



Patterns of Inter-Provincial Trade in the PRC: 1987—2007

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Note: views presented in this report are those of the author rather than those of the organization where the author works.



Outline

- Introduction
- Overview of inter-provincial trade flows
- Main Findings
- Regional Policy Implications



31 Provinces

Beijing	北京	京	Jing	Hubei	湖北	鄂	E
Tianjin	天津	津	Jin	Hunan	湖南	湘	Xiang
Hebei	河北	冀	Ji	Guangdong	广东	粤	Yue
Shanxi	山西	晋	Jin	Guangxi	广西	桂	Gui
Inner Mongolia	内蒙古	内蒙	Neimeng	Hainan	海南	琼	Qun
Liaoning	辽宁	辽	Liao	Chongqing	重庆	渝	Yu
Jilin	吉林	吉	Ji	Sichuan	四川	川	Chuan
Heilongjiang	黑龙江	黑	Hei	Guizhou	贵州	黔	Qian
Shanghai	上海	沪	Hu	Yunnan	云南	滇	Dian
Jiangsu	江苏	苏	Su	Tibet	西藏	藏	Zang
Zhejiang	浙江	浙	Zhe	Shaanxi	陕西	陕	Shaan
Anhui	安徽	皖	Wan	Gansu	甘肃	甘	Gan
Fujian	福建	闽	Min	Qinghai	青海	青	Qing
Jiangxi	江西	赣	Gan	Ningxia	宁夏	宁	Ning
Shandong	山东	鲁	Lu	Xinjiang	新疆	新	Xin
Henan	河南	豫	Yu				



31 Provinces: Population (million)

Guangdong	104.30	Yunnan	45.97	Inner Mongolia	24.71
Shandong	95.79	Jiangxi	44.57	Shanghai	23.02
Henan	94.02	Liaoning	43.75	Xinjiang	21.81
Sichuan	80.42	Heilongjiang	38.31	Beijing	19.61
Jiangsu	78.66	Shaanxi	37.33	Tianjin	12.94
Hebei	71.85	Fujian	36.89	Hainan	8.67
Hunan	65.68	Shanxi	35.71	Ningxia	6.30
Anhui	59.50	Guizhou	34.75	Qinghai	5.63
Hubei	57.24	Chongqing	28.85	Tibet	3.00
Zhejiang	54.43	Jilin	27.46		
Guangxi	46.03	Gansu	25.58		

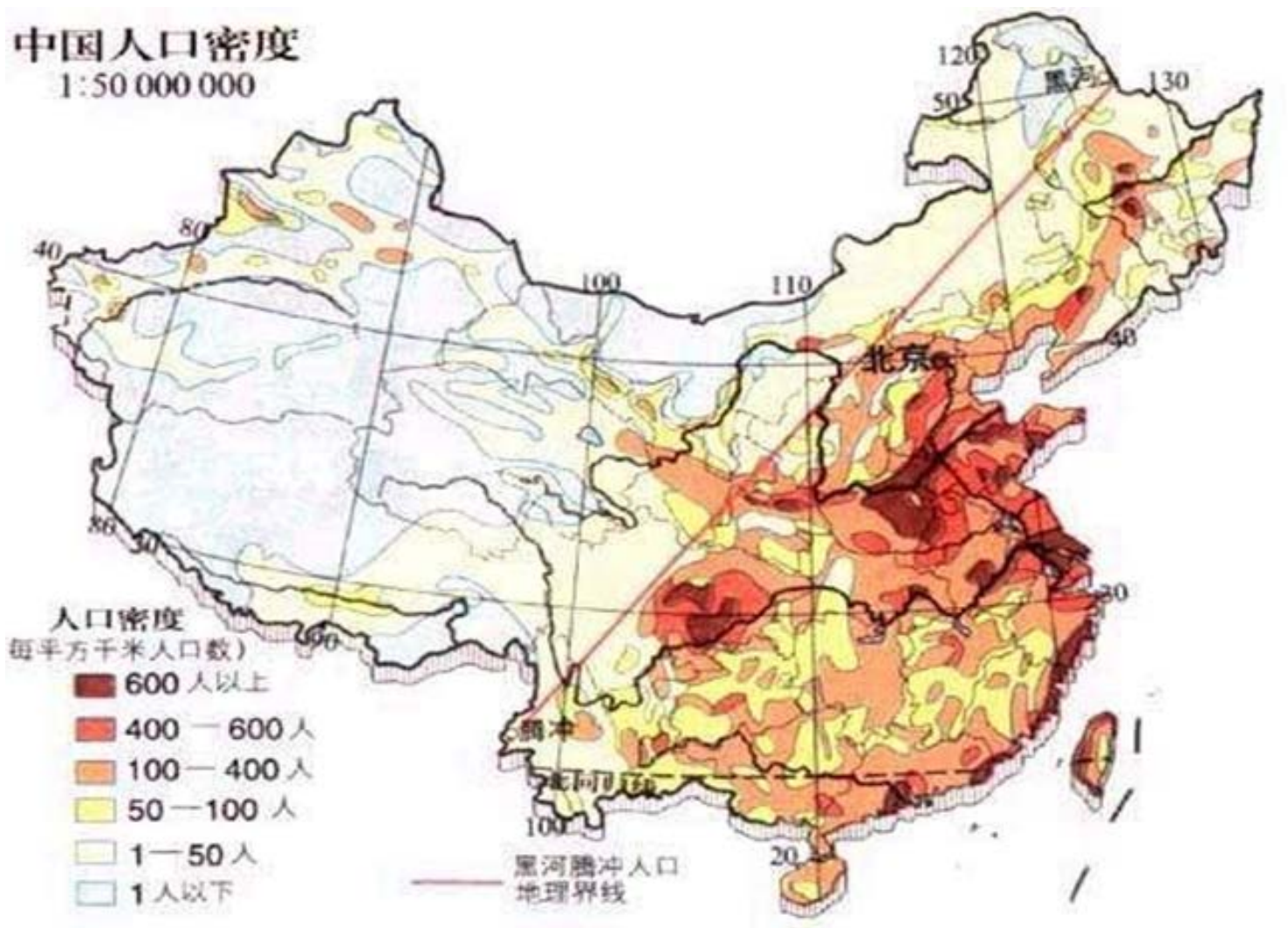


31 Provinces: Area (km²)

Xinjiang	1,660,000	Hebei	190,000	Fujian	121,400
Tibet	1,228,400	Jilin	187,400	Jiangsu	102,600
Inner Mongolia	1,183,000	Hubei	185,900	Zhejiang	101,800
Qinghai	722,000	Guangdong	179,800	Chongqing	82,400
Sichuan	485,000	Guizhou	176,100	Ningxia	66,400
Gansu	455,000	Henan	167,000	Hainan	35,000
Heilongjiang	454,000	Jiangxi	166,947	Beijing	16,807
Yunnan	394,000	Shandong	157,100	Tianjin	11,305
Guangxi	236,300	Shanxi	156,000	Shanghai	6,341
Hunan	211,875	Liaoning	145,700		
Shaanxi	205,600	Anhui	139,600		



Hu Huanyong Line (1935)





Four Regions(Western, North-Eastern, Central, Eastern)





Introduction



Inter-provincial trade is an important component for a country's robust and regionally-balanced growth

- **The scale of inter-provincial trade represents the degree of the economic integration**
- **Inter-provincial trade reflects and results from differences in economic specializations between provinces**
- **More inter-provincial trade also facilitates learning and externalities, with technological spillovers to be shared between provinces**
- **The inter-provincial trade is an important channel of expanding domestic demand**



Data Source

- **Hainan Administrative Area, originally belonged to Guangdong Province, was upgraded to Hainan Province in 1988. Chongqing Administrative Area, originally belonged to Sichuan Province, was upgraded as Chongqing Municipality directly under the central government in 1997. Qinghai Province had not drawn up any IO table for 1987.**
- **Excluding Tibetan Autonomous Region, the final dataset includes 27 provincial input-output tables for 1987, 29 provinces for 1992, and 30 provinces for 1997, 2002 and 2007.**



Definition

- ***Outflows and Inflows*** -- Inter-provincial export plus international export of the province are termed as outflows; while inter-provincial import plus international import of this province are all termed as inflows.
- ***Concentration ratio of the inter-provincial trade***-- the top 5 provinces with a bigger proportion of the amount of the inter-provincial trade to the total amount of that of all provinces.
- ***Openness of the inter-provincial trade*** -- the ratio between inflows and outflows and its GDP of a province
- ***Proportion of inter-provincial trade*** -- the proportion of inter-provincial export or inter-provincial import of a province to its total amount of inflows or outflows
- ***Balance of inter-provincial trade*** -- if a province's inter-provincial export exceeds its inter-provincial import, otherwise, it would be termed as deficit of inter-provincial trade.



Overview of inter-provincial trade flows

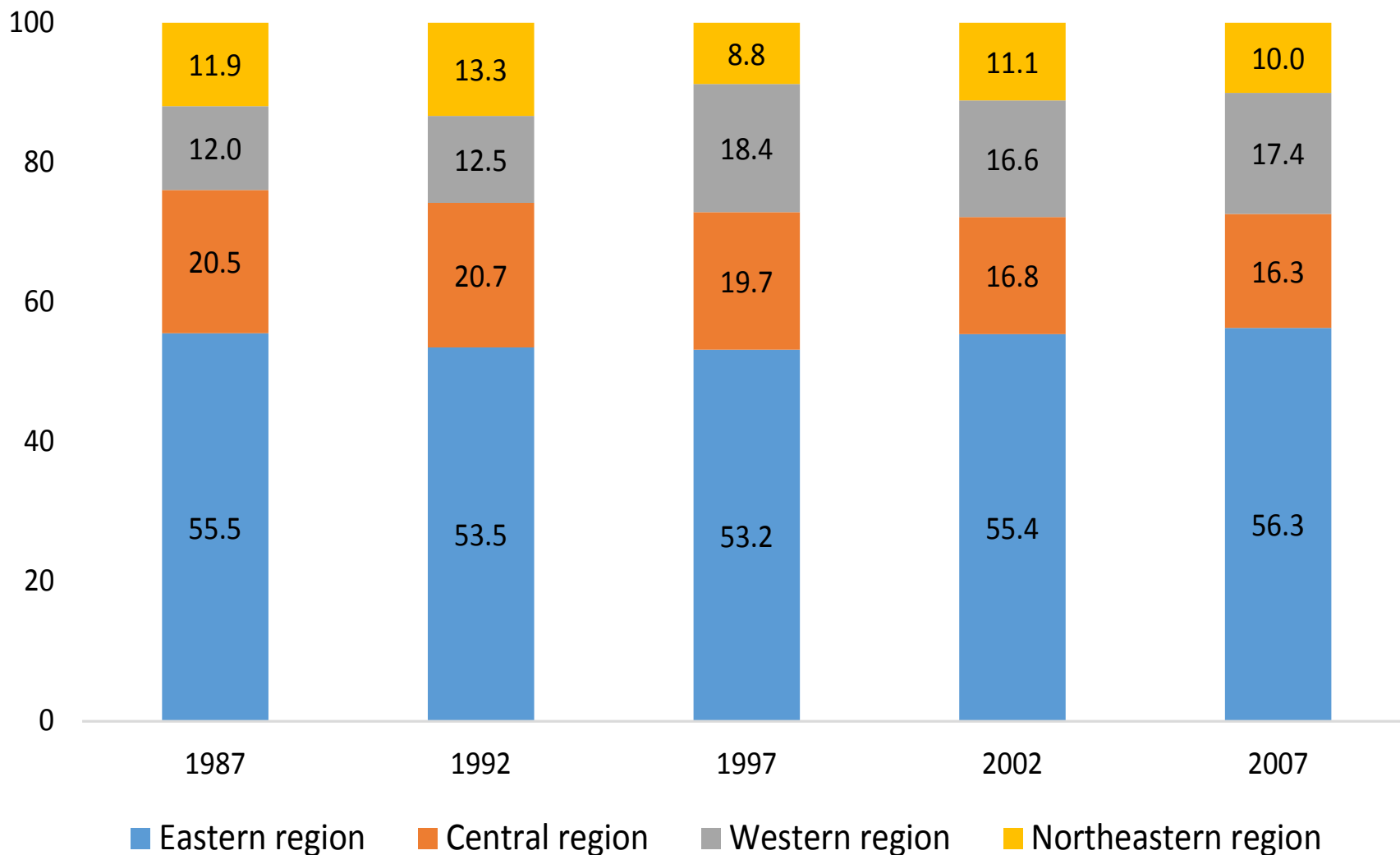


Overview of inter-provincial trade flows

- **The total amount of the Chinese inter-provincial trade in 1987 was CNY1.01 trillion, and it increased to CNY6.8 trillion in 1997, and further to CNY29.27 trillion in 2007**
- **This is equivalent to an increase of 29 times in 20 years, or an average growth rate of 143% for every five years.**
- **The total amount of the Chinese inter-provincial trade in 2007 was double that of the international trade(in 2007, the total amount of Chinese international trade was CNY14.48 trillion)**



Composition of total Inter-Provincial Trade by regions



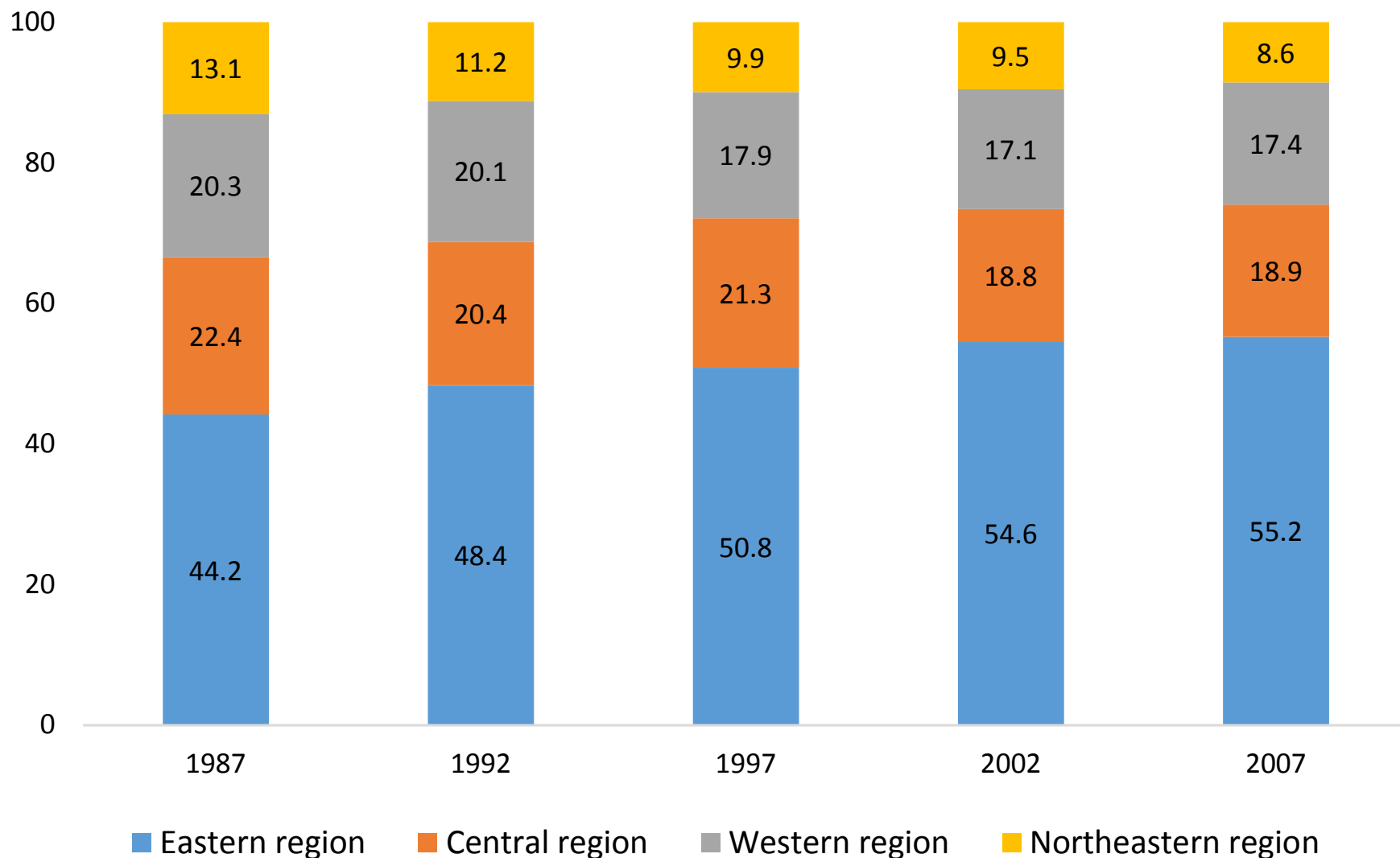


The Inter-Provincial Trade by regions

- The proportions inter-provincial trade flows of the Eastern region to that of the whole country were all above 50% for the five period observed, which had been the main body of the inter-provincial trade;
- The proportions inter-provincial trade flows in the Central region and Northeastern region began to decrease since 1992; while the figure of that in the Western region of the country showed a rising trend



GDP composition by region





Top Five Provinces of volume of the inter-provincial trade and GDP

		Top Five	Overlap in top 5
1987	Inter-Provincial Trade	Shanghai、Jiangsu、Zhejiang、Henan、Guangdong	40%
	GDP	Jiangsu、Shandong、Sichuan、Guangdong、Liaoning	
1992	Inter-Provincial Trade	Jiangsu、Hebei、Guangdong、Shandong、Shanghai	60%
	GDP	Guangdong、Shandong、Jiangsu、Sichuan、Liaoning	
1997	Inter-Provincial Trade	Jiangsu、Guangdong、Hebei、Shandong、Anhui	60%
	GDP	Guangdong、Jiangsu、Shandong、Zhejiang、Henan	
2002	Inter-Provincial Trade	Zhejiang、Guangdong、Hebei、Jiangsu、Shandong	80%
	GDP	Guangdong、Jiangsu、Shandong、Zhejiang、Henan	
2007	Inter-Provincial Trade	Guangdong、Hebei、Jiangsu、Zhejiang、Henan	80%
	GDP	Guangdong、Jiangsu、Shandong、Zhejiang、Henan	

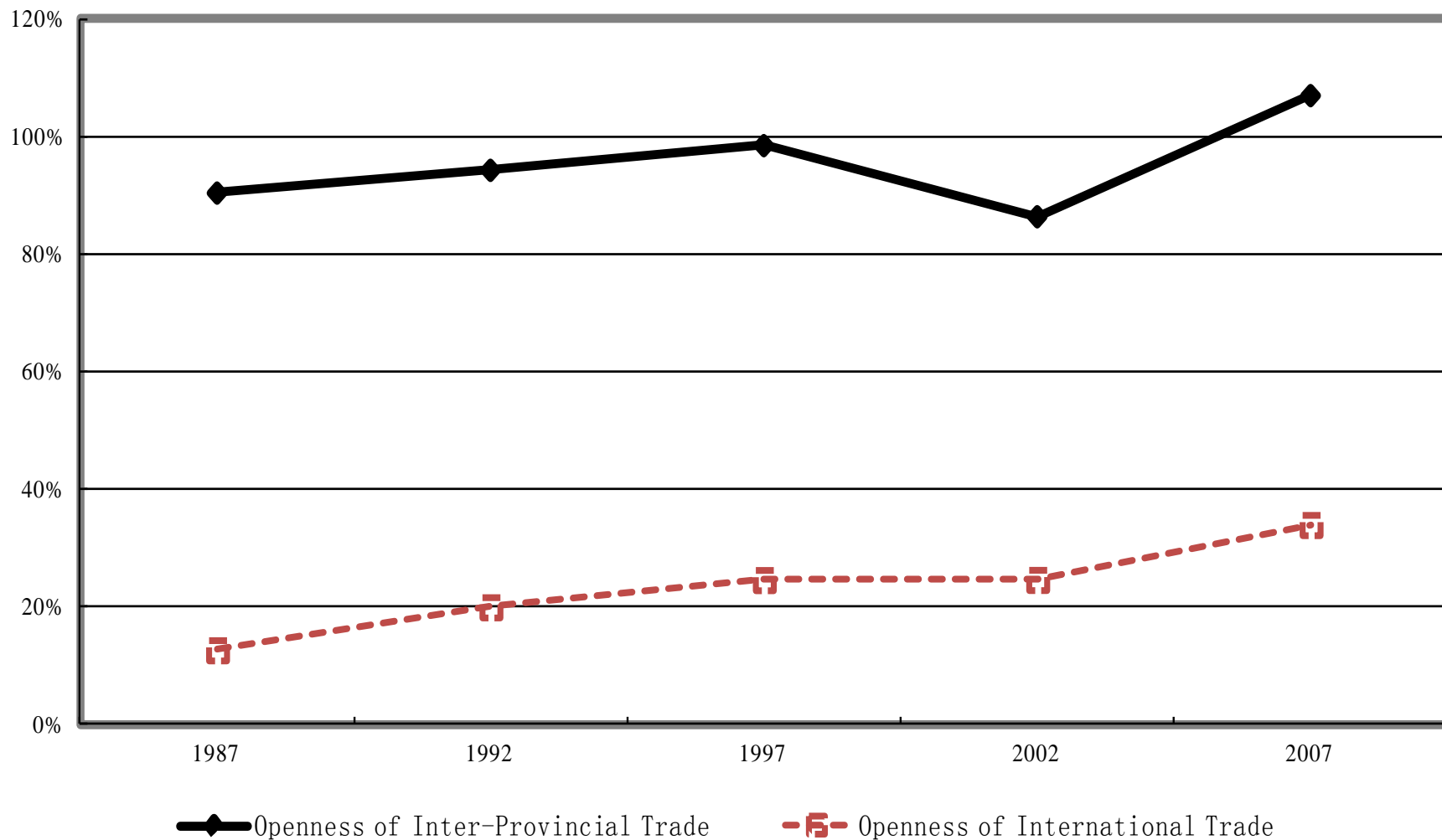


Concentration of inter-provincial trade

- Since 1987, the distribution of inter-provincial trade in the PRC has exhibited a sustained degree of concentration. In the years of 1987, 1992, 1997, 2002 and 2007, the proportion of the inter-provincial trade of the top five provinces to that of the whole country were respectively 40.2%, 45.1%, 41.1%, 39.9% and 43.3%.
- In the years of 1987, 1992, 1997, 2002 and 2007, the GDP share of the top five provinces were 36.7%, 37.8%, 38.2%, 40.2% and 42.2% respectively.
- There is a positive correlation of concentration degrees of inter-provincial trade and that of GDP



Openness of inter-provincial trade



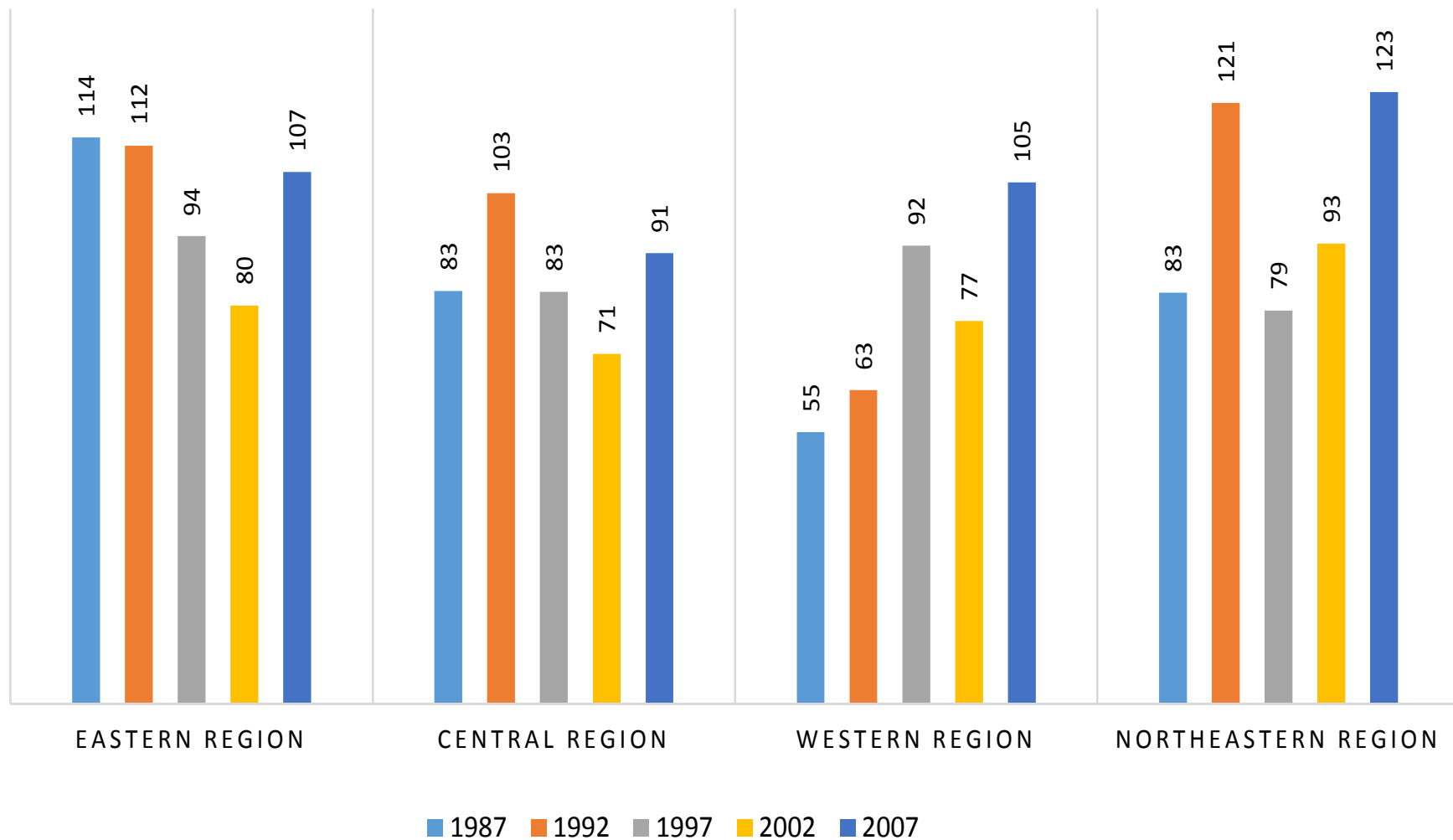


Openness of inter-provincial trade

- In 1987, the average openness of inter-provincial trade of 27 provinces in was 90.4%, while the figure of that in 2007 was 106.9%.
- The average openness of international trade of 27 provinces in 1987 was 12.7%, and the corresponding average openness of international trade of 30 provinces was 34.0% in 2007.
- The average openness of inter-provincial trade from 1987 to 2007 for Eastern, Central, Western and Northeastern regions were respectively 102%, 86%, 78% and 100%



Openness of inter-provincial trade by region





Regional variation in the share of inter-provincial trade in total provincial trade

- from the view of the proportion of the Chinese inter-provincial trade in the total provincial trade of the country, the share of the inter-provincial trade of 27 provinces in 1987 was 86%; the figure of that of 30 provinces was 66% in 2007, about 20 percentage points decrease, proving that the growth rate of the Chinese inter-provincial trade is lower than that of the international trade and the level of domestic market integration is lower than that of the international market



Regional variation in the share of inter-provincial trade in total provincial trade

- proportion of the inter-provincial trade of **Eastern** region was 83% in 1987, decreasing to 56% in 2007.
- For the **Central** region decreased from 93% in 1987 to 89% in 2007
- The proportion in **Northeastern** regions decreased from 89% in 1987 to 82% in 2007;
- The proportion in the **Western** region decreased from 91 in 1987 to 90% in 2007, which was relatively constant.
- The average proportions of the Eastern, Central, Western and Northeastern regions across the years we observed were respectively 67%, 91%, 90% and 83%. Interestingly, this indicates that compared to the Eastern region, the inland provinces actually depends more on the inter-provincial trade

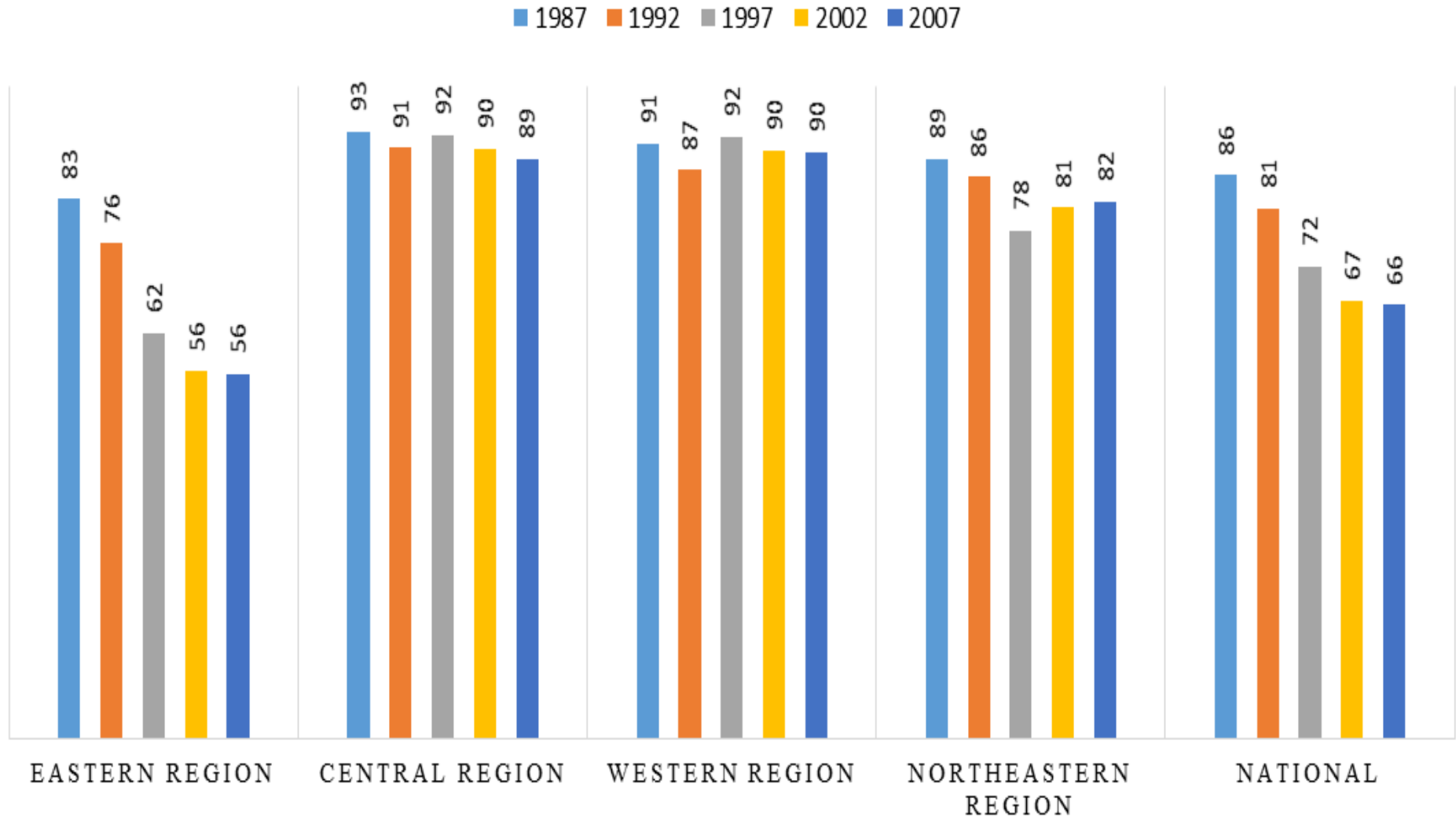


Regional variation in the share of inter-provincial trade in total provincial trade

- At the provincial level, the proportion of the inter-provincial trade of top five provinces ranked orderly
 - Henan, Gansu, Guizhou, Jilin, Hubei in 1987;
 - Xinjiang, Ningxia, Hebei, Anhui in 1992, Henan;
 - Gansu, Guizhou, Hebei, Anhui, Qingdao in 1997;
 - Shann'xi, Chongqing, Ningxia, Anhui, Hebei in 2002;
 - Shann'xi, Hebei, Henan, Guizhou, and Anhui in 2007.
- One could find that Hebei is the only province in the Eastern region ranking the top five in these five years, the rest of provinces belonged to the central and western region of the country, showing that compared with the eastern region, the provinces in the central and western region depend more on the inter-provincial trade



Proportion of inter-provincial trade by regions





Balance of the Chinese inter-provincial trade

- Kept a surplus for the five years: Liaoning and Henan
- Maintained an deficit for the five years: Beijing, Shanxi, Jilin, Guizhou, Yunnan, Shann'xi, Gansu, Qinghai and Ningxia
- The surplus of the inter-provincial trade of the rest 19 provinces had all experienced changes for the five years, which shows that the provinces with long term deficit mostly belong to central and western region of the country, indicating that economic development is relatively backward in that part of the country, and it is need to be imported finished industrial products from the eastern region of the PRC; and the surplus model of the inter-provincial trade of most provinces had changed



Main Findings

- **The levels of Chinese inter-provincial trade were high. The total amount of inter-provincial trade was twice that of international trade, and the eastern region has always been central to domestic trade**
- **There is a high degree of concentration in the spatial distribution of inter-provincial trade, which is also strongly correlated with that of provincial GDP. In other words, the GDP influence on domestic trade is likely greater than that of distance**



Main Findings

- **The openness of inter-provincial trade has been increasing, which is consistent with the hypothesis of deepening domestic market integration in the PRC. The openness of inter-provincial trade is three times that of the international trade, further supporting the notion that domestic market integration is greater than that of the international market. In addition, the domestic openness of the inter-provincial trade of eastern region is higher than that of central and western region.**



Main Findings

- **The proportion of the inter-provincial trade in the total provincial trade shows a falling trend, indicating that the growth speed of domestic market integration is slower than that of the international market; and the proportion of the inter-provincial trade of eastern region is much lower than that of the central and western region, but from the view of proportion, the trade between most of Chinese provinces still depend on the inter-provincial trade**



Main Findings

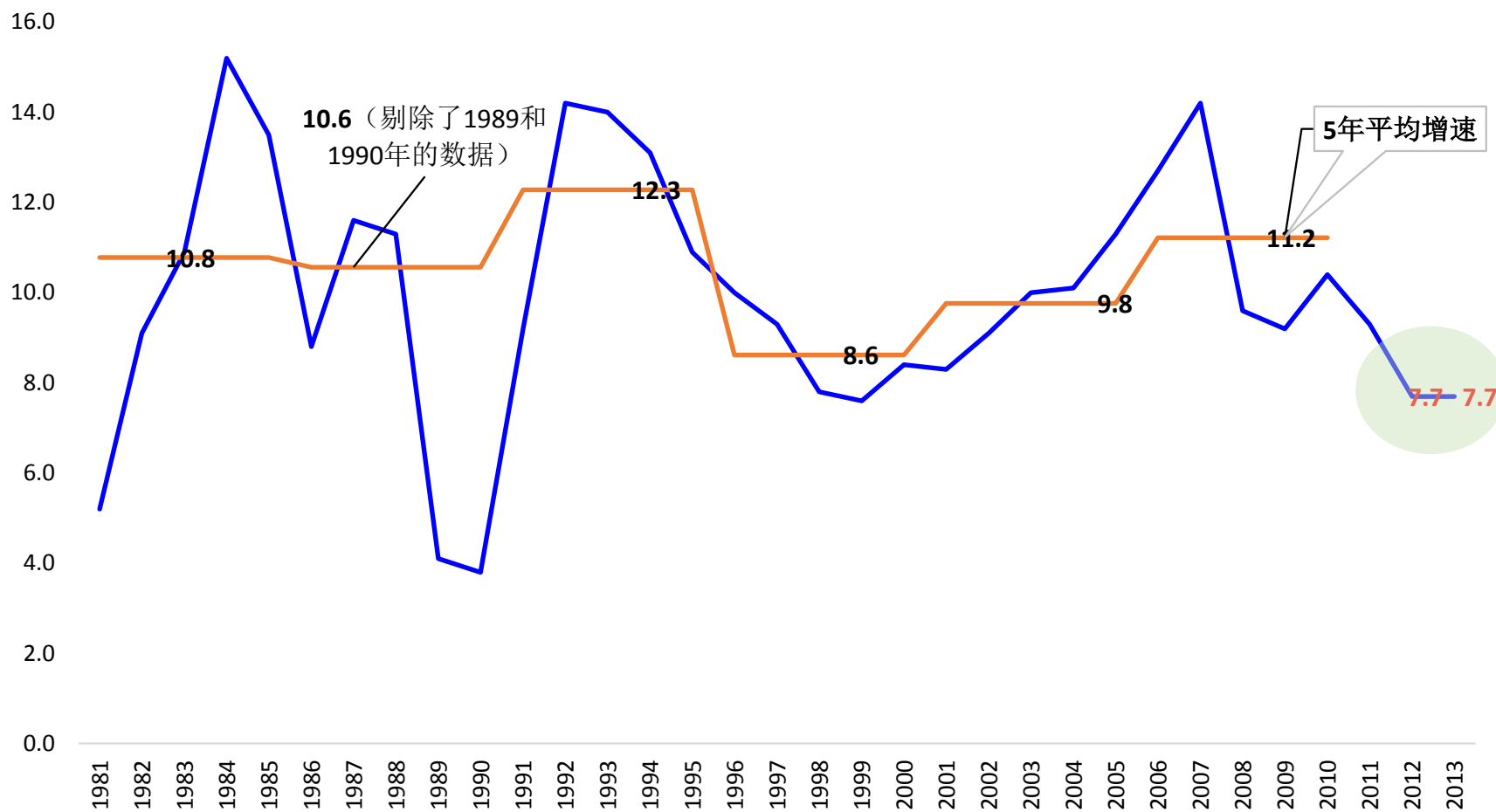
- **The provinces with a long term unfavorable balance of the inter-provincial trade mostly belong to central and western region, in line with the view that the economic development in those regions was relatively backward, and thus bolstering the need to import finished industrial products from eastern region.**



Regional Policy Implications

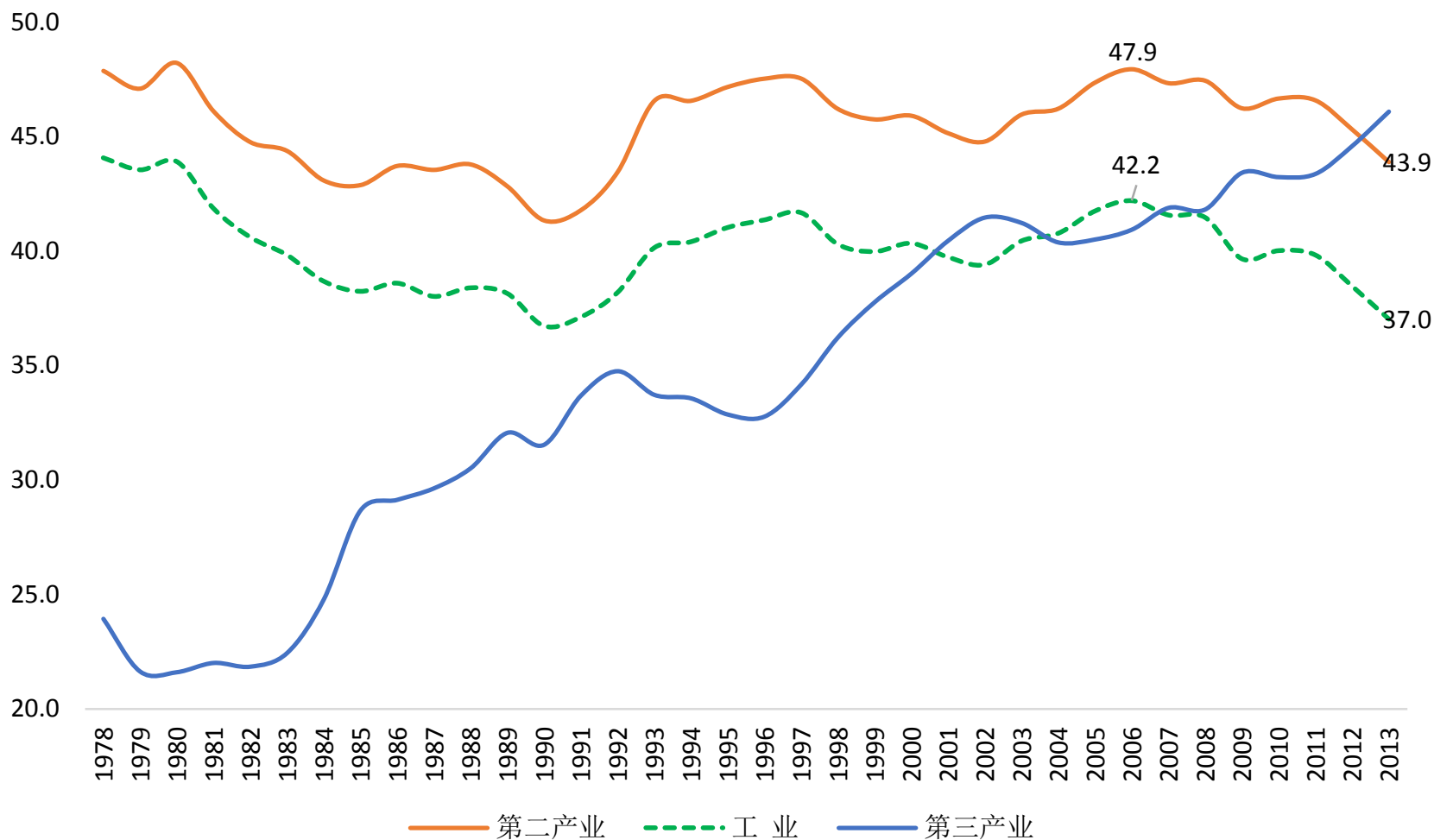


GDP Growth Rate (1981-2013)



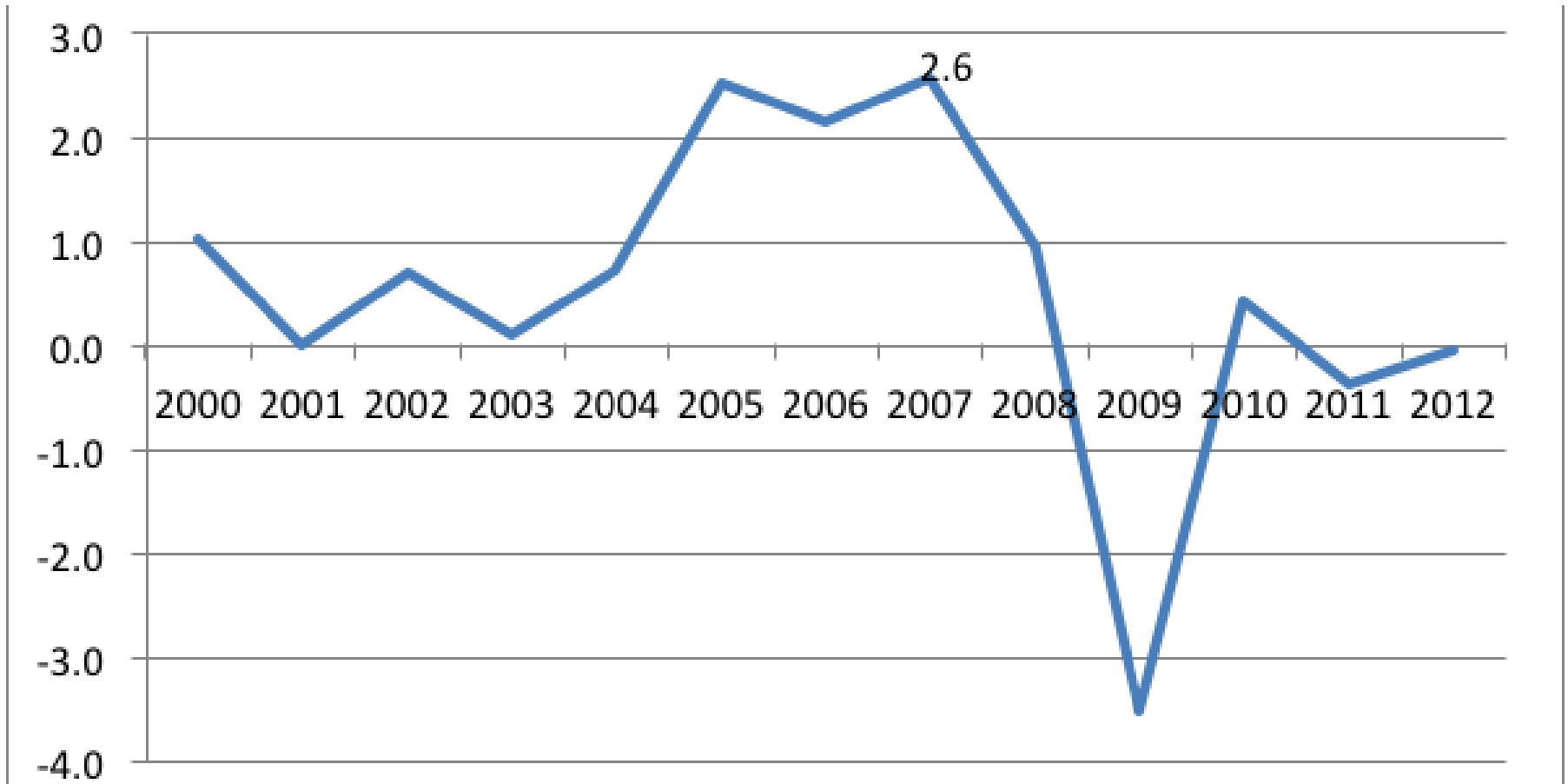


Share of Industry in GDP



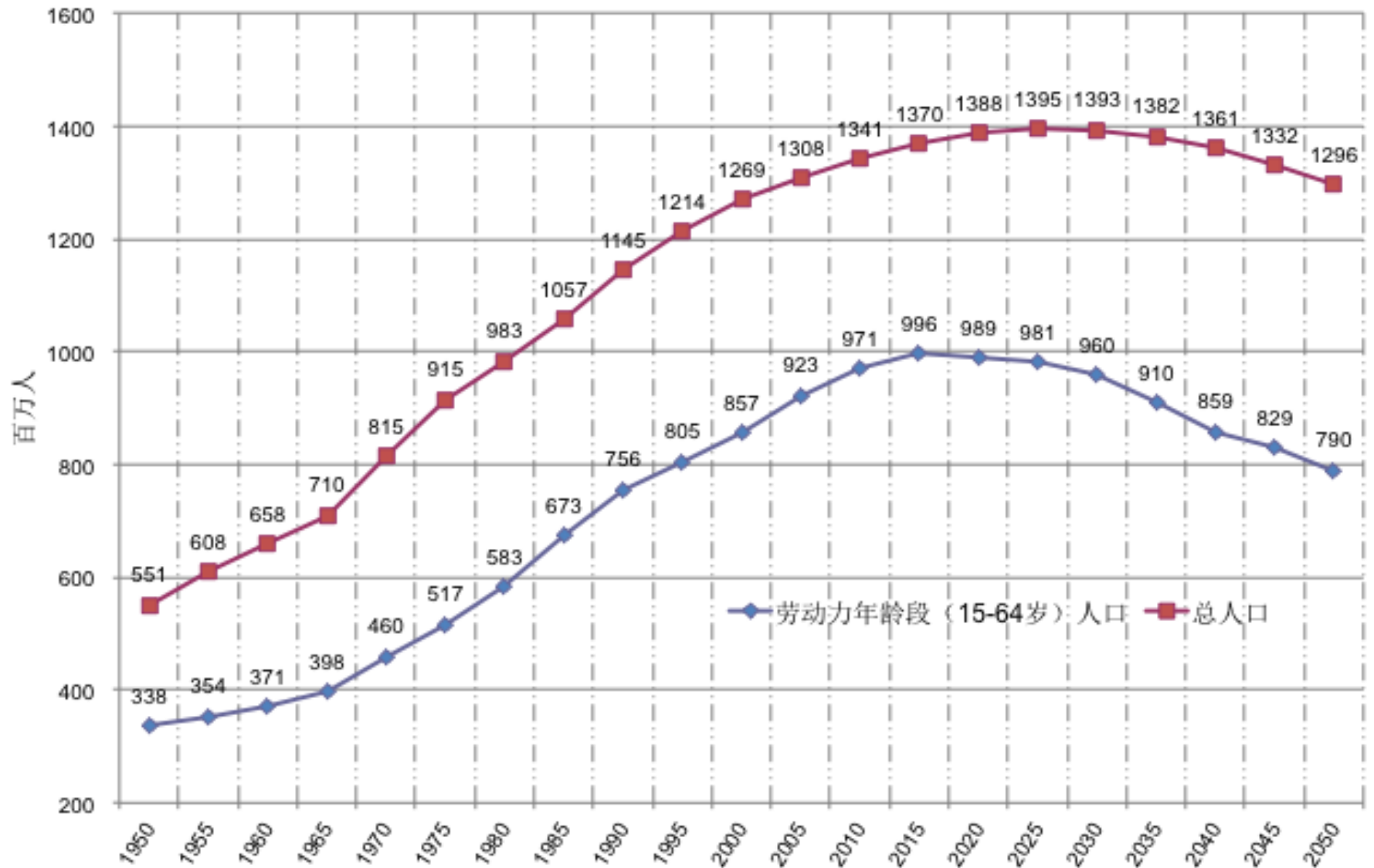


Contribution of Net Export to GDP growth



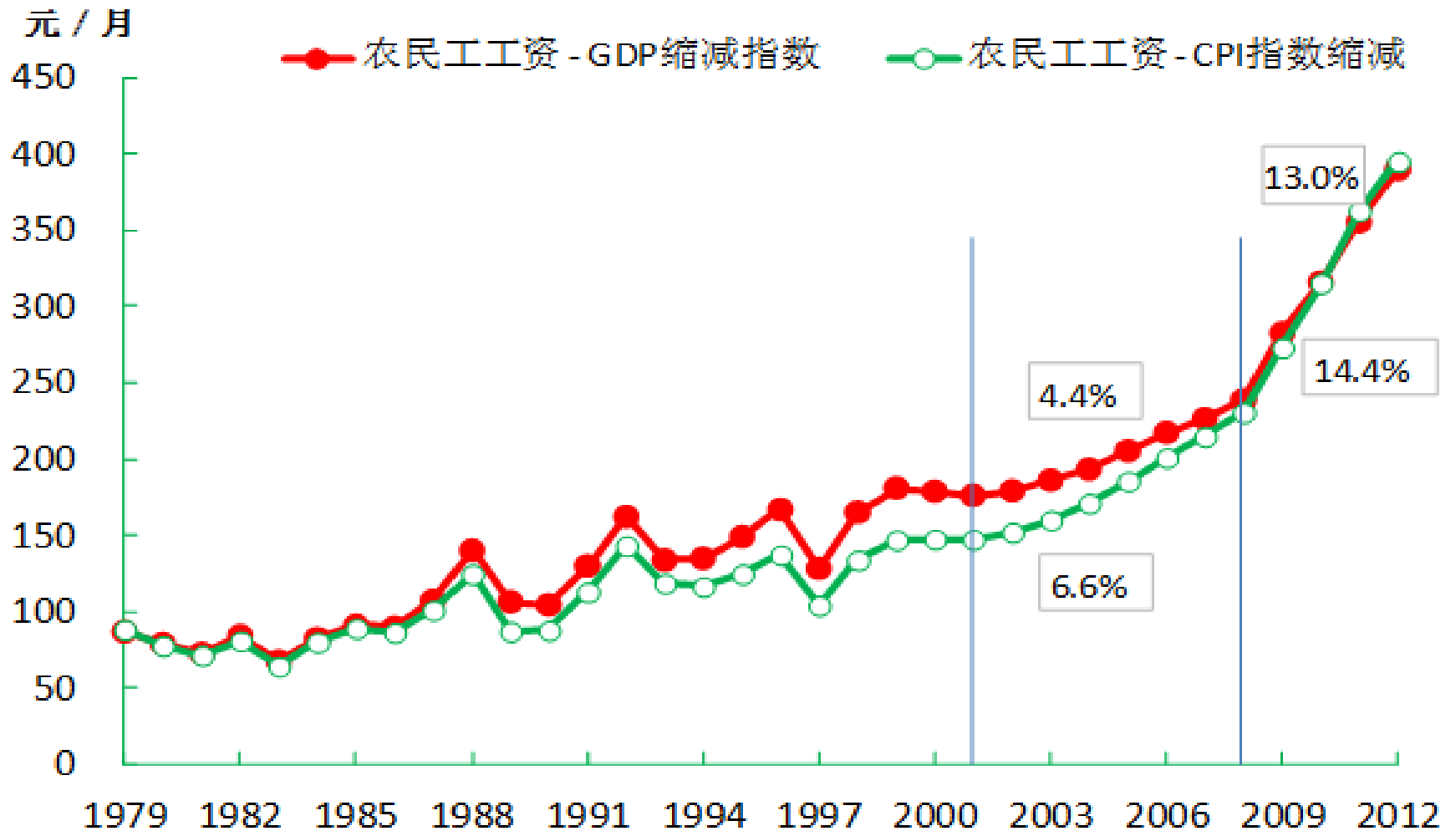


我国的总人口和劳动力年龄段人口（联合国的中位预测，新版）





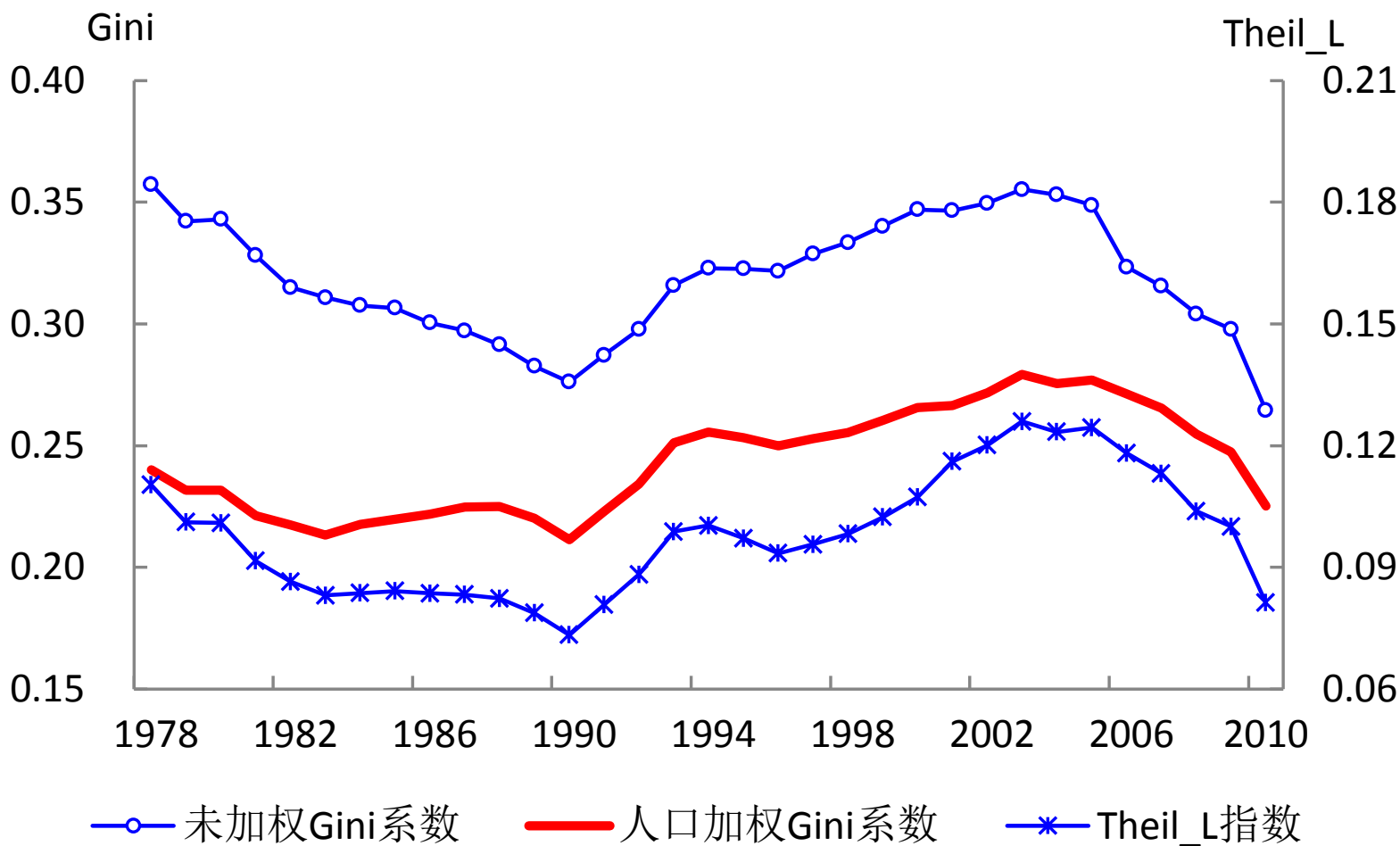
Growth of Income for Migrants



资料来源：转引自许召元（2014）



Regional Income disparity



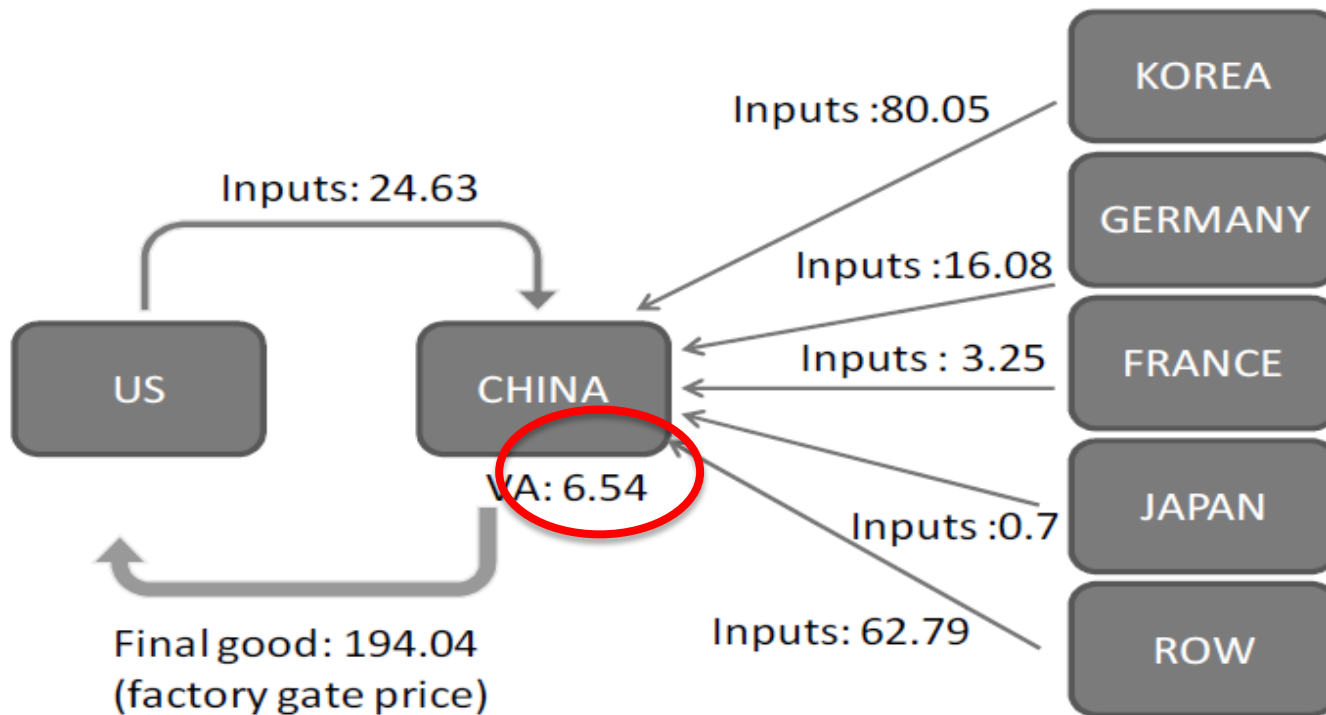


Regional Policy Implementations

- **The shift should be made from relying on low-end factors to the higher-ends of the value chain**
- In the past three decades, the Chinese economic growth was intensively reliant on low-end factors of labors, land and natural resources. But it is no longer enough. A unified and open domestic market should be formed by supporting inter-provincial trade, promoting the construction and optimizing of nationwide production network, and setting up a virtuous cycle of learning and technological diffusion across provinces and region. All these will increase specialization and raise productivity, thereby producing a new source of Chinese economic growth.



The case of 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



Regional Policy Implementations

- The shift should be made from a strategy of regional economic growth first to one of coordinated regional development



Regional Policy Implementations

- **The shift from the strategy of export-oriented development to the both internal and external-oriented development has been adopted**
- The marginal effect of the inter-provincial trade is smaller than that of the international trade, so it could be a major channel for PRC to expand its domestic demand, and could develop the domestic market at utmost extent by developing and prospering the inter-provincial trade



Regional Policy Implementations

- **The shift from the strategy of “exchange market for technology” to a strategy of “both catching up with and surpassing of the market and technology” has been implemented adopted**
- Since the reform and opening up, the PRC has a tendency of stressing technology and neglecting market, forming a strategy of “exchanging market for technology”, causing the problems of an early open in time and greater open in extent of the domestic market. The PRC could further develop its domestic inter-provincial trade, reduce the fragmentation of the domestic market and decrease regional protection, form a unified and open domestic market for domestic enterprises, and support further deepening of local innovations.



Thank you very much !