



“Thirteenth Five Year Plan” : Prospects of Economic Development in China

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**Expressions in this report are the author's view, and are not related to the
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Outline

- **“Thirteenth Five Year Plan” is the crucial five years in the process of establishment of Modernization of China**
- **The Economic Development of China in the period of “Thirteenth Five Year Plan” is faced toward New Situations**
- **Scenario Analysis for Future Economic Development**
- **Main Conclusion and Policy Implications**



Five Year Plan	Year	Growth Rate	GDP (100 million Yuan)		GDP per capita (Yuan)	
			Begin	End	Begin	End
First	1953-1957	9.2%	824	1060.3	142	168
Second	1958-1962	-0.2%	1308.2	1151.3	200	173
Adjustment	1963-1965	15.1%	1236	1717	181	240
Third	1966-1970	6.9%	1873	2261	255	276
Fourth	1971-1975	5.9%	2435	3013	290	329
Fifth	1976-1980	6.5%	2961.5	4545.6	318	463



Five Year Plan	Year	Growth Rate	GDP (100 million Yuan)		GDP per capita (Yuan)	
			Begin	End	Begin	End
Sixth	1981-1985	10.8%	4891.6	9016.0	492	858
Seventh	1986-1990	7.9%	10275.2	18667.8	963	1644
Eighth	1991-1995	12.3%	21781.5	60793.7	1893	5046
Ninth	1996-2000	8.63%	71176.6	99214.6	5846	7858
Tenth	2001-2005	9.76%	109655.2	184937.4	8622	14185
Eleventh	2006-2010	11.21%	211923.5	401512.8	16500	30015
Twelfth	2011-2015		473104.0		35198	



“Thirteenth Five” is the crucial five years in the process of establishment of modernization of China

- **This is the crucial period to achieve successfully the grand target to establish an all-round Xiao-Kang Society**
 - Building a well-off society in an all-around way target before the 100th birthday of the CPC in 2021 is an important part of the strategy of “three stages”, this is also a target shall be achieved by the end of “Thirteenth Five”。
- **This is also the crucial period to obtain decisive results in important areas and crucial element in guaranteeing an all-round deepening reform**
 - Third Plenary Session of Eighteenth Party’s Congress has made arrangement on the process of an all-round deepening reform, the time span covers the whole period of “Thirteenth Five”
- **This is also the crucial period to achieve substantive progress in guaranteeing the transformation of pattern of economic development**



The Economic Development of China in the period of “Thirteenth Five Year Plan” is faced toward New Situations



International Situation

I. The pattern of international economic growth is changing

- The new emerging economy becomes an important pulling force of the growth of the global economy since this century, the global economy is showing a situation of “Rising East and Declining West”, this situation becomes evident increasingly post the global financial crisis.
- There is new change of this situation since 2013, the economic growth rate of developed economies becomes faster especially the economic recovery of United States of America. While the growth rate of the newly emerging economy becomes slower. The pattern of change of growth of future global economy requires to concern in depth and to study in depth.



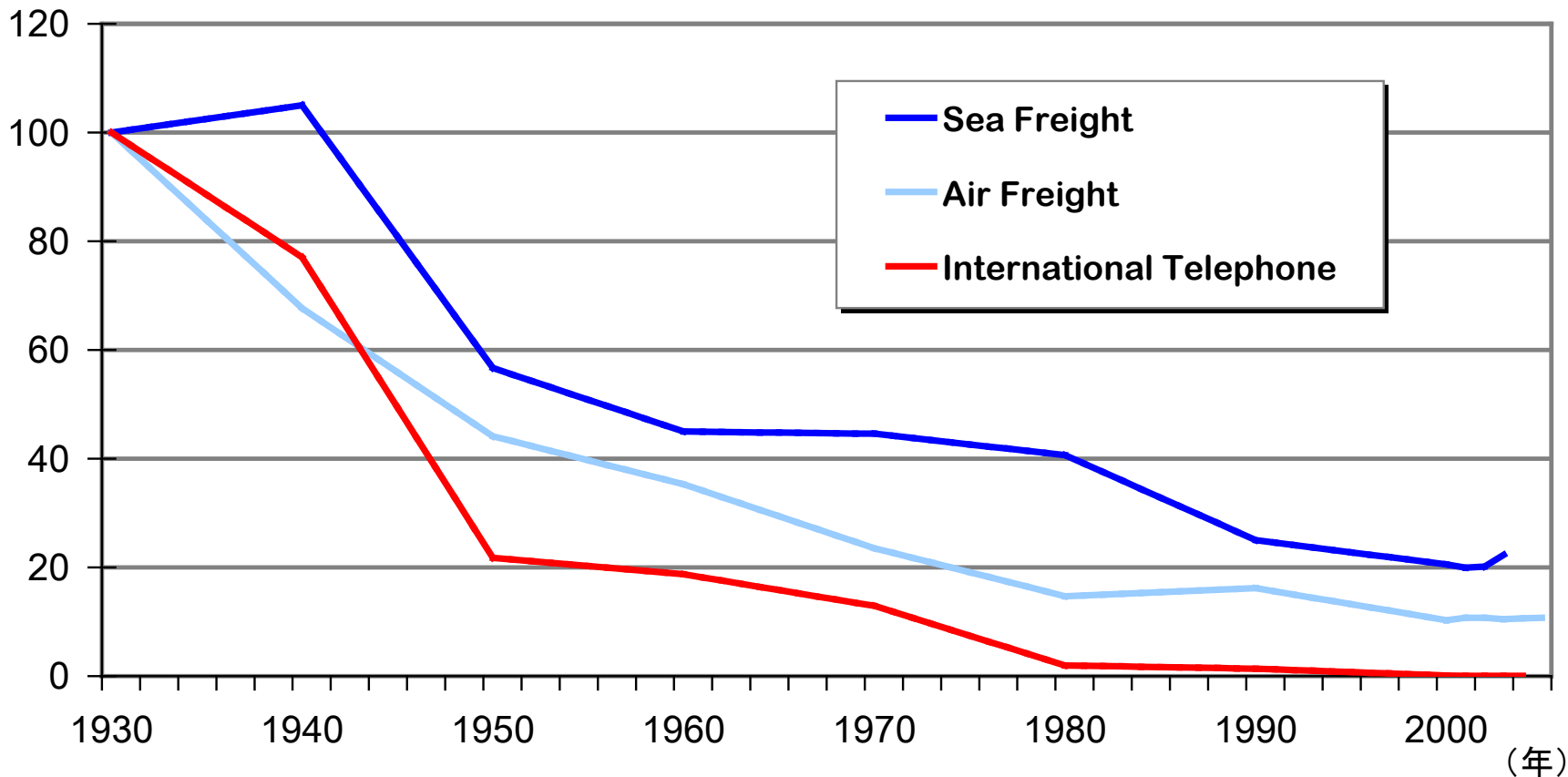
International Situation

II. There are violent changes of organizational pattern of global production

- The global economy has stepped into a new stage in networking since 80's of 20th century, the global production network is formed increasingly, the mode of global production is changing violently-division of labor of interindustry→division of labor of intraindustry →division of labor among production element and production task. National value chain→regional value chain →global value chain
- The importance of production network/platform is shown increasingly
- In the time of competition of global value chain, the manufacturing element will be changed to lower profit while the two terminal elements (R&D and Marketing and after sales service) will become more profitable, this will raise new challenge to future industrial development of China to be a global large manufacturing country



(1930年=100)

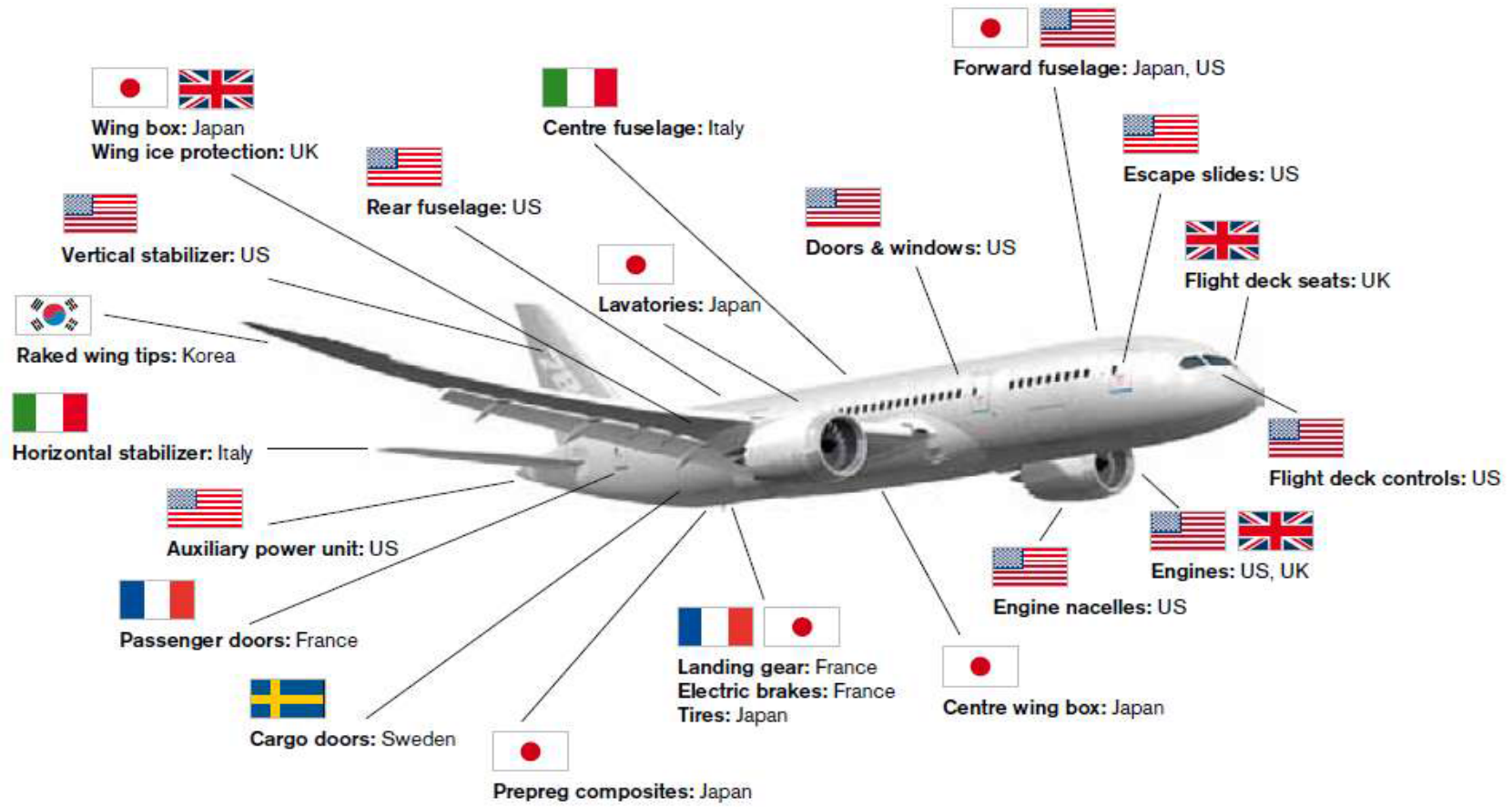


Source: Growth and Impact of GVCs? What is so special? (OECD)

Source: 2008 White Paper on International Economy and Trade



Boeing 787



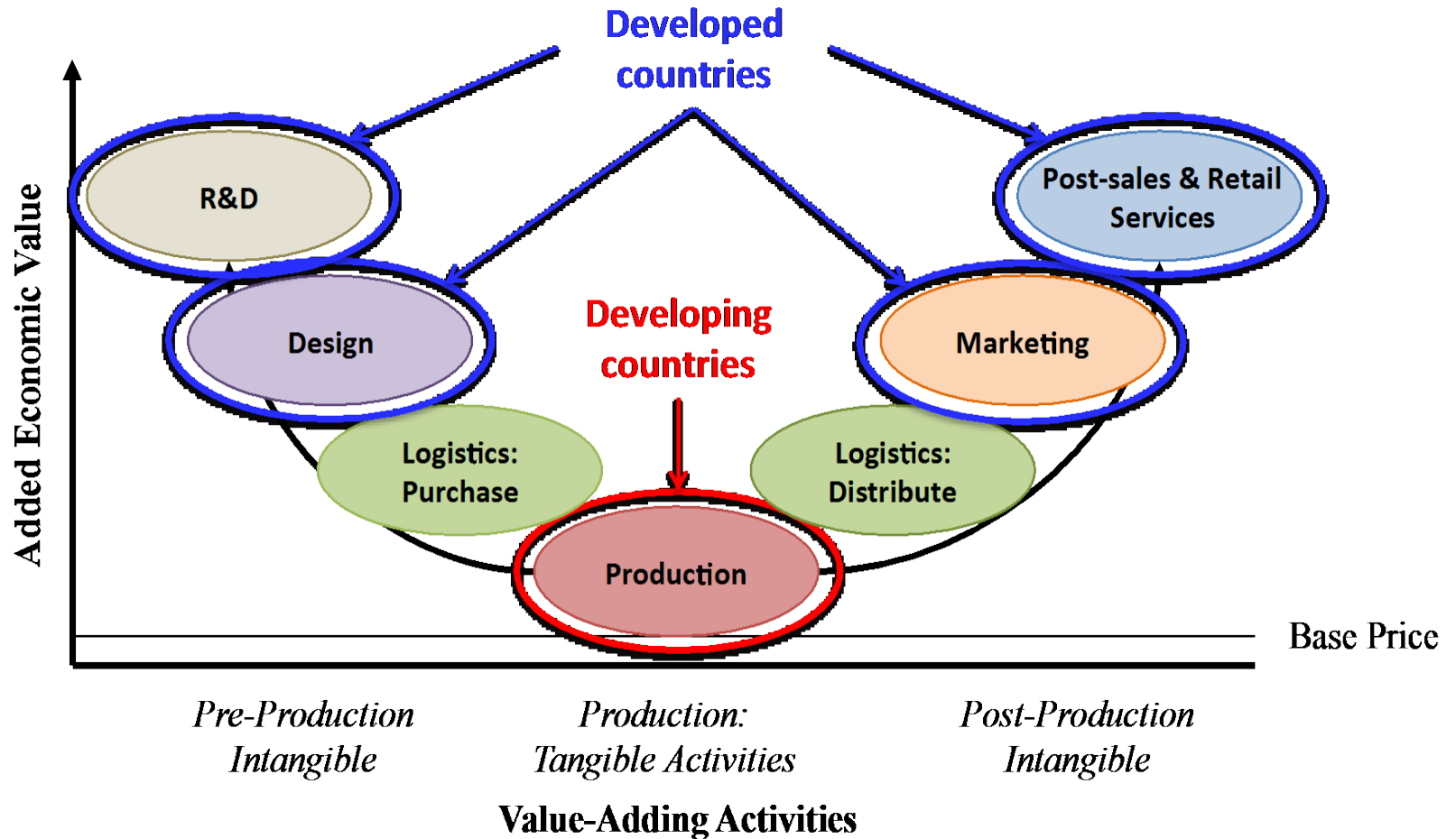

Tools/Software: France
Navigation: US
Pilot control system: US
Wiring: France


Final assembly: Boeing
 Commercial Airplanes, US



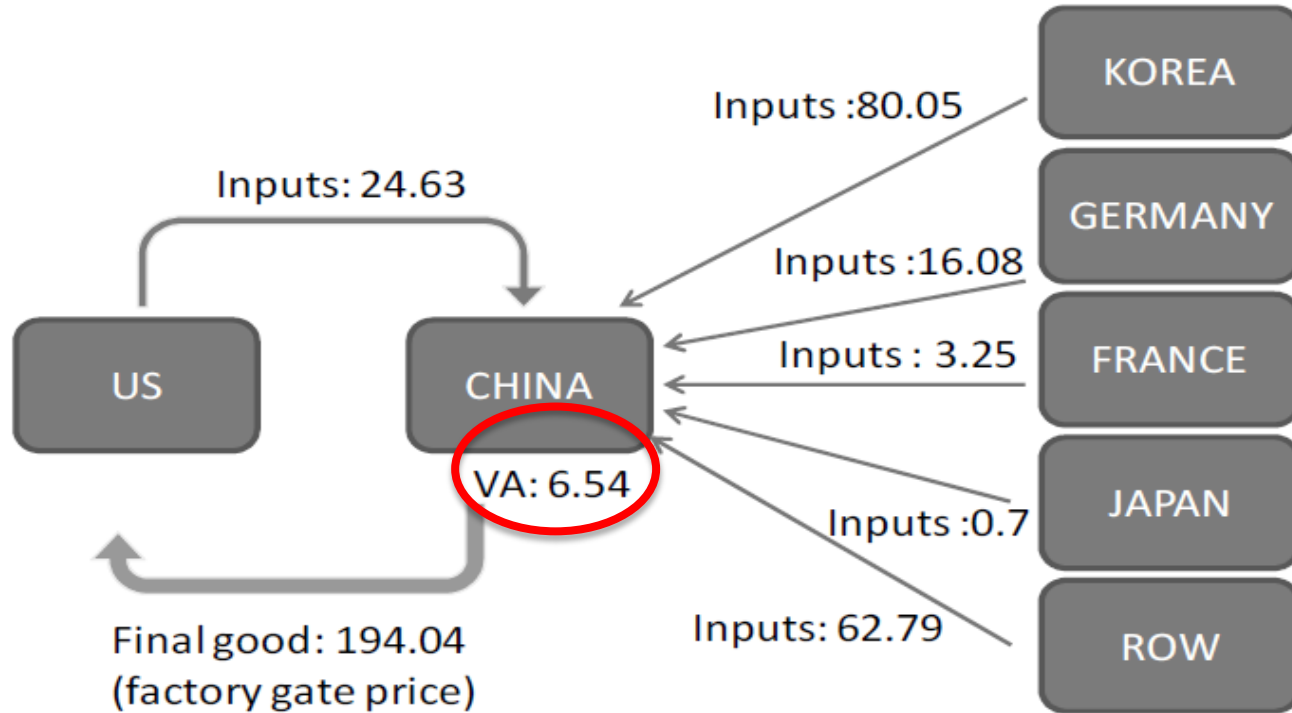
DISTRIBUTION OF VALUE IN GVCS: APPAREL GLOBAL VALUE

There has been a tendency for developed countries to concentrate in higher value activities while developing countries are generally concentrated in lower value activities



Source: Fernandez-Stark, Karina, Stacey Frederick and Gary Gereffi. (2011). "The Apparel Global Value Chain: Economic Upgrading and Workforce Development. In G. Gereffi, K. Fernandez-Stark & P. Psilos (Eds.), *Skills for Upgrading: Workforce Development and Global Value Chains in Developing Countries*. Durham: Center on Globalization Governance & Competitiveness and RTI International.

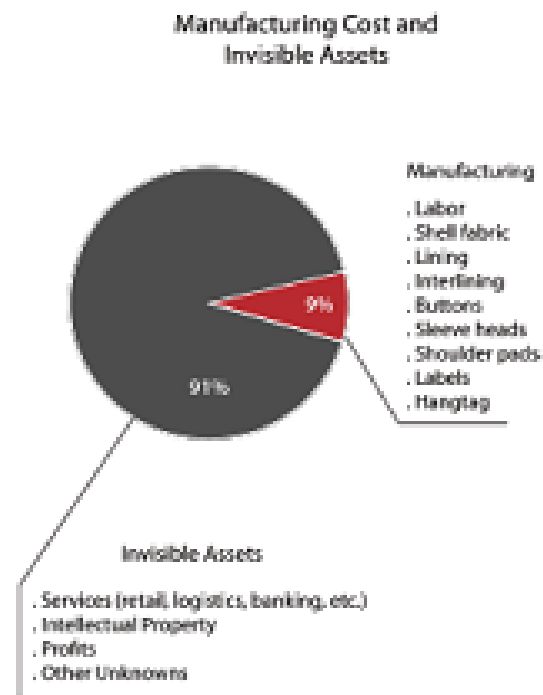
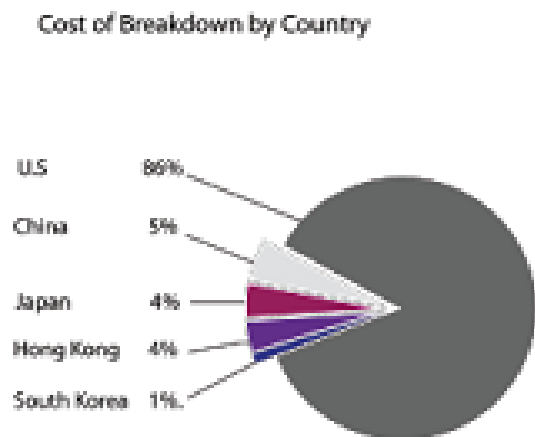
Case: iPhone 4 (US\$)



US trade balance with	CHINA	KOREA	GERMANY	FRANCE	JAPAN	ROW	WORLD
Gross	-169.41	0	0	0	0	0	-169.41
Value added	-6.54	-80.05	-16.08	-3.25	-0.7	-62.79	-169.41



Figure 1: A jacket made in China and sold in the U.S.



Source: Fung Global Institute

西装上衣在美国销售：**425美元**

制造部分：**38美元**，占**9%**，其中中国**21美元**，占**5%**



International Situation

III. Division of labor of international industry is in a state of pregnancy with new changes

- Implementation of “Re-industrialization” policy has induced a back flow of high and medium end manufacturing industry into developed countries
- Low income countries is accelerating to absorb labor intensive industry based upon their comparative advantage of low labor cost
- A new round of S&T revolution and industrial change are in pregnancy, competition in occupying the commanding height of industries among countries becoming fierce increasingly
- China is facing double squeeze between developed countries and other developing countries in international division of labor.



International Situation

IV. New changes on rules of global investment and trade are in the process of formation

- WTO has got rid of the passive state of Doha Round, active progress had been achieved in Indonesia and Paris Conference by the end of 2013, regional economic cooperation is booming, there is emergence of large amount of various types of FTA (Free Trade Agreement)
- USA is accelerating to push forward the negotiation of two regional cooperations, the “Trans-Pacific Partnership”(TPP) and “Transatlantic Trade and Investment Partnership” (TTIP). These two regional cooperations are trying to exclude China in global cooperative regime of trade and investment. It will produce important influence to WTO and pattern of global trade once the rules of negotiation of these two regional cooperations are in agreements.



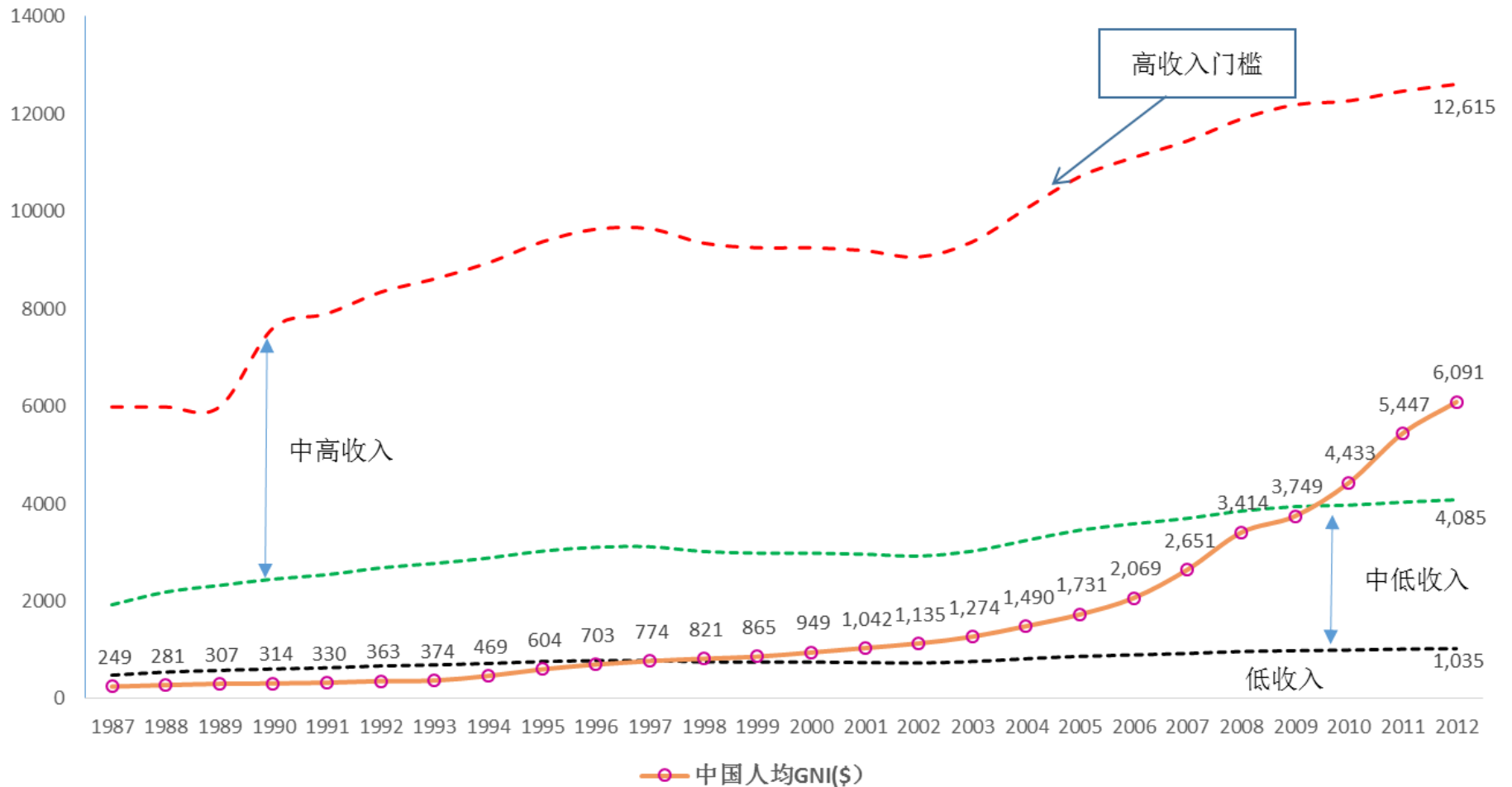
Domestic Situation

I. China will be in the crucial stage to march to high income group of countries

- Based upon the classification of income group of countries of the World Bank, China had entered into the income group of Upper-middle income economies by the year 2010, it is projected that China will approach basically the high income group of countries based upon the standard set up by the World Bank. The demand of the people will be higher, more diversified needs in accompanying the coming of a high income society. The people will concern more to the governmental services, especially the ecological environment



China's GNI per capita and Classification of the World Bank





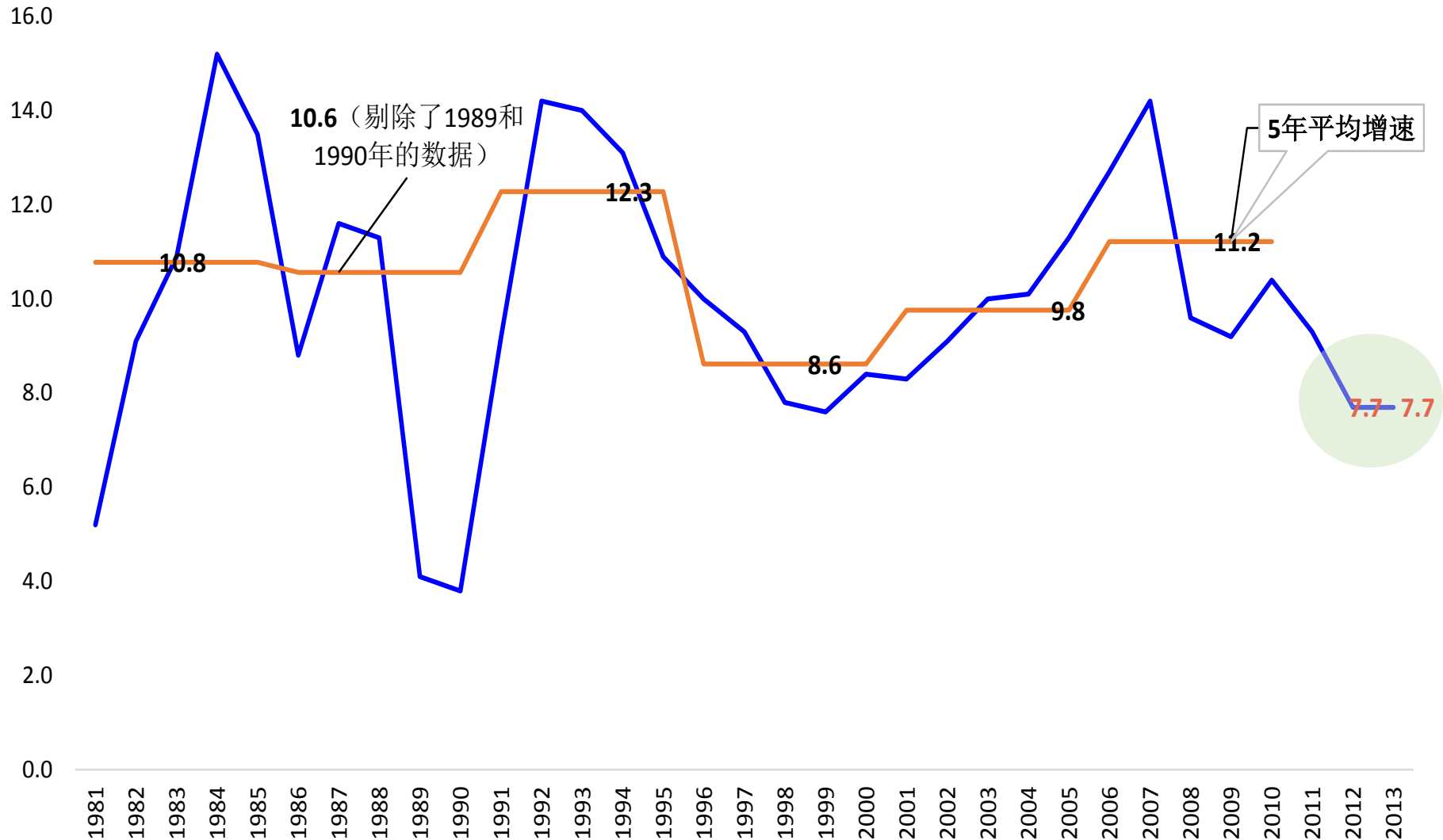
Domestic Situation

II. China will be in an important period to change the growth rate of the economy

- Chinese economy had kept an extraordinary growth rate in past thirty years with an average annual growth rate around 10%. But currently, Chinese economy is in the transitional stage from a period with a growth rate of two digits to the period with a growth rate of single digit. It can be seen from international experience that it is hardly possible to continue a growth rate with two digits in the coming future.



Economic Growth Rate(1981-2013)





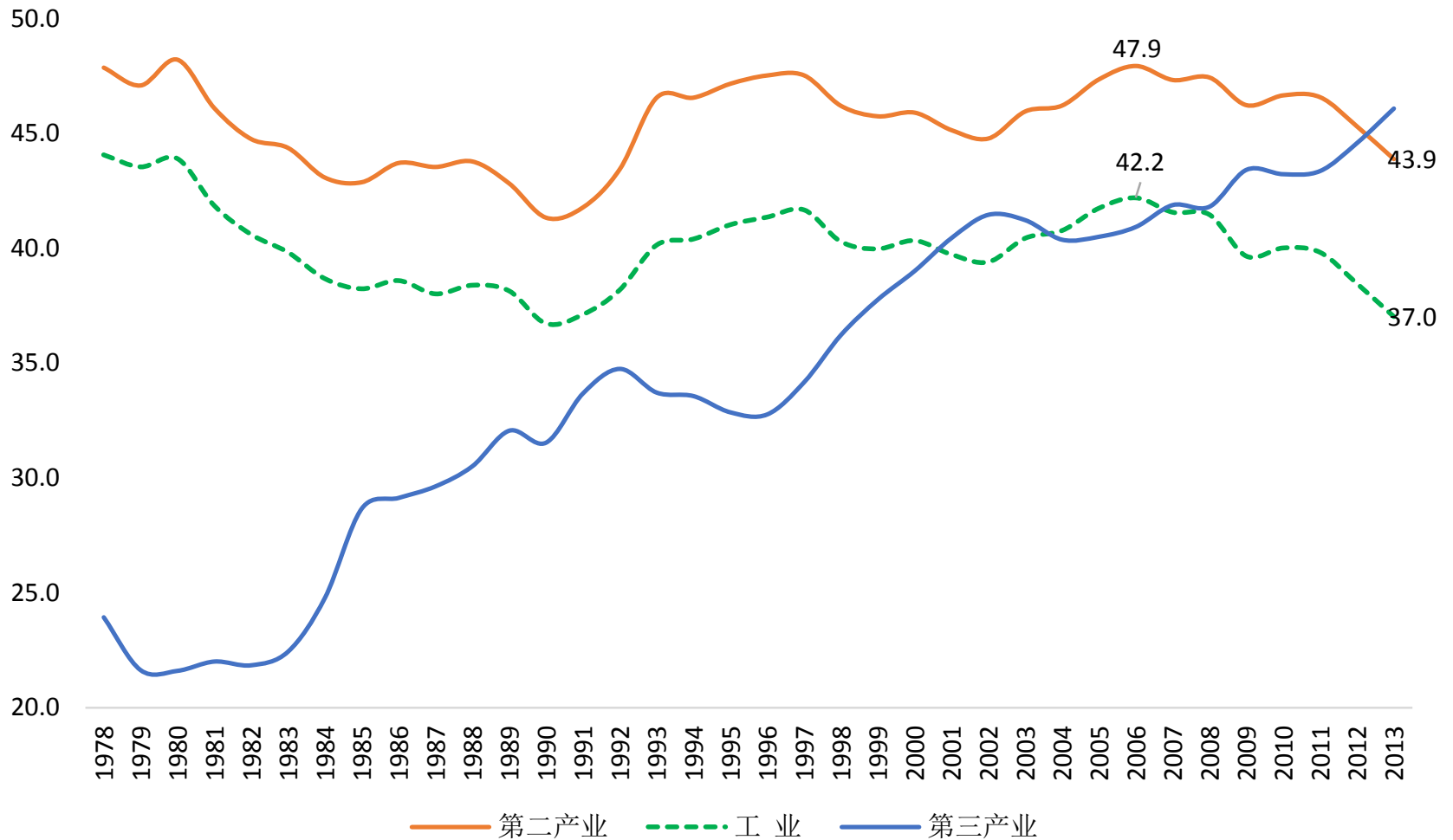
Domestic Situation

III. The share of non-Agriculture sector exceeds 90%, task of upgrading industrial structure becomes urgent increasingly

- There is a continuous declining trend of the share of industry since its peak value 42.2% in 2006; the share of service in GDP exceeds the secondary industry in the first time in 2013.
- It is difficult to continue the past pattern of growth through dependence of expanding the quantity of industrial production within the context of strengthening increasingly the constraints of resources and environment. In addition, there are limited rooms for quantitative expansion of many industrial products, the issue of excessive capacity of production will become more serious if the past growth pattern is in continuity, and the efficiency of investment will be lowered with large magnitude



Share of Secondary Industry in GDP





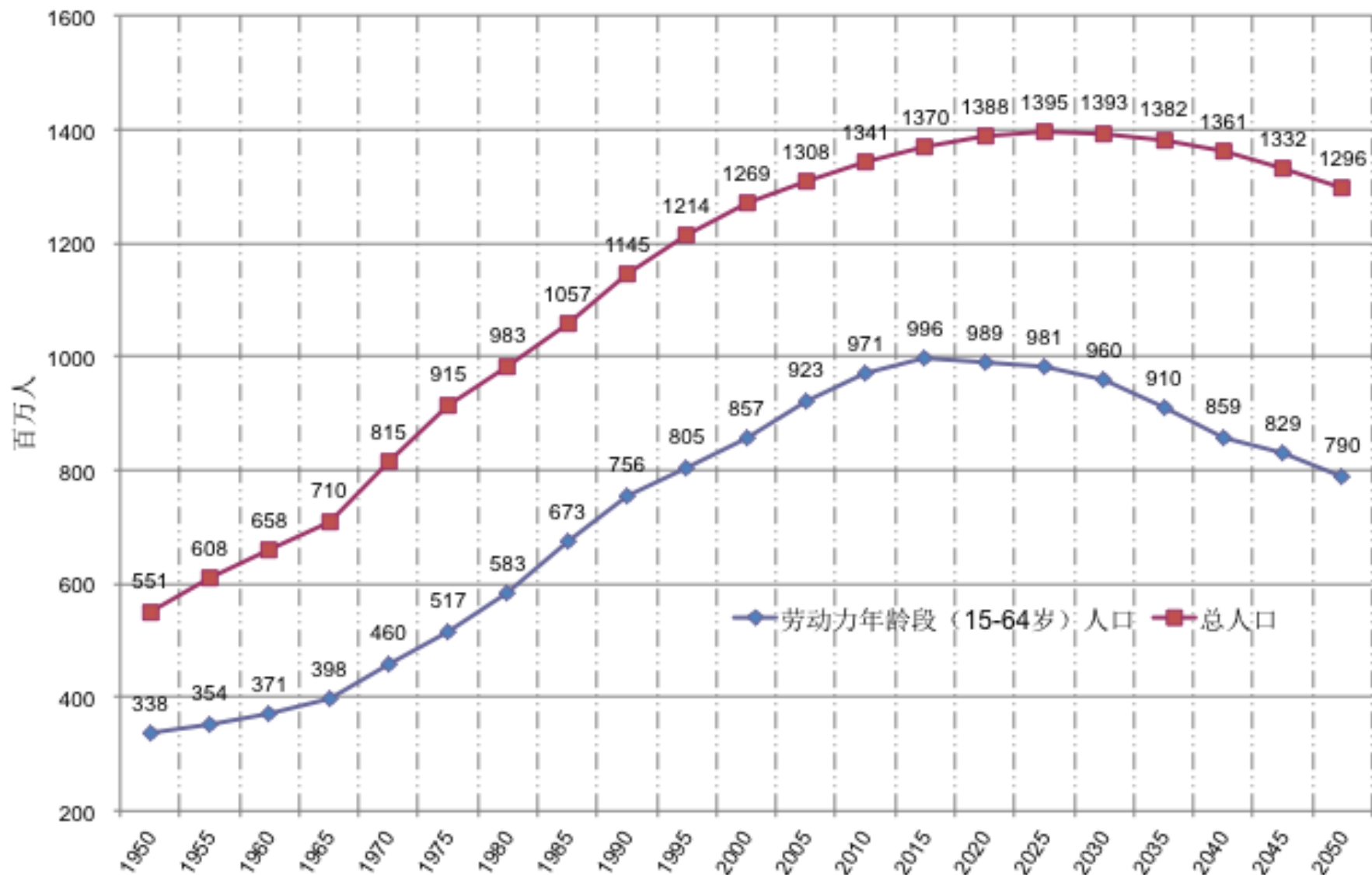
Domestic Situation

IV. Aging population shall be increased further , the comparative advantage of amount of labor force will be weakened gradually

- In spite of the fact that China is a country with huge amount of labor force, but its demographic structure is entering into a new stage of “low birth rate, low death rate, and low growth rate.”
- Decrease of growth of the total amount of labor force or even it is in decline will weaken the comparative advantage of amount of labor force and also the advantage of low labor cost. There is urgent need to explore new areas of comparative advantage.
- By the mean time, China is in a situation to enter into an aging society. that aging comes beforehand the riches.



我国的总人口和劳动力年龄段人口（联合国的中位预测，新版）





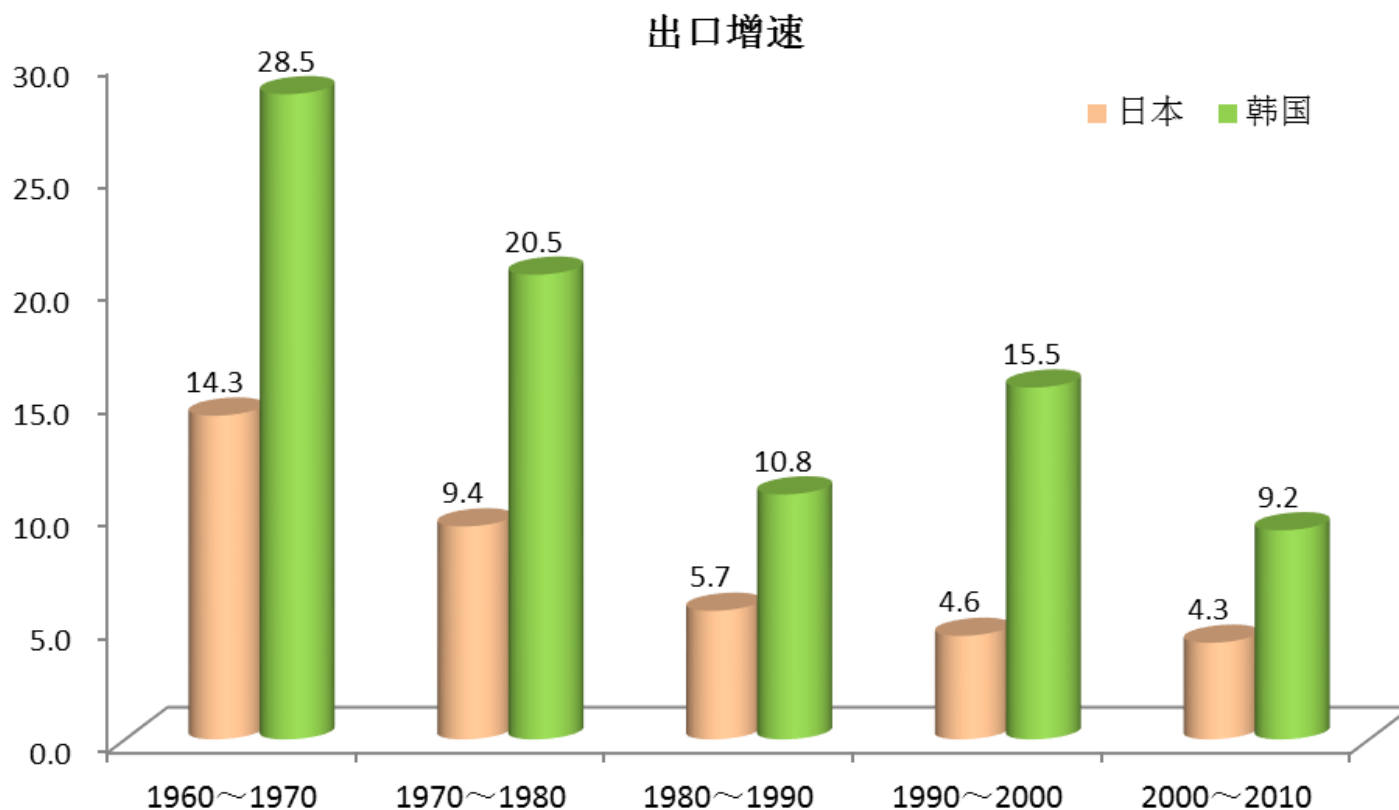
Domestic Situation

V. The role of pulling effect of export to China's economic growth will be difficult to be re-emerged. Economic growth will face a strengthening constraints of demand

- The global economy is passing through the period of low growth from the perspective of Kondratief wave Cycle (or long wave cycle)
- There is continuous decline of international competitiveness of Chinese export due to large increase of domestic factor cost of production and the continuous rising of exchange rate of RMB.
- The shift of order and investment from China to abroad is rising rapidly.
- Due to the influences of all above factors, the export of China cannot be returned back to state of high growth rate around 20% or even 30% in the beginning of 21st Century, the external demand force of economic growth will be stagnant for a quite long period.



追赶经济体出口增速都经历了大幅下滑过程





Domestic Situation

VI. The task in solving surplus production capacity is very hard, but it is necessary to have demand of investment to promote economic growth

- There are excessive production capacities in traditional industries such as iron and steel, cement, non famous metals, plateglass etc., part of industrial sectors even have excessive production capacity in long or absolute term.
- Newly emerging industrial sectors such as photovoltaic sector has also excessive capacity. Currently, the utility rate of production capacity of wind turbine is lower than 60% while the excessive production capacity of photovoltaic cell reached around 95%.
- The issue of excessive production capacity will be remained in the period of “Thirteenth Five”. By the mean time, certain amount of growth rate of investment must be kept in order to have appropriate growth rate of the economy. Therefore, China must solve this issue to reduce effectively the excessive capacity of production together with the issue to achieve efficient investment .



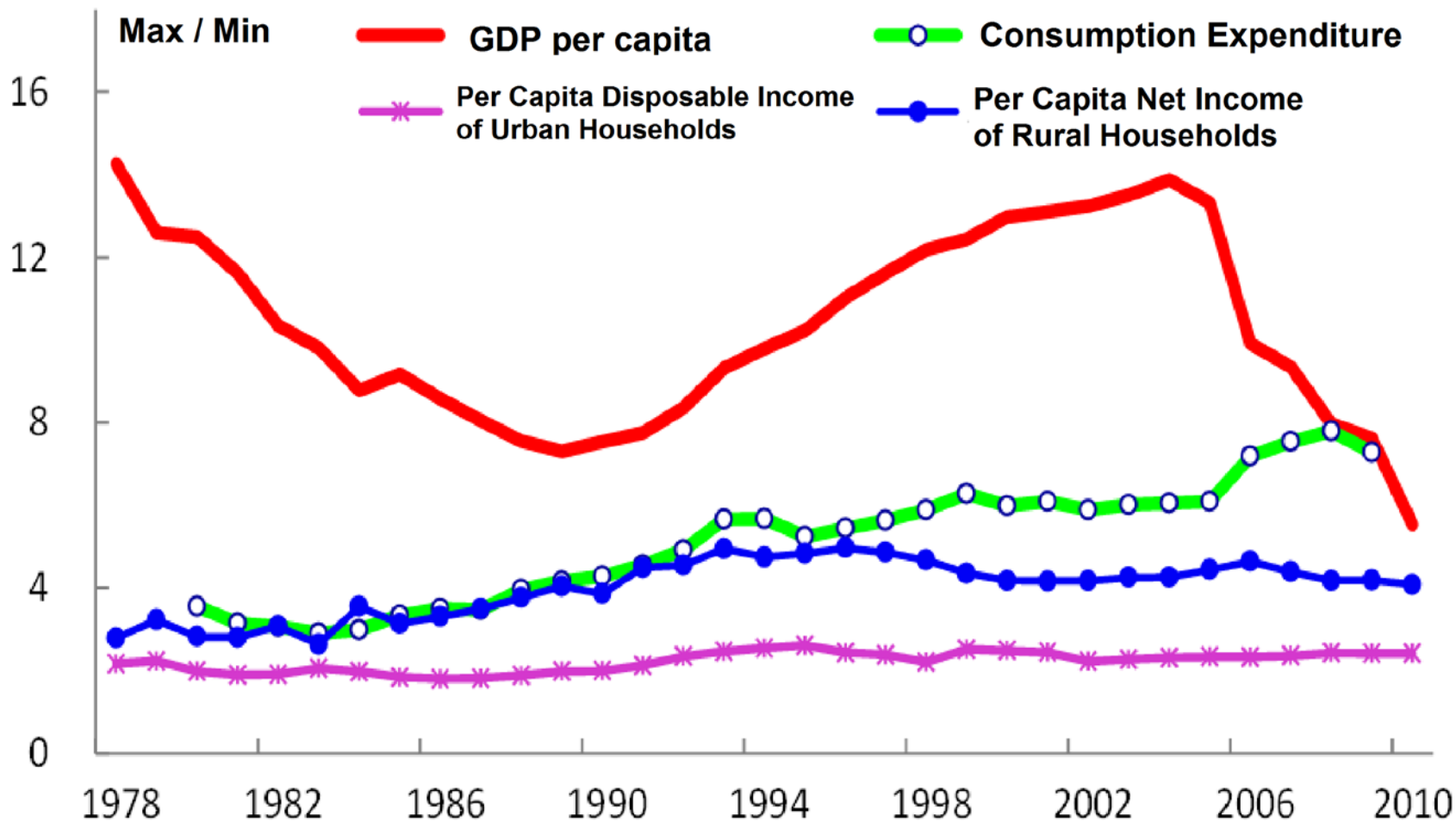
Domestic Situation

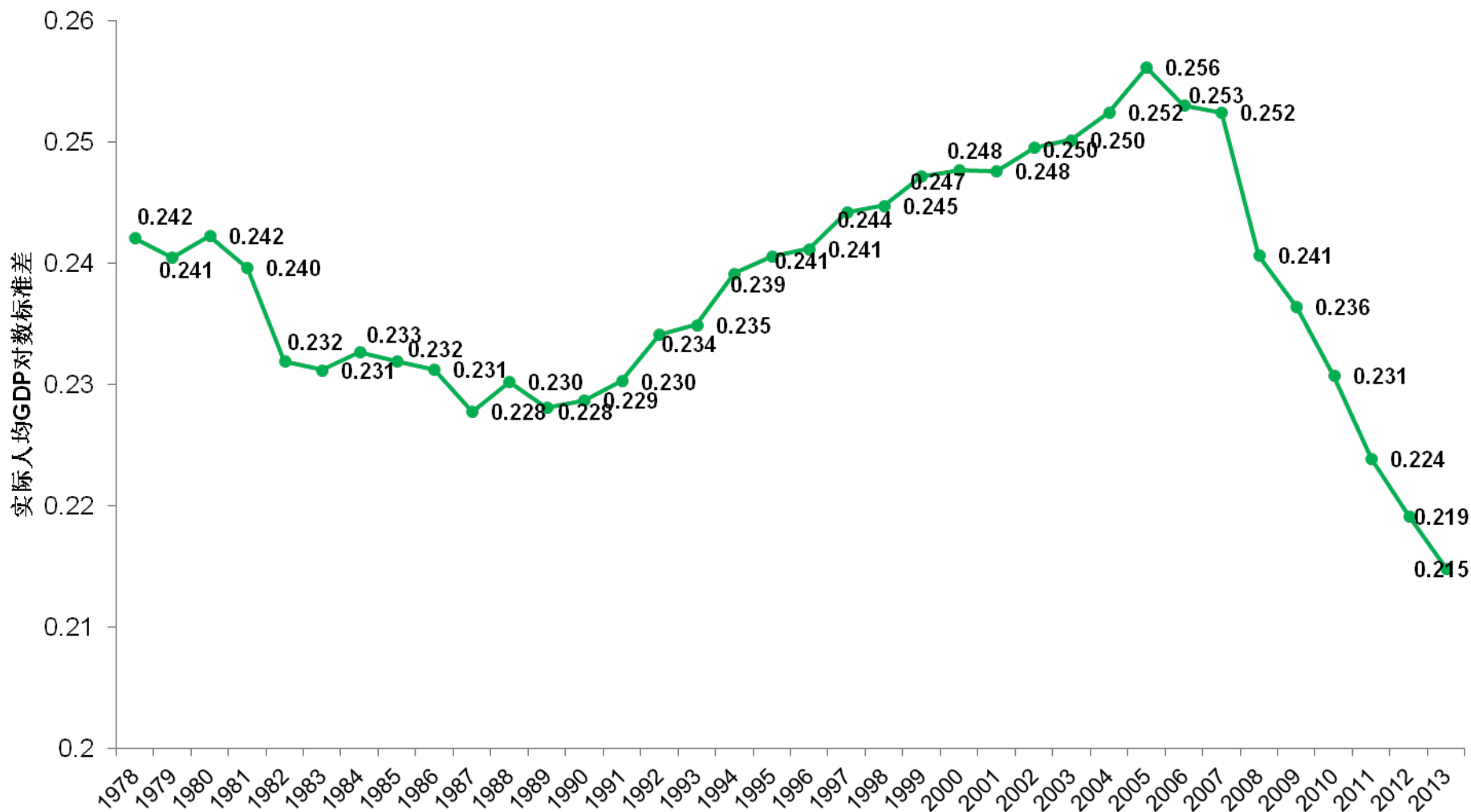
VII. Disparities among regional development are reduced to some extent, but integration of regional economies is lagged behind

- Disparities of regional development are reduced explicitly since 2005 especially the regional disparities measured in per capita GDP
- But various obstacles remained for China on cross regional flow of labor force, capital and commodities, level of an integrated regional market remains to be upgraded.



Inter-Provinces– Max/Min





Standard Deviation based on Per Capita GDP at 1978 Constant Prices



Scenario Analysis for Future Economic Development



Scenario Analysis for Future Economic Development

■ Three scenarios

• **Business-as-Usual(BaU)**

- ❖ Chinese economy could maintain the past growth performance

• **High quality of economic development scenario**

- ❖ High Efficiency
- ❖ Inclusiveness
- ❖ Sustainability

• **Low quality of economic development scenario**

- ❖ emphasizes that the risks and challenges in the process of future economic development, and the reform cannot be pushed forward effectively

- Based on the different assumptions about the key underlying factors



Assumption in Baseline

- 1、Trend of change of total amount of population is Exogenous direct use data of projection of UN.
- 2、Level of urbanization and population of urban and rural, Exogenous; annual average rise of rate of urbanization is 0.9 percentage points from 2016-2020. annual average rise of rate of urbanization is 0.7 percentage points from 2021-2030.
- 3、Growth of total amount of labor force, Exogenous. Change of supply of rural land, Exogenous.
- 4、Various domestic tax rate are kept without change, Various transfer payment, Exogenous.
- 5、Balance of payments 2016-2030 to be kept in balance
- 6、Growth of governmental consumption, Exogenous
- 7、Total factor productivity (TFP), Exogenous。 Assume the growth rate of TFP from 2016-2020 will be lower increasingly, it will be assumed lower than the average level of past 30 years, it will be maintained around the level of 1-2%
- 8、Bias of technical progress and the changes of rate of intermediate input, Exogenous



Assumption in “High quality of economic development” Scenario (1)

1、Accelerate the steps of technological innovation, promote free flow of factors of production and optimum allocation of them to raise the efficiency of growth

- i. Reform and perfect the mechanism of institution of innovation, create a good ecological environment of innovation; push forward reform of institution of education and medical health work, accelerate the accumulation of human capital. Assume the growth rate of technical progress derived thereby will be 0.1 percentage point faster than the baseline scenario, the growth rate of technical workers will be 0.4 percentage points faster than the baseline scenario.
- ii. Accelerate to push forward the construction of an integrated domestic market, promote the free flow of factors of production among regions, sectors and enterprises. Abolish various explicit and implicit barriers which constrain the free flow of factors of production, promote optimal allocations of them; reform and perfect related legal and policy system for free entry and exit of firms to create a better environment for the survival of the fittest. Average annual transfer of rural labor force will be assumed 1000-2000 thousand persons more than the baseline scenario, annual rate of urbanization from 2016-2030 will be 0.2 percentage points higher than the baseline scenario. Average annual rate of improvement of assumed technical efficiency will be 0.1 percentage points faster than the baseline scenario.
- iii. Perfect the reform of regulations of service sector, promote the opening of service sector to raise its efficiency. TFP of service sector from 2016-2030 will be 0.5 percentage points higher than the baseline scenario.
- iv. Further expand the opening of domestic to external world to raise the position of China in global industrial chain, accelerate the process to upgrade Chinese industry.



Assumption in “High quality of economic development” Scenario (2)

2、Promote fair share of fruitful development, raise the inclusiveness of development

- i. Promote the **equalization of basic public service** among regions, urban and rural and groups of people. **Process of citizenship of migrant workers** will be accelerated, annual increase of new citizen of migrant workers will be persons, the growth rate of governmental expenditure on public service will be 1-2 percentage points higher than the baseline scenario.
- ii. Reform the regime of **income distribution** to reduce income disparity and promote the growth of mid-income group. The share of mid-income group will be 0.3-0.5 percentage points higher than the baseline scenario, average propensity to consume accumulated will be raised by 5 percentage points.
- iii. Adjust income distribution system of state owned enterprise and monopolistic enterprise, raise the share of profit delivering. **Increase the share of governmental expenditure: raise the transfer payment of government** from the year 2016-2030 to poverty region and poverty people, it will be 10%-15% higher than the baseline scenario.



Assumption in “High quality of economic development” Scenario (2)

3、Promote green growth, upgrade the sustainability of development

- i. Continue to accelerate the price reform of product of resource and energy.
- ii. Impose carbon tax to raise the efficiency of utilization of energy and reduce the intensity of discharge of pollutant. Collection of carbon tax can be started since 2016, the tax rate can be gradually increased from 50 yuan per tons of CO₂. The efficiency of utilization of energy in the period of 2016-2030 can be raised in average around 0.5 percentage points than the baseline scenario.
- iii. Push forward reform of institutions of central and local government and also their achievement assessment system, raise the control efforts of pollution discharge, raise the standard of achievement of pollutant discharge.



Assumption in “Low quality of economic development” Scenario

- 1、 Global economy is sluggish continuously, progress of cultivation of domestic new competitive advantage is slower.**
- 2、 Progress of construction of domestic integrated market is slower.**
 - i. Urbanization rate in the period of 2016-2030 is 0.2 percentage lower than the baseline scenario, rate of transfer of labor force between urban and rural is also slower than the baseline scenario.
- 3、 Progress of technological innovation becomes slower**
 - i. TFP is around 0.4 percentage lower than the baseline scenario
- 4 、 Push forward reform measures of income distribution and equalization of basic public service becoming slower**
- 5、 Green growth cannot be pushed forward effectively**



Model Dimension

- **34 production sectors and 2 representative households**
 - *1 agricultural sectors, 23 industrial sectors, 1 construction sector and 9 service sectors,*
 - *1 urban households and 1 rural households*
- **4 production factors**
 - *capital, agricultural labor, production worker, and professionals*
- **The model is calibrated to the 2010 Chinese Social Accounting Matrix (SAM) developed from the 2010 input/output table**
- **Emission of Pollutant**
 - CO_2 ,



Simulation result

- **Economic growth and its source**
- **Economic composition (GDP and Employment)**
- **Investment and Consumption**
- **Disparity between urban and rural**
- **Energy consumption and CO₂ emission**



1. Economic growth and its source

Baseline	2010-2015	2015-2020	2020-2025	2025-2030
GDP	7.9	6.6	5.5	4.5
Sources :				
Labor	0.3	-0.2	-0.2	-0.4
Capital	10.1	8.2	6.5	4.9
TFP	1.7	1.7	1.7	1.8
High Quality				
GDP	7.9	6.6	5.6	4.6
Sources :				
Labor	0.3	-0.2	-0.2	-0.4
Capital	10.1	7.9	6.0	4.4
TFP	1.7	2.0	2.1	2.2
Low Quality				
GDP	7.9	6.4	5.2	3.9
Sources :				
Labor	0.3	-0.2	-0.2	-0.4
Capital	10.1	8.2	6.3	4.4
TFP	1.7	1.5	1.5	1.4

- GDP growth rate will go down gradually.
- In "High quality" scenario, economic growth will rely more on innovation and improvement of technical efficiency;
- In "Low quality" scenario, due to fast decrease of TFP and investment rate, the GDP growth rate is lower than baseline and "high quality" scenario.



2. Economic composition(GDP and Employment)

	GDP					就业				
	2010	2015	2020	2025	2030	2010	2015	2020	2025	2030
Baseline										
Agriculture	10	8.1	6.7	5.5	4.2	36.7	31	25.9	21.6	17.1
Secondary industry	48.2	45.5	42.9	39.5	37.4	28.7	29	29.2	28.4	28.4
Service	41.8	46.4	50.3	55	58.5	41.1	47.2	52.6	57.3	61.9
High quality										
Agriculture	10	8.1	7.1	6	4.7	36.7	31	24.6	18.9	12.8
Secondary industry	48.2	45.5	41.7	37.4	34.7	28.7	29	29.1	28.3	28.4
Service	41.8	46.4	51.2	56.6	60.6	41.1	47.2	53.8	59.9	65.8
Low quality										
Agriculture	10.0	8.1	6.8	5.6	4.3	36.7	31.0	25.9	21.6	17.1
Secondary industry	48.2	45.5	42.9	39.2	36.6	28.7	29.0	29.1	28.2	27.9
Service	41.8	46.4	50.4	55.2	59.1	41.1	47.2	52.6	57.4	62.1

- In baseline, the share of service in GDP will become higher than that of secondary industry. In the next 5-15 years, the share of service in GDP will rise by 10 percentage points, close to 60% in 2030;
- In "High quality" scenario, the share of service in GDP and total employment are higher than other scenarios.



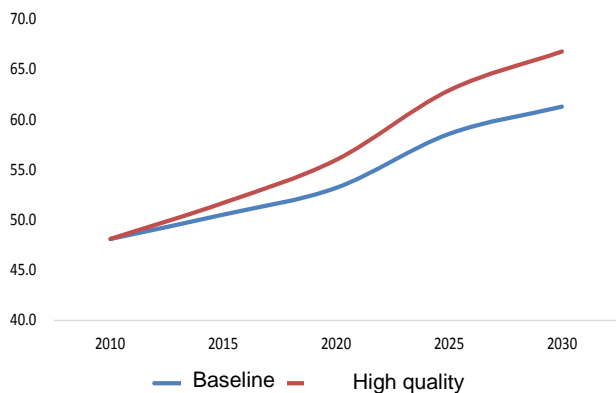
3. Investment and consumption

In "High quality" scenario, economic growth will rely more on consumption than other scenarios, and the efficiency of investment is higher than other scenarios.

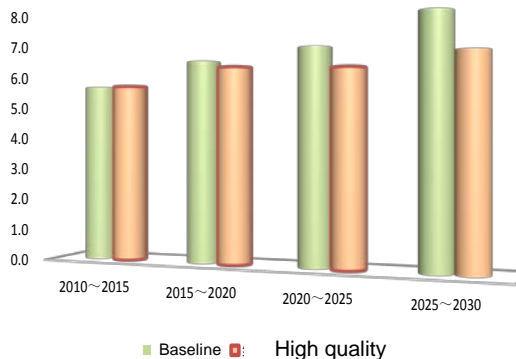
4. Disparity between urban and rural

In "High quality" scenario, the equity in sharing development outcomes will be improved and the income disparity between urban and rural households will be reduced by 20%, comparing to Baseline. On the one hand, due to quick urbanization and the equality of basic public service, more and more migrant worker become citizen and rural marginal productivity will increase; on the other hand, government will increase transfer to poor region and people in "high quality" scenario.

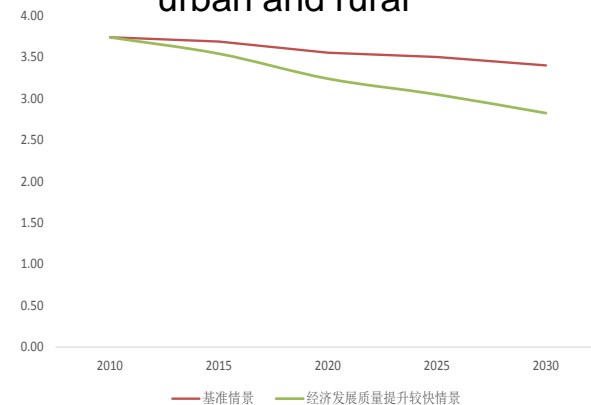
Consumption Rate



ICOR



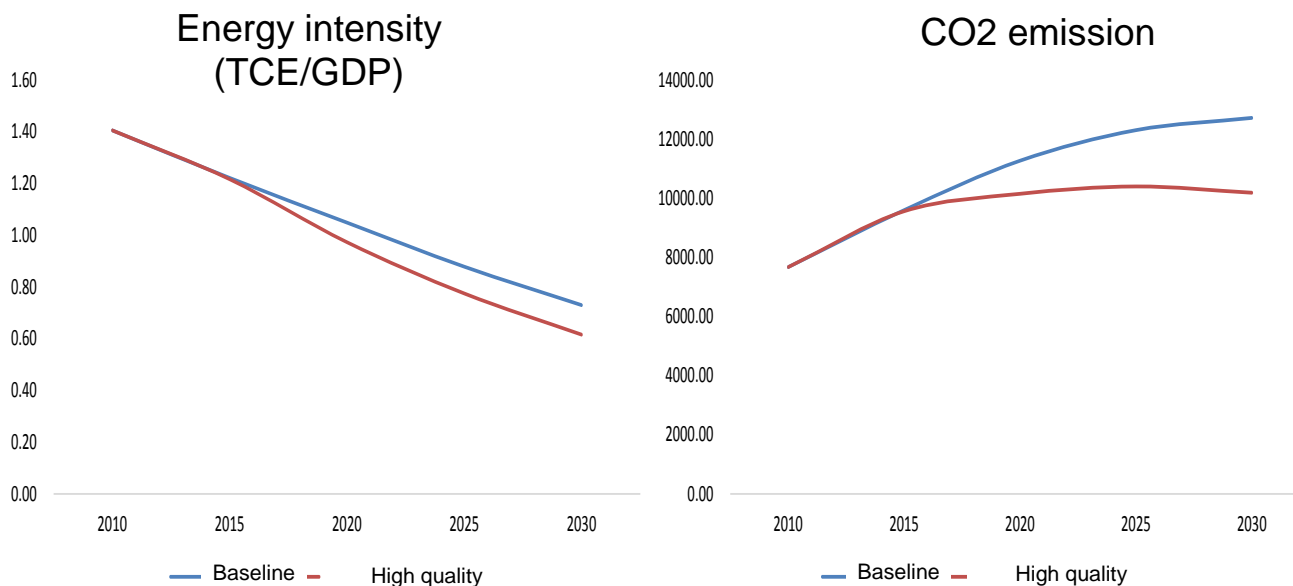
Disparity between urban and rural





5. Energy consumption and CO2 emission

- In baseline, there is no peak for CO₂ before 2030.
- In “high quality” scenario, the efficiency of energy use will increase by 7% in 2020 and 16% in 2030, comparing to Baseline. The emission of CO₂ will decrease by 20% in 2030, comparing to Baseline. Furthermore, the emission of will peak and begin to fall in 2020-2030.
- In “Low quality” scenario, the energy consumption will continue to increase and there is also no peak for CO2 before 2030.





Main Conclusions and Policy Implications



Upgrading the quality of economic development is the necessary choice to deal with various risks, it is also an important safeguard to achieve the building up a well-off society in an all-round way and establishing a sound foundation for construction of modernization

- . This is inevitable either from the historical perspective or from the changes of future environment of development. It can be seen from the results of simulation that acceleration of the process of upgrading the quality of economic development is the only means to deal with various risks brought from changes of traditional mode of development and future environment, thereby to achieve the target in building up a well-off society in all-round, to achieve a sustainable development of economy and society.



- **It can be seen from the result of analysis of simulation, in accompanying a definite economic growth rate through acceleration of progress of upgrading quality of economic development**
- **There will be promotion of process of transformation**
- From growth relying upon cumulative quantity of factors to growth relying increasingly on technical progress;



- From growth relying heavily on quantity of export and investment to growth based upon increase of demand of consumption and improvement of efficiency of investment;
- From growth relying too much on industrial sectors to growth based more on coordinated development of various industries.
- It can also promote the upgrading of inclusive development and reduce the pressure of economic growth on resource environment to achieve economic social and environmental development in harmony.



Push forward deepening of various reforms is the key to accelerate the upgrading of quality of economic development

- It can be seen from the results of analysis of simulation, the achievement of all objects, upgrading of efficiency of economic growth, reduction of social disparity, lowering of discharge of pollution depends upon the implementation of various reform measures, such as reform of mechanism of innovation, factor markets, income distribution and ecological environment.



Thank you very much for your kind attention!