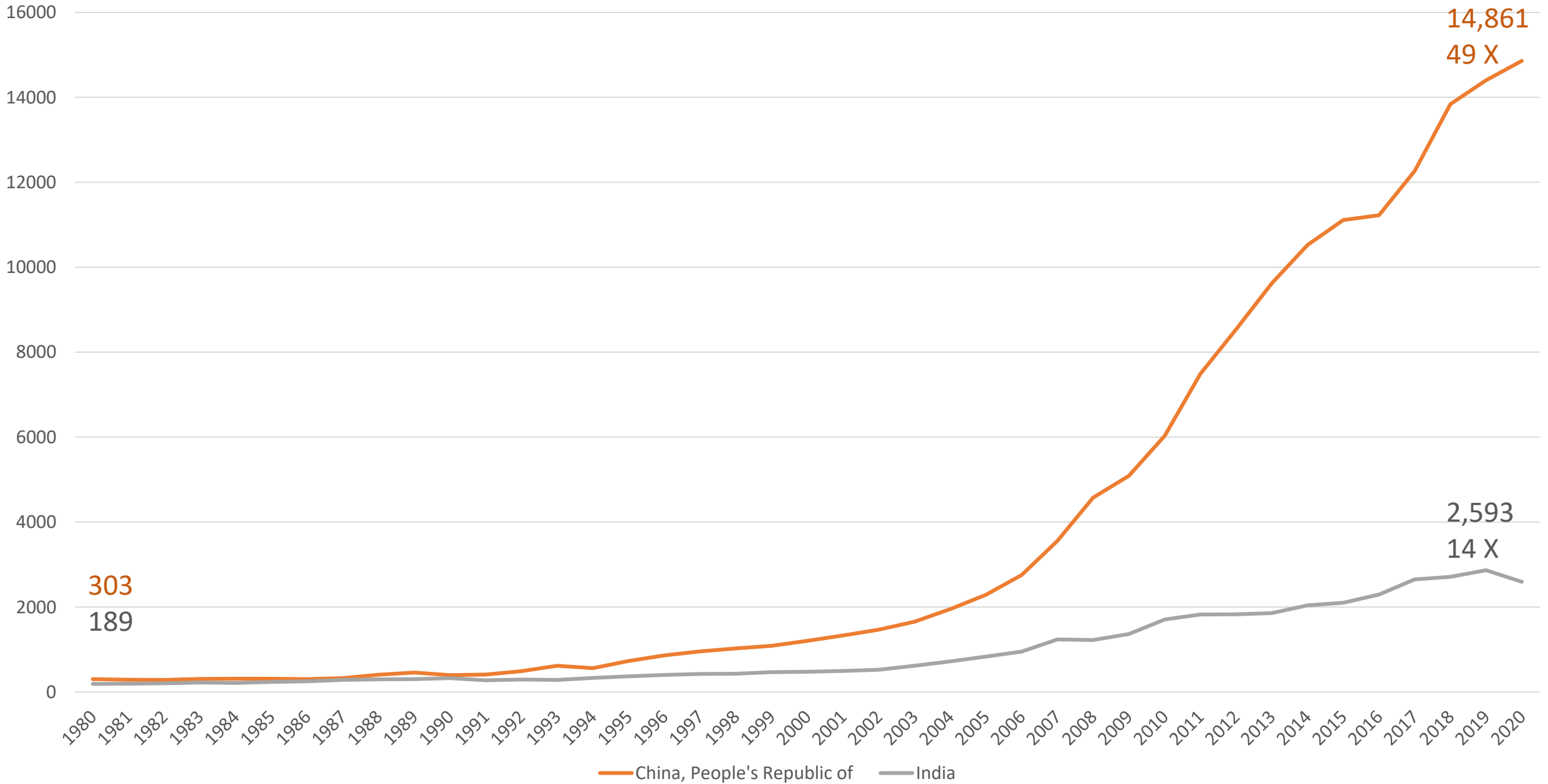
# Beginning

- The 11<sup>th</sup> Central Committee of Communist Party of China (CPC) held its third plenum in December 1978
- “ seeking truth from the facts” – shift the focus from political movement to economic development which was the foundation of reform and opening up
- In winter same year, 18 farmers of Xiogang abandoned its collective brigade production structure and contracted collectively owned land to households
- Household responsibility system (HRS) spread nationwide and replaced the commune system by 1980 which was the first break in planned economy
- Opening up to international trade and investment was also done

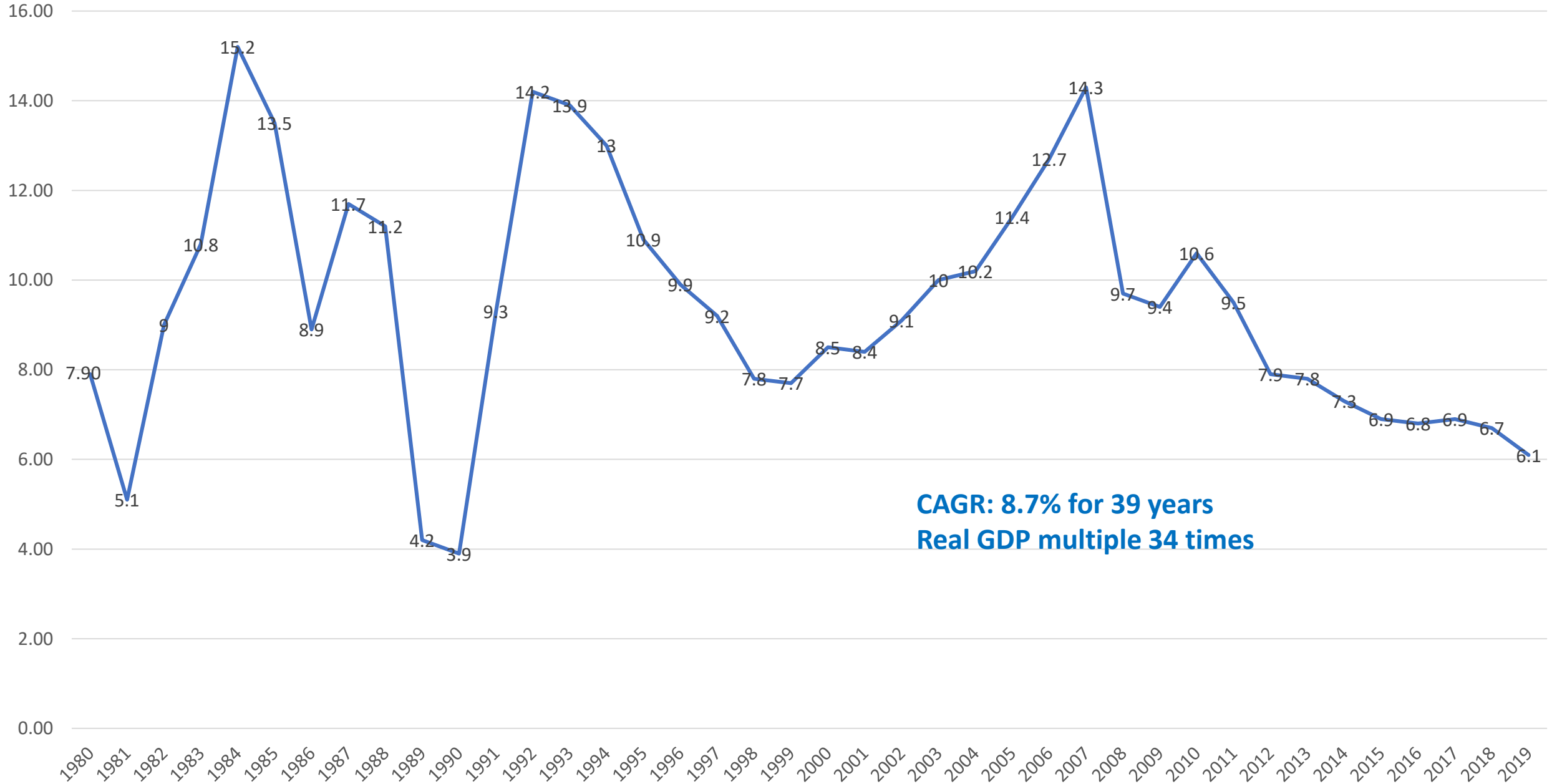
# Beginning

- Deng Xiaoping established Special Economic Zones (SEZ) in Shenzhen, Zhuhai, Shantou and Xiamen signaling to the world that China is open for business – many more SEZs were established by 1990s
- China entered GATT in 1986 and WTO in 2001 gaining access to international markets

## GDP, current prices (Billions of U.S. dollars) – IMF data

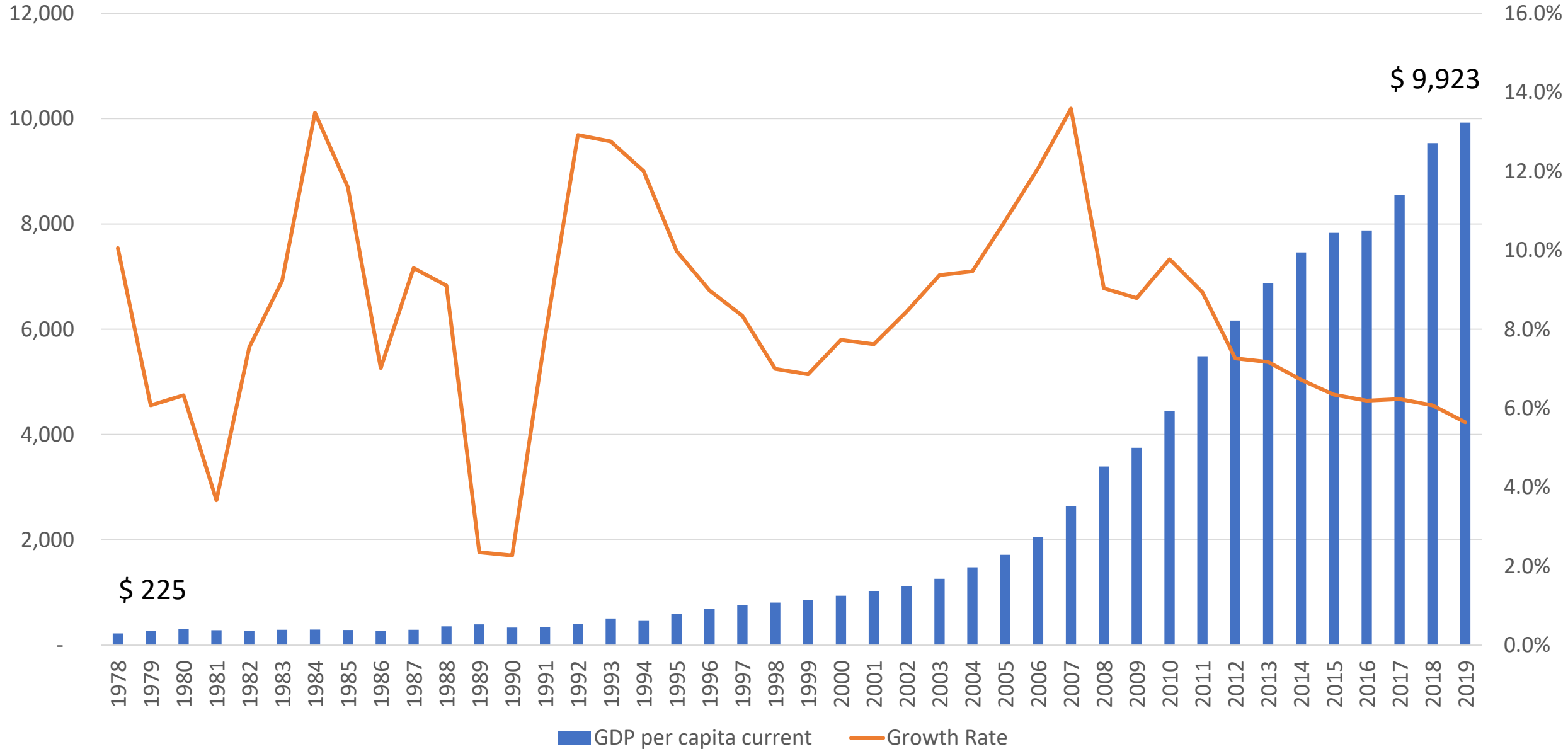


# China, People's Republic of, Real GDP growth (Annual percent change)

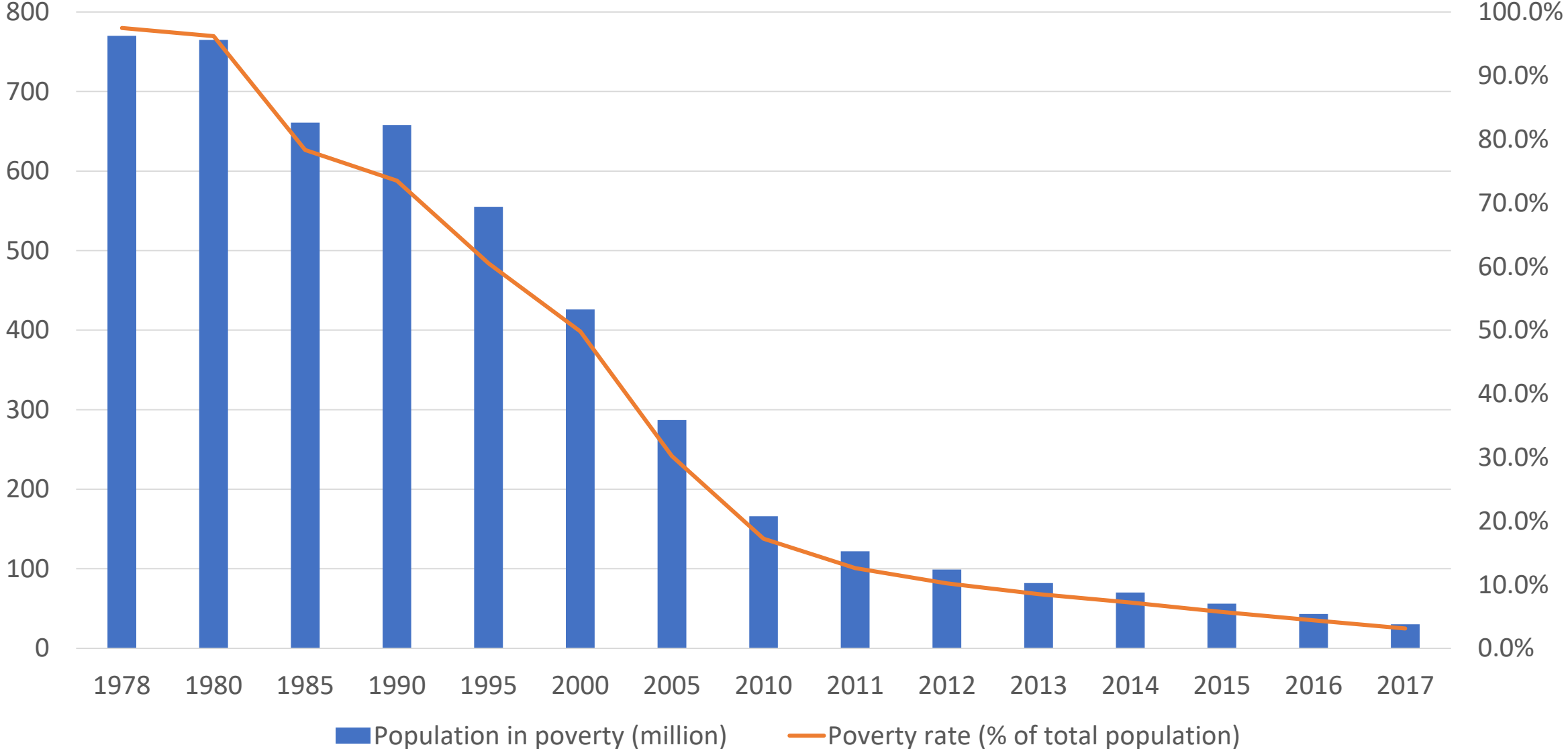


# GDP (current prices) per capita and growth rate (real) – CHINA

## 44 X growth nominal



# China's Poverty



# Introduction

- The eleventh Central Committee of the Communist Party of China (CPC) held its third plenum from 18<sup>th</sup> to 22<sup>nd</sup> December 1978 - This is beginning of reform era in China
- “Seeking truth from facts”
- Shift focus from political movement to economic development
- Foundation for reform and opening up were laid here
- In winter of 1978, Xiaogang farmers abandoned its collective brigade production structure and pioneered contracting collectively held land to households – this became the Household Responsibility System (HRS)



# Introduction

- Change from central planning to market economy
- Opening up for international trade and investment
- Deng Xiaoping was the proponent and protector of Chinese reforms for two decades
- In July 1979, four “ special export zones “ later known as “ special economic zones” (SEZ) were set up at Shenzhen, Zhuhai, Shantou and Xiamen
- China joined GATT in 1986 and WTO in 2001

# Three questions

- How and why China missed the opportunity of catching up with the developed countries during its planned economy era?
- How was China's economic growth enhanced by removal of institutional constraints, factor accumulation and improvements in resource allocation?
- How can China, which is a upper middle-income country become a high-income country?

# Missed Opportunity of convergence in the planning era

- China was amongst the poorest countries in the world in 1980 – but higher in terms of human capital indices such as average years of schooling and life expectancy at birth
- The capital stock and rate of accumulation of capital were high – During 1953-78, the average investment rate was 29.5% much higher than world average and that of many developing countries
- The institutions and policies for efficient resource allocation and work incentives were not there leading to sub optimal growth

# Missed Opportunity of convergence in the planning era

- High rates of capital accumulation and rapid increase in labour force did not lead high growth because the productivity was low
- Resource mis allocation distorted industry structure and appropriate technology was not used in production
- From 1950 onwards, China moved from a demographic combination of high birth rate, high mortality rate and low population growth rate to that high birth rate, low mortality and high population and labour force growth rate
- This leads to a dual economy characterized by labour surplus in agriculture

# Missed Opportunity of convergence in the planning era

- Accumulated labour surplus and low dependency ratio lead to a population structure conducive to high economic growth – Demographic dividend
- There is a comparative advantage in the production of labour intensive goods and services and linked with open international trade, this can lead to miracle growth
- This opportunity was not realized as a comparative advantage defying rather than a comparative advantage following strategy was adopted
- Industrialization was promoted to catch up with advanced countries and resources were allocated to that through central planning and there was no international trade

# Missed Opportunity of convergence in the planning era

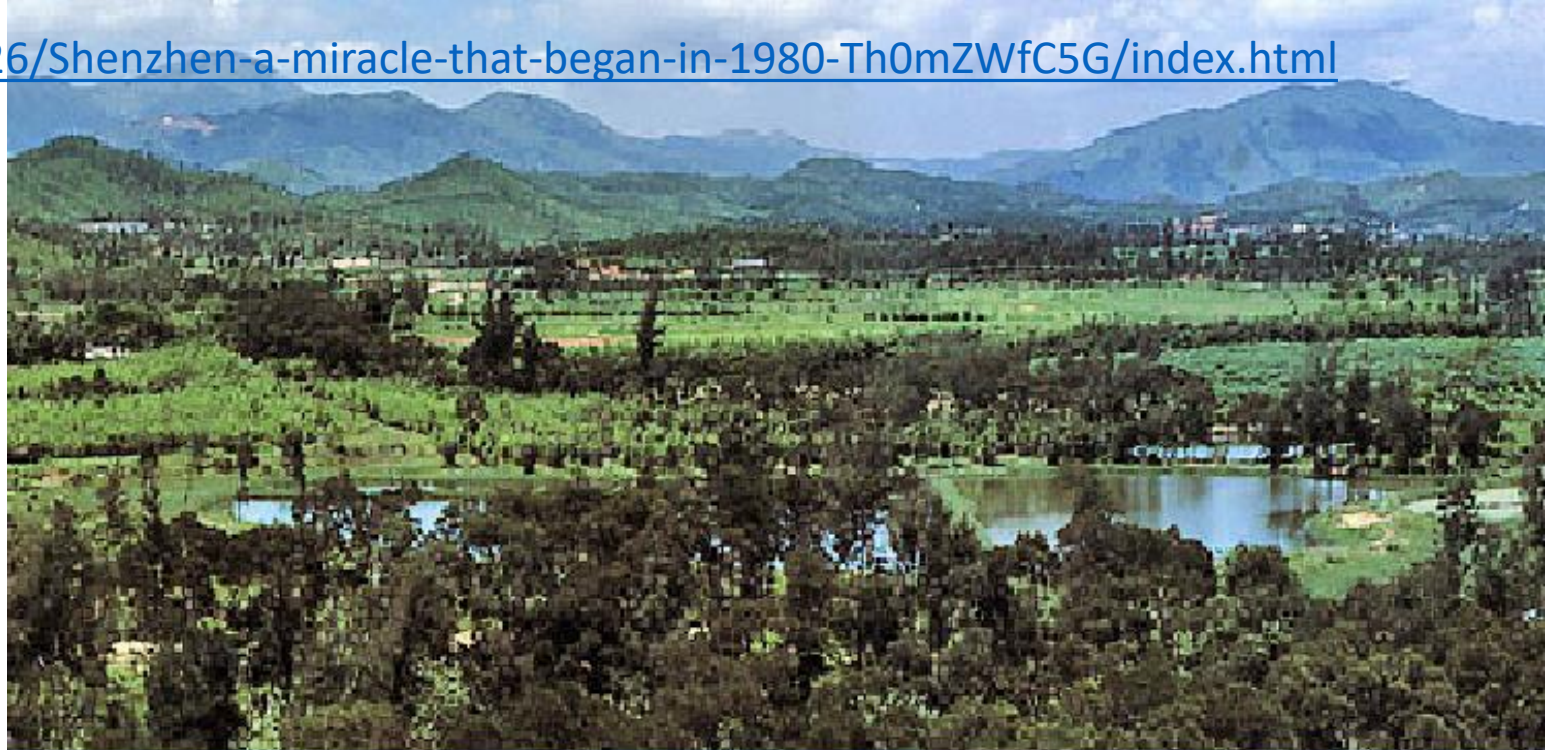
- Huge amount of output was allocated to investment rather than consumption
- Highly centralized planning denied a role for markets leading to mis allocation of resources and factor productivity and growth declined
- So it was not the lack of resources or factors of production which was holding back the growth rather the inability of a centralized, planning system to utilize these resources in an effective manner was the problem
- Nationalization of industry (SOE) and collectivization of agriculture were good for planning purposes but there was no operational autonomy and work incentives were mis aligned leading to inefficiencies

# Misallocation of resources

- in 1952, the labour force working in agriculture was 82.5% - potentially this was surplus labour available for modernizing the economy
- From mid 1960s, the dependency ratio declined leading to a potential demographic dividend
- Lewis model – abundant labour force not only increases labour force but also leads to a high savings rate and this in turn avoids a diminishing return to capital and raises allocative efficiency as labour is transferred from agriculture to other sectors of the economy
- The planning model stopped China from enjoying all these benefits – in 1977, the share of labour force in agriculture was 74.5%
- The “ Great Leap Forward” and “ Cultural Revolution” were the most disastrous episodes during the planning period

# Impact of reform and opening up

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# Reform and opening up

- Successful economic development needs adequate capital accumulation and efficient allocation of physical and human capital
- Reform process has to meet three conditions to be successful
  1. It should bring benefits to one major group to provide political support
  2. These benefits can't be at the expense of any other major group
  3. It should be in a key area so that it gains momentum
- HRS system which abolition of people's communes met all these conditions and was very successful
- It was adopted in five years (1979-84) across China
- Improved incentives by granting farmers autonomy over operations and rights to profit from more efficient use of land and labour and increased productivity

<http://video1.sixthtone.com/video/5/0/219.mp4>

# Reform and opening up

- From 1978-84, grain yield per unit area increased by 42.8% and output of grain by 33.6%
- The quantum jump in agricultural production mitigated the shortage of urban supply and abolition of rationing system by 1990s
- Nominal average income of farm households increased by 166% and the number of rural poor reduced from 250 million to 128 million
- Similar reforms in urban and industrial sectors were taken up but with much greater difficulty
- In SOEs, a system of bonuses was introduced to align incentives of employees with the organization – autonomy and profit sharing were given to SOEs

# Reform and opening up – State owned enterprises

- Expanding enterprise autonomy began as a pilot in few cities during late 1970s and was expanded to the whole country by 1980s
- Simplification of government controls and delegation was followed through
- Autonomy was given in wages and bonus setting, hiring and firing of workers, purchasing and selling of goods and services, pricing of products, utilizing internal revenue accrued for further investments
- Experimented with different management forms - manager's responsibility, enterprise contracts, asset leasing and shareholding systems
- In late 1990s, radical reforms were introduced

# Reform and opening up – State owned enterprises

- “ Grasping the large and letting go of the small” – corporatize large enterprises based on modern management principles and privatizing small and medium sized enterprises
- Market discipline and accountability were introduced
- 1998 – State owned assets supervision and administrative commission (SASAC) was established – it was responsible for supervising central government’s nonfinancial enterprises
- Property rights and governance structures were reformed to allow wide range of non state enterprises
- Competition between enterprises with different kinds of ownership helped to improve the efficiency of SOEs

# Reform and opening up – State owned enterprises

- By 2015, only 4.1% of revenue was generated by SOEs and the rest was from 29 other kinds of ownership such as private individuals and partnerships, limited liability companies, foreign owned companies and joint ventures between Chinese and foreign companies
- Price reform: Prices have to reflect true economic value is necessary for efficient resource allocation
- Enterprise reform requires that effective markets should function for setting prices of goods, services and factors of production
- A “double track approach” was adopted for transition in markets – for a while market and state determined prices exist alongside each other – overtime, the market prices expanded, and the planned prices decreased

# Reform and opening up – role of state

- Government role changed from being directly involved in economic activities to promoting equity by provision of basic public services
- To provide such services , local governments need revenues which can only come from high growth of GDP
- This form of entrepreneurial government has provided powerful impetus to economic growth
- Sometimes, over involvement of the Government in allocation of resources has impeded the role of market forces and since 2010 onwards the role has gone back to provide basic services in education, social protection, market regulation and macroeconomic policies

# Demographic dividend

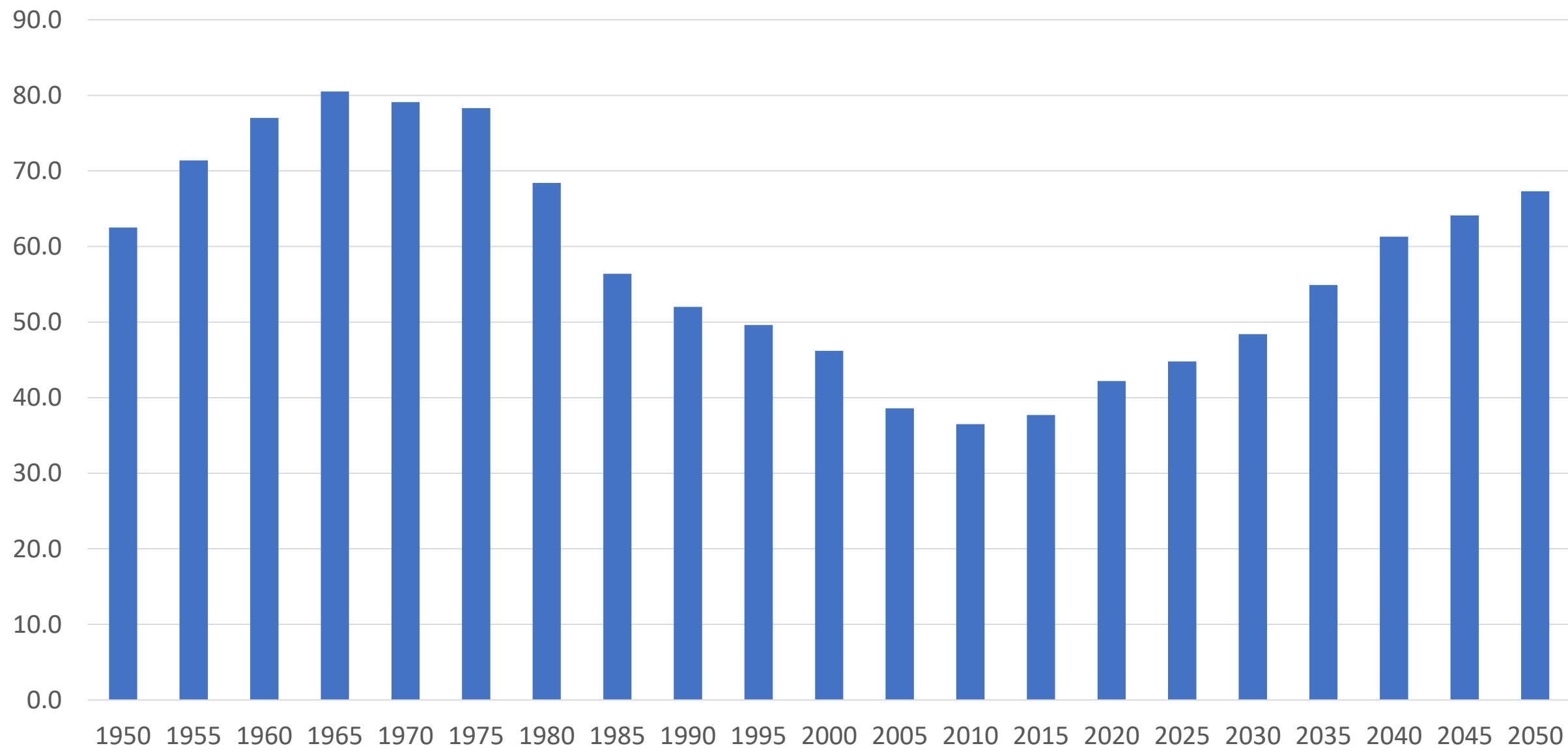
- It happens when growth in working age population exceeds that of dependent population
- In China, the population window of opportunity coincided with the first three and half decades of reform and opening up
- Low and declining dependency ratio, leads to high labour force growth rate ; Also it contributes to high savings rate
- The abundant supply of labour from the country side delays the onset of diminishing returns to capital and makes the capital accumulation the main engine of growth

# Demographic dividend

- An abundant supply of labour is favorable factor for rapid growth of developing country especially when it is catching up
- A favorable age structure and skills in terms of number of yaers of schooling that they had also is important
- Total employment in rural and urban areas increased from 402 million in 1978 to 775 million in 2015, the share of agriculture labour dropped from 69.6 % to 18.3%
- Strong employment growth leads to increases in living standards



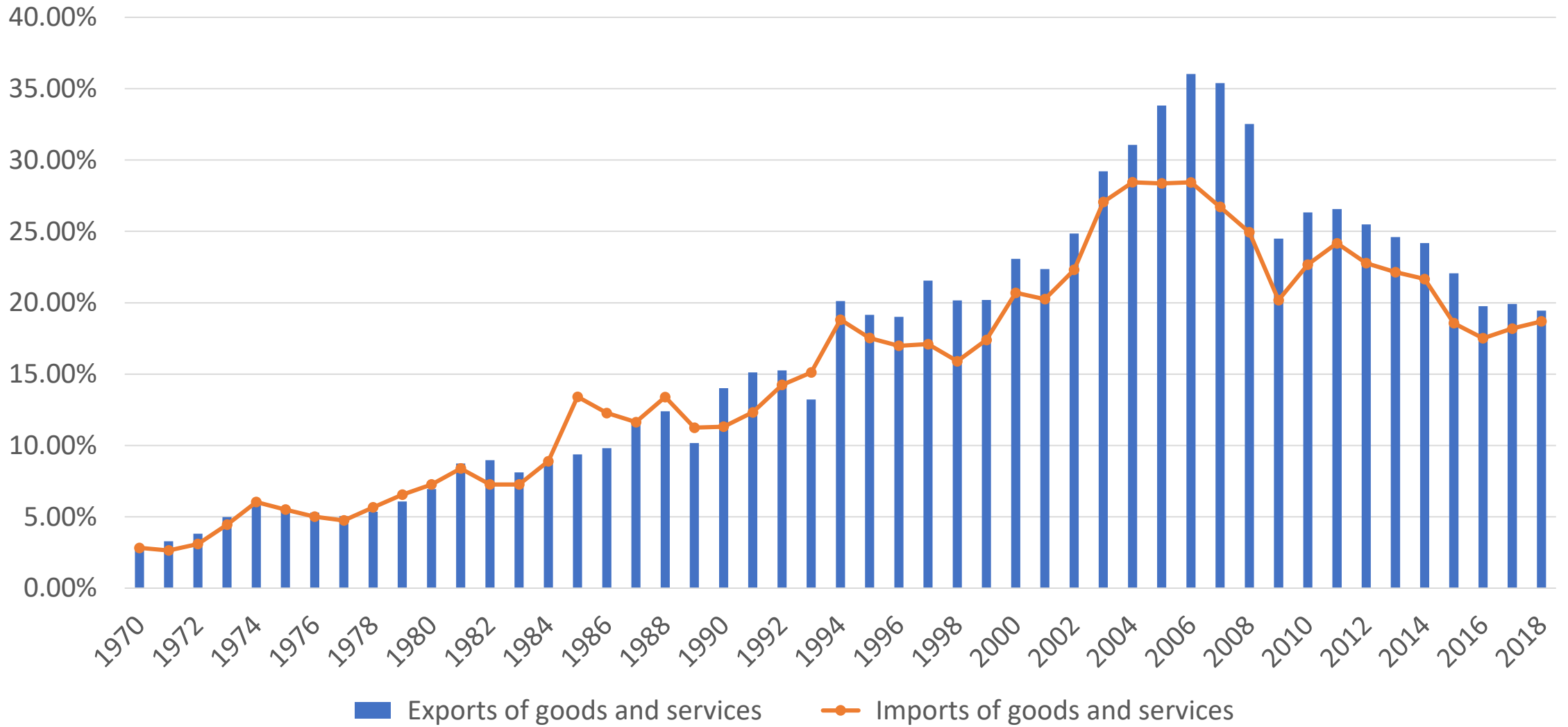
Total dependency ratio (ratio of population aged 0-14 and 65+ per 100 population 15-64)  
- CHINA



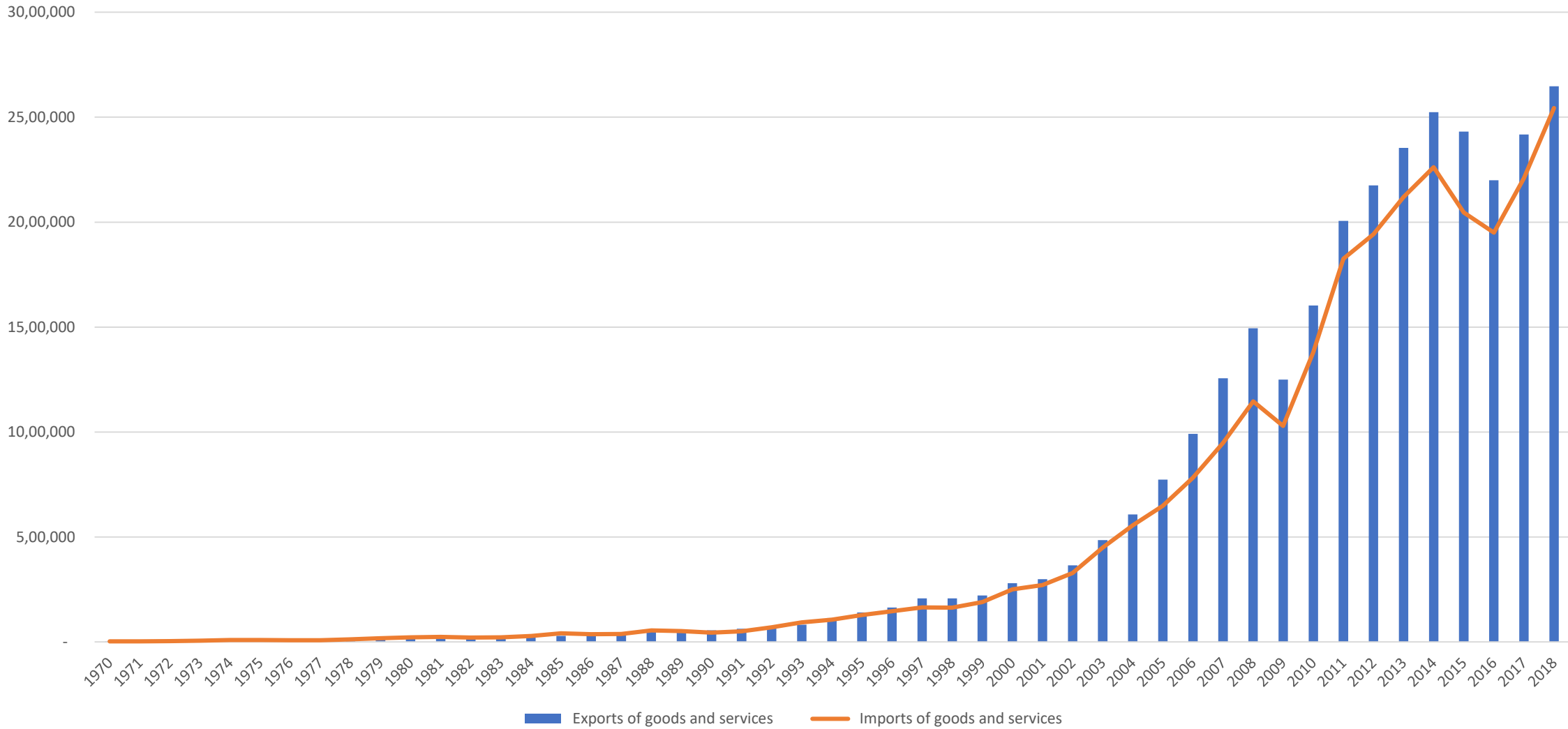
# Reform and opening up – Trade

- China opening up to international economy has proceeded in parallel to economic reform
- China's exports have grown from 4.6% of GDP in 1978 to 20.7% in 2016 – they have been a main engine of growth
- China has benefited from getting lots of foreign investment, participated in global governance and invested overseas
- Interaction with foreign companies has helped China to adopt advanced technologies and management techniques and become competitive to exposure to world class companies
- The demographic dividend has been converted into massive gains from trade

### China exports and imports as % of GDP



# China - exoprts and imports in US \$ billions



# Reform and opening up : income inequalities increased but still there was no backlash. Why?

- Increase in employment – expansion of labour intensive industries created numerous jobs outside agriculture
- In the period 1978-2015, GDP and per capita GDP increased by 29 and 20 times ( in real terms), the consumption of rural and urban households increased by 16 times – for many years, the improvement in living standards owed more to non agricultural employment rather than to higher wages
- Chinese economy entered Lewis turning point around 2004, the wages of workers have increased rapidly; between 2013-16, the wage of migrant workers increased at 10.1% per annum- gini coefficient fell steadily
- From 2004 onwards, the government has focused on redistribution such as poverty alleviation programs, expanding coverage of public services, raising minimum wages, relaxing control over households registration for migration from rural to urban areas

# New development stage and unfinished tasks

- China has made two important systemic transitions – from a planned to a market economy and a dual economy to neo classical growth
- China also has made a rapid demographic transition from high to low fertility
- Economic reform and opening up to the world economy have created an institutional environment in which demographic dividend has translated into extraordinary economic growth
- Reforms of incentive mechanisms, enterprise governance, price determination, resource allocation system, foreign trade and investment have contributed at different points in time for growth

# New development stage and unfinished tasks

- If China is to graduate from upper-middle income to high-income status, its growth needs to shift from reliance on labour and capital supply to reliance on productivity enhancement
- This would need more effective reforms which are inherently difficult
- Chinese economy entered its Lewis turning point – characterized by labour shortage and raising wages – demographic dividend diminished rapidly
- Labour shortage means that wages grow faster than productivity growth ; rapid increase in capital – labour ratio leads to a sharp decline in return to investment
- The deceleration of labour movement from agriculture to other sectors removes a source of rapid improvement in allocative efficiency leading to sharp fall in TFP growth
- All the above factors lower China's potential growth by considerable amount

# Growth sources and trends

	Growth factor	How have they worked?	Features and implications
1	Capital accumulation	Low dependency ratio is conducive to high savings; unlimited supply of labour prevents diminishing returns to capital	Unsustainable; as labour becomes scarce, return on capital starts diminishing
2	Quantity of labour	Population structure guarantees labour supply which is a comparative advantage in labour intensive manufacturing	Unsustainable; demographic dividend disappears as economy passes Lewis turning point
3	Human Capital	Education expansion and mass labour entry improves quality of stock of workers	Education expansion eventually slows and would need enhancing its quality and equity
4	Total Factor Productivity	Increases from improvements of incentives and resource allocation system	Increasingly becomes challenging but is important to sustain growth and requires new sources of growth



# Growth sources and trends

	Growth factor	How have they worked?	Features and implications
5	TFP of which resource allocation	Reallocation efficiency of resources through labour mobility from agriculture to industry and service sectors	Dominant in early stages of development and diminishes after Lewis turning point
6	TFP of which technology	Utilize the advantage of backwardness through absorbing foreign technology and management practices – Solow model of growth	As gap grows, technology progress depends upon innovation and not on catching up
7	Population	Demographic dividend manifested itself in all factors driving rapid growth	Diminishes as China ages ; second dividend is available by removing barriers to growth

# New development stage and unfinished tasks

- Estimates of fall in potential growth from about 10% per annum prior to 2010 to 7.6% in 2011-15; 6.2% in 2016-20 and with a gradual decline to 3% up to 2050
- China will not escape the iron law of regression to mean in the long run – however, by deepening reform and upgrading its industrial structures , it can prevent its growth from falling too fast
- One reason why deeper reform is difficult than earlier is that its now difficult to find improvements that benefit one substantial group in society without hurting others ( Pareto improvements such as HRS)
- Reform now faces resistance from vested interests
- Creative destruction will mean tapping news sources of growth and some workers will loose jobs and some established enterprises will go out of business

# New development stage and unfinished tasks

- To meet this challenge, reform dividend – the added economic value from new reform measures – should be made available to the losers of reform
- Redefine fiscal responsibility between central and local governments, strengthen special protection for unemployed workers, and disadvantaged families
- TFP growth in future has to come from innovation and creative destruction
- Allocative efficiency related to entry, expansion, contraction and exit of firms can contribute up to one third of national productivity growth
- To make it work in China needs to increase competition, break monopolies, encourage entrepreneurial activities and strengthen social protection
- Road ahead is harder than the road already travelled – but if not taken China will be caught in middle income trap

# China's success over past 40 years is unprecedented in world history

- Enormous increase in GDP ( \$ 224.985 bn in 1976 vs. \$ 9.604 trillion in 2016)
- GDP per capita increased from \$ 263.231 in 1976 to \$ 6,893.77 in 2016)
- Now largest economy in the world in PPP ( China is 15% larger than USA in 2016; 3.6% of global economy in 1990 vs. 17.7% in 2016)
- Largest source of global savings (32.4% of GDP in 1978 (global average 23.8%) vs. 45.4% of GDP in 2017 (global average 25.8%))
- Largest manufacturing economy ( share of global manufacturing as of end 2017: China 27%, Indonesia 22%, Japan 19% and India 16%)
- 740 million people moved out of poverty (770 million in 1978 vs. 30 million in 2017)
- Successful transformation in many dimensions – towards a social market economy with Chinese characteristics
  - Education
  - Innovation
  - Both physical and soft infrastructure
  - Institutional transformation

## Still much to be done

- Per capita income still about one sixth of USA
- Many areas of institutional development needed
- Many aspects of quality of life
  - Environmental problems
  - Health – though the trends are positive
- Inequality
  - Including access to education, especially for migrants
- Some critical aspects of economic structure
  - Excessive reliance on debt
  - Developing sustainable basis of support for local government

# How was China successful?

## Multiple Problems

- Change in system of organization of production to a market economy
- Shift from rural to urban
- Shift from agriculture to industry
- Transformation from a developing country to an emerging market
- To an innovation economy and learning society

# Marked contrast with Russia

- Russia had more educated population
- More resources
- More industrialized
- More urbanized
- Higher GDP
- Yet Russia saw income and living standards (even life expectancy) decline

# Why did China succeed?

- Pragmatic and non –ideological
  - Recognition that transition was a new problem that has never been solved
  - But there were lessons that were to be learnt from experience of others
  - Crossing the river by feeling the stones
- Gradualism and no shock therapy
  - Still, there may be threshold effects that require decisive, critical minimum efforts
  - Mixture of speed and gradualism
- Recognition that each stage of development requires new institutional arrangements, new policies
  - Marked shift in policies in each decade, within the context of continuity



# Why did China succeed?

- What separates developed and developing countries is as much gap in knowledge as a gap in resources
- Institutional innovation and learning
  - Dual pricing regime
  - Township and village enterprises (TVE)
  - Joint ventures
- Heavy investment in education
  - Sending many students abroad
- Learning from others : Opening to world was crucial
  - Engagement in trade
    - But recognized early on that China had to go from just being low-cost center of production / assembly for others to having its own firms

# Why did China succeed? – Learning and innovation

- Recognizing that what was learned in one part of the country had to be transmitted to the rest
  - Gaps in knowledge within a country are as important as gaps in knowledge between countries
  - Success in eastern China had to be replicated in rest of country
- Focus on becoming an innovation economy
- Recognition that one can not just borrow from others

# Specific institutional innovations that contributed to China's success

- Individual responsibility system in agriculture
  - Provided strong incentives, without having to engage in contentious political debate over full privatization
  - Got 95% of benefits, without large distributive costs that would come from full privatization
  - China still has not come to terms with rising inequality associated with property and needs capital gains and property taxes
- Marked contrast with countries that ideologically insisted on quick privatizations
  - Agriculture production declined
  - Institutional framework associated with production eroded
  - Poverty and inequality increased

# Township and Village Enterprises (TVEs)

- Decentralized competition
- China emphasized competition
- Russia emphasized privatization – largely failed
  - Deindustrialization – largely a natural resource economy with high levels of inequality
  - Monopolization
  - Corruption – even Americans who were involved and in charge of privatization were corrupted in the process
- Wrong theory of reform
  - Should not expect Rockefeller to be enthusiastic of competition law
  - With poor corporate governance, could loot companies
  - Failures undermine confidence of reform process

# Reform is a never ending process

- China is entering a new stage of development
  - Critical problems of inequality, health, environment, livable cities
  - Markets can't solve these problems
- Further questions are posed by changing globalization and recognition of risks of excessive financialization
  - West has not succeeded in adequately taming the financial markets
  - Problem is partly political – excessive influence of financial markets
  - As China grows, vested interests may also grow in influence
- Principles that guided China in first forty years likely to continue to be relevant
  - Pragmatism – Crossing the river feeling for the stones
  - New problems, not fully foreseen will appear
  - Will have to address these using insights from theory and past experience
  - Openness – there is much to be learned from experiences of others and from insights of non-ideological economic analysis