

Economic Impacts of
China (Shanghai) Pilot Free Trade Zone:
Geographical Simulation Analysis by IDE-GSM

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IDE-JETRO

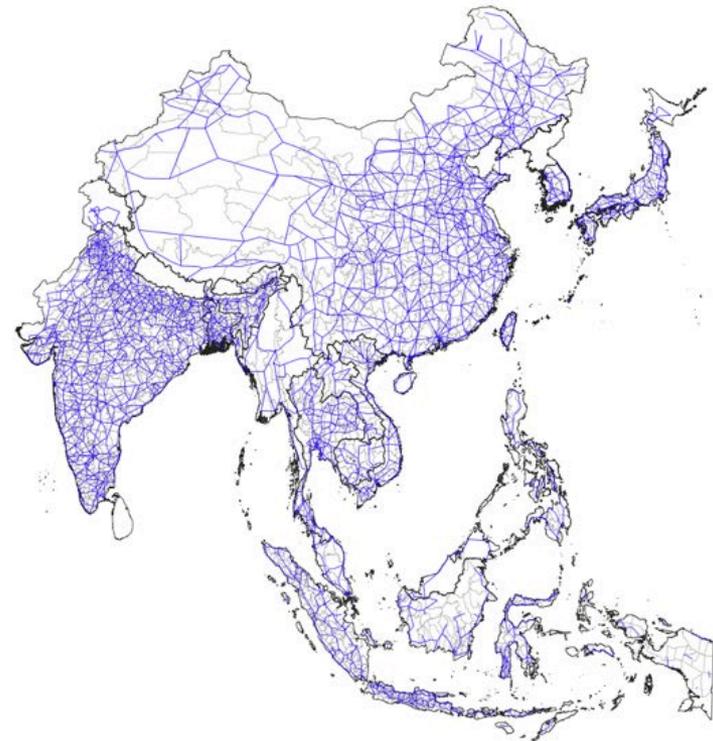
Institute of Developing Economies, JETRO

Geographical Simulation Model: GSM

GSM is a simulation model based on Spatial Economics, aka New Economic Geography.

- To simulate the dynamics of population and industries for long-term
- To analyze the effects of infrastructure projects and customs facilitation on the economic activities **at prefecture level**

Road network of East Asia in IDE-GSM

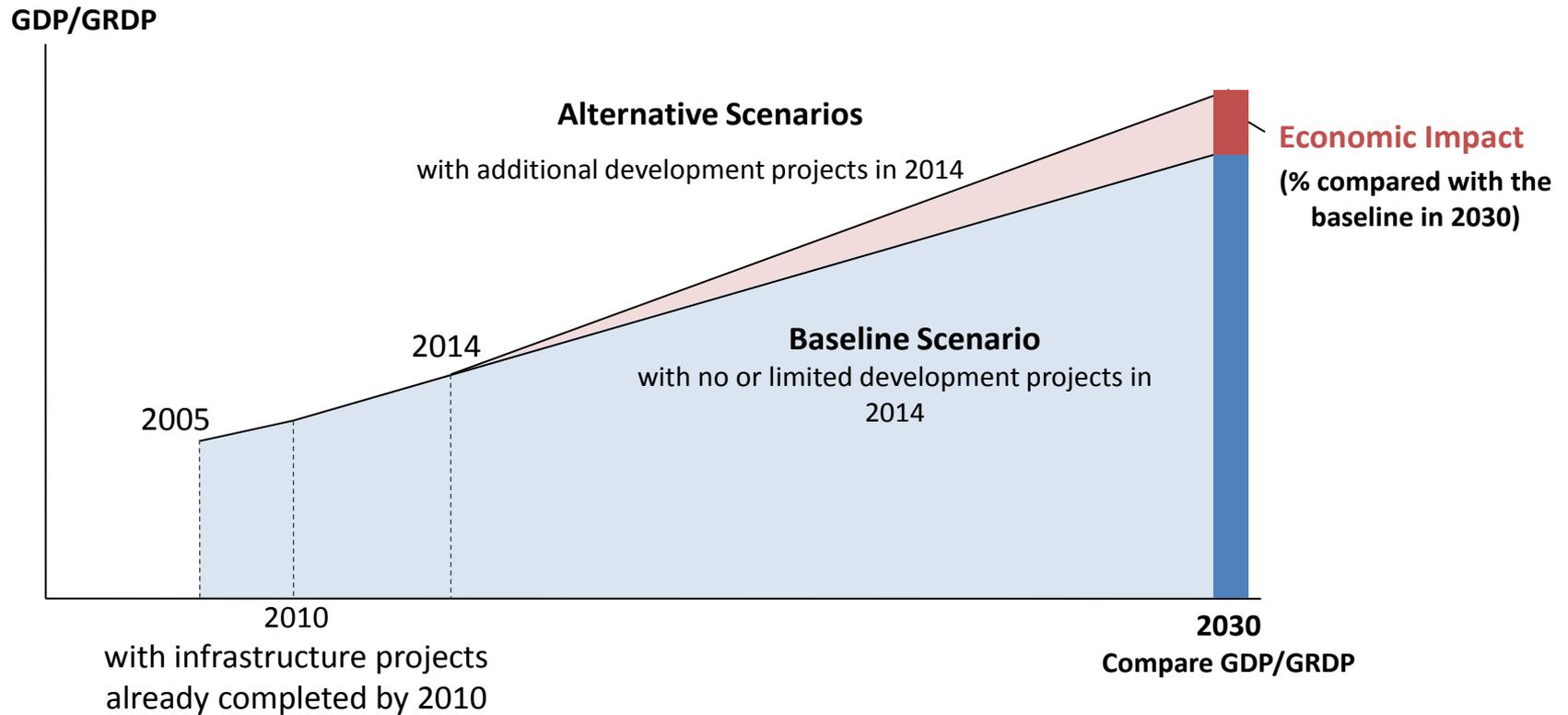


What can we estimate with GSM?

- Economic Impacts of
 - Hard infrastructure development
 - Trade facilitation, regulatory reform and FTA
 - SEZ development
 - Combination of those hard and soft infrastructure projects
- In this simulation, we describe China (Shanghai) Pilot Free Trade Zone (SHFTZ) as **a regulatory reform** at selected areas, cities and provinces, **rather than a development of industrial estate.**



Simulation Analysis: See the Difference



Most Likely Scenario

Selected cities and provinces in China will lower services barriers and the non-tariff barriers (NTBs) of manufacturing goods gradually.

Most Likely Scenario

Shanghai City as a whole:

By half the Hong Kong-China difference during 2014-2025

in both Services and Manufacturing

Guangzhou and Tianjin:

By half the Hong Kong-China difference during 2016-2025

in both Services and Manufacturing

Yangtze River Economic Belt*:

By half the Hong Kong-China difference during 2021-2025

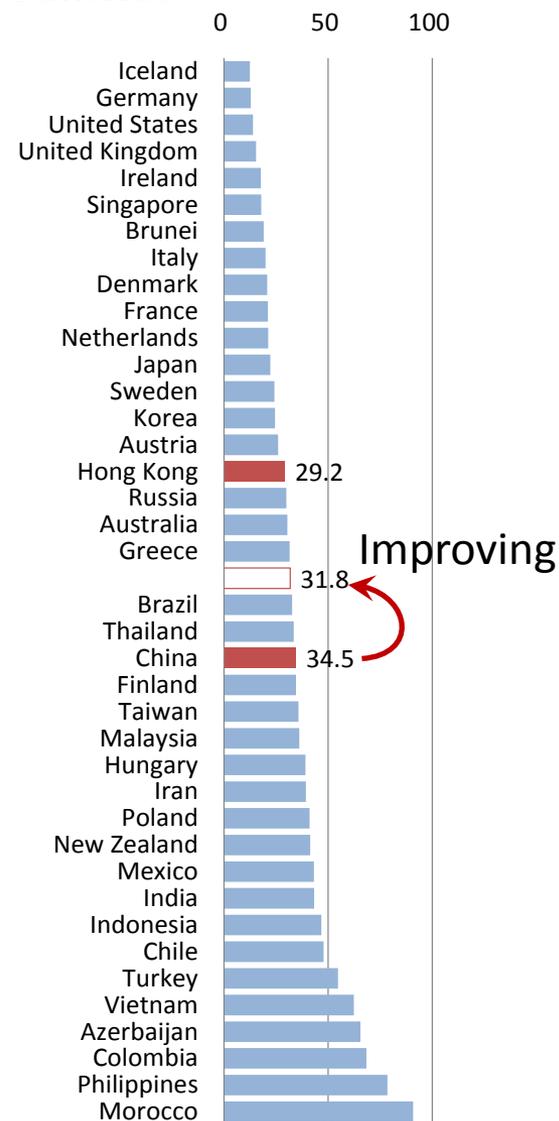
in both Services and Manufacturing

The other regions:

No reduction

*Chongqing, Jiangsu, Hubei, Zhejiang, Sichuan, Yunnan, Guizhou, Hunan, Jiangxi, and Anhui Provinces.

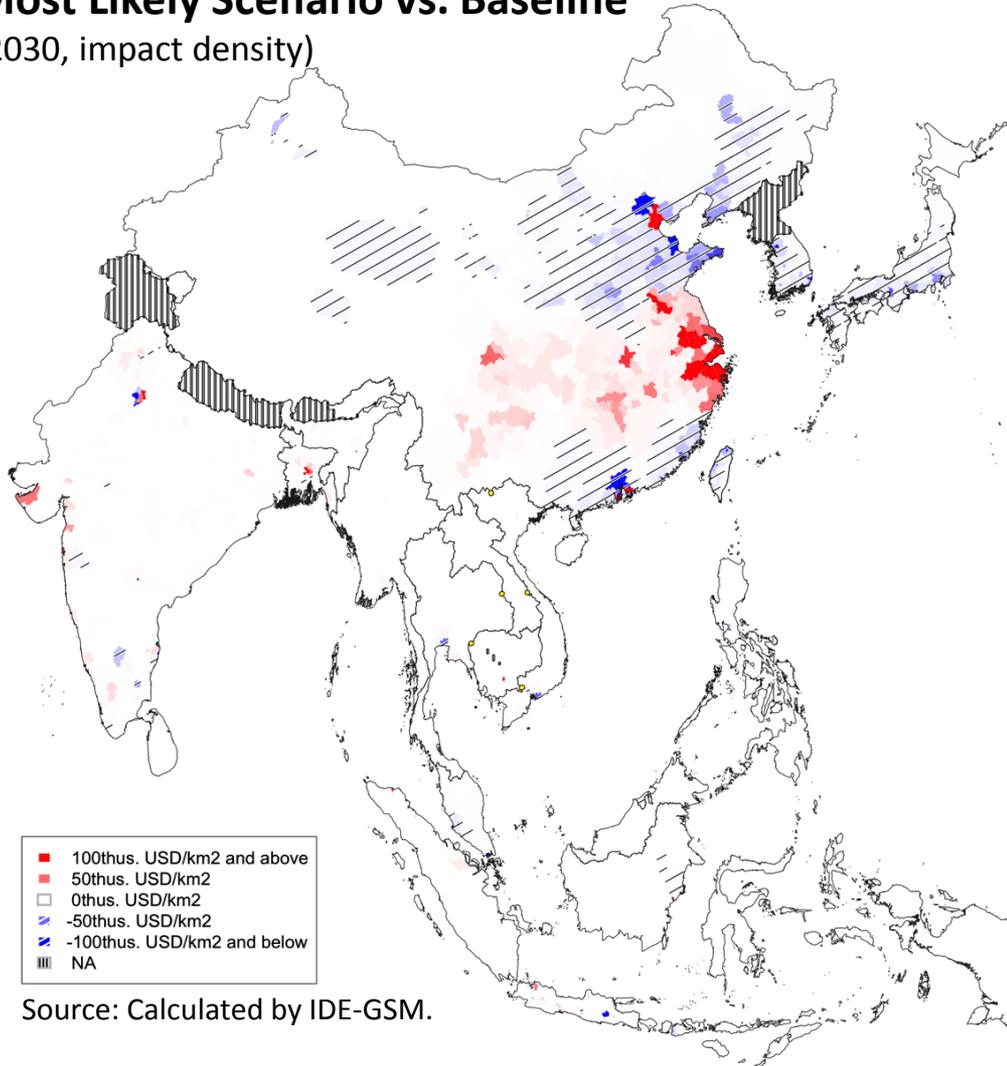
Services Barriers in Selected Countries



Results on GRDP

Most Likely Scenario vs. Baseline

(2030, impact density)

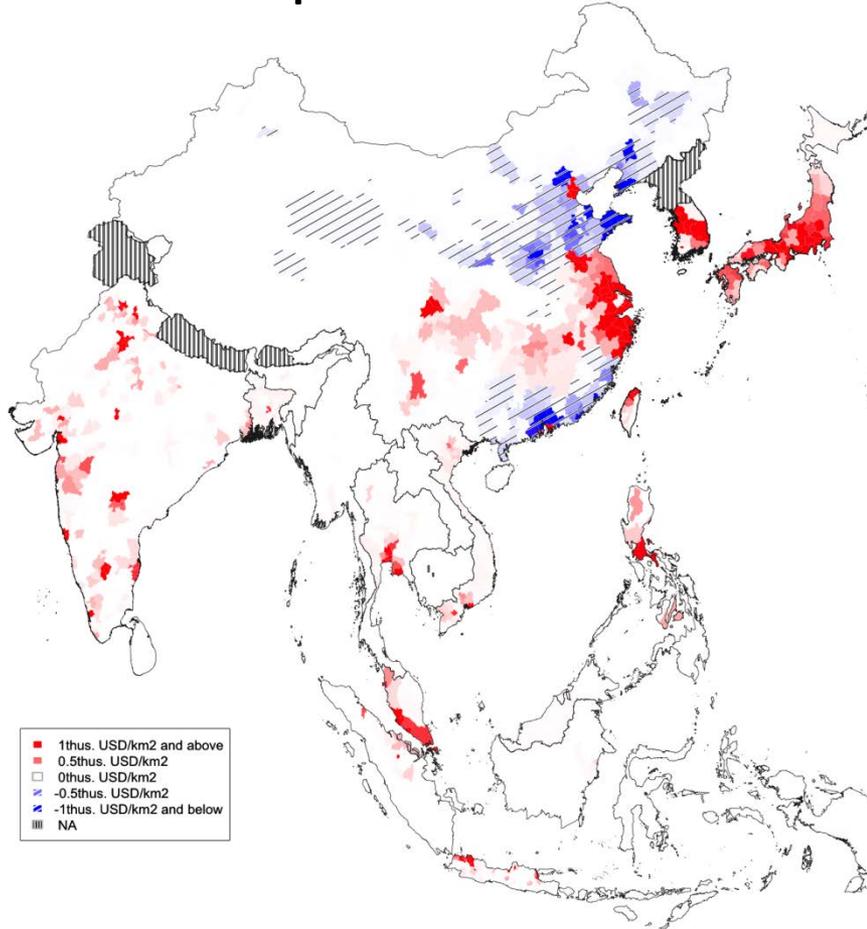


Source: Calculated by IDE-GSM.

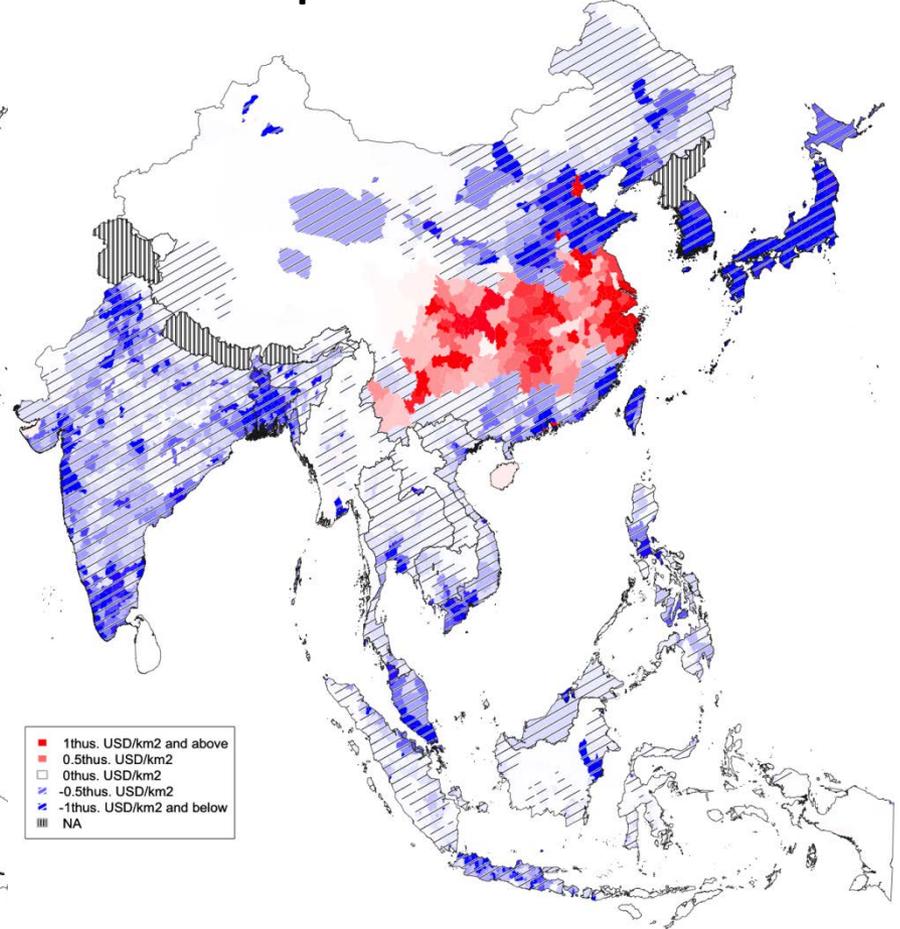
Red regions will gain competitiveness through purchasing parts and components in relatively lower prices. Consumers will benefit from lower prices in goods and services. They will see inflow of the firms and households from other regions which leads to higher competitiveness of the firms. On the other hand, Blue regions will face fiercer price competition with red regions, lose some customers and see outflow of the firms and households, compared with the economic situation in the baseline scenario.

Economic Impacts by Industry

Economic Impacts on E&E Sector



Economic Impacts on Services Sector



Source: Calculated by IDE-GSM.

Economic Impacts by Country

Economic Impacts by Country

Country	GDP
China	0.11%
Brunei	-0.03%
Cambodia	0.06%
Indonesia	-0.01%
Japan	-0.02%
Korea	-0.03%
Laos	0.02%
Malaysia	-0.02%
Myanmar	0.01%
Philippines	0.00%
Singapore	-0.03%
Thailand	-0.01%
Vietnam	-0.02%

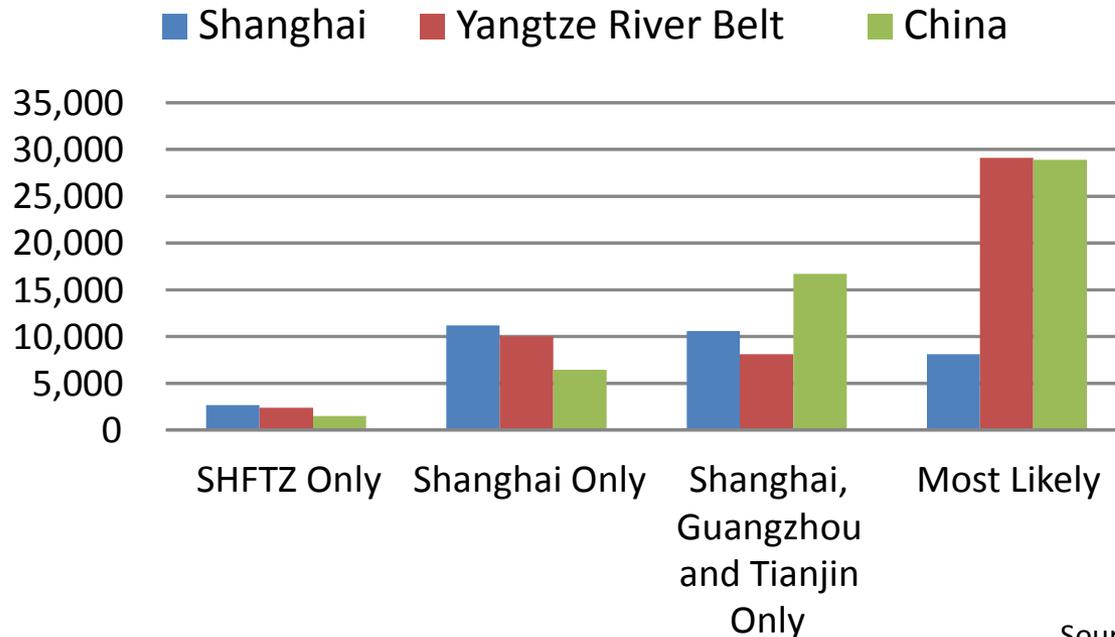
China as a whole will see a 0.11% of positive impact. In East Asia, Cambodia, Laos, Myanmar, which have relatively smaller portion of services sector, will have positive impacts while others will see some negative impacts.

Source: Calculated by IDE-GSM.

Several Alternative Scenarios

Alternative Scenarios (1): Limited Expansion

(Real GDP: Million USD)



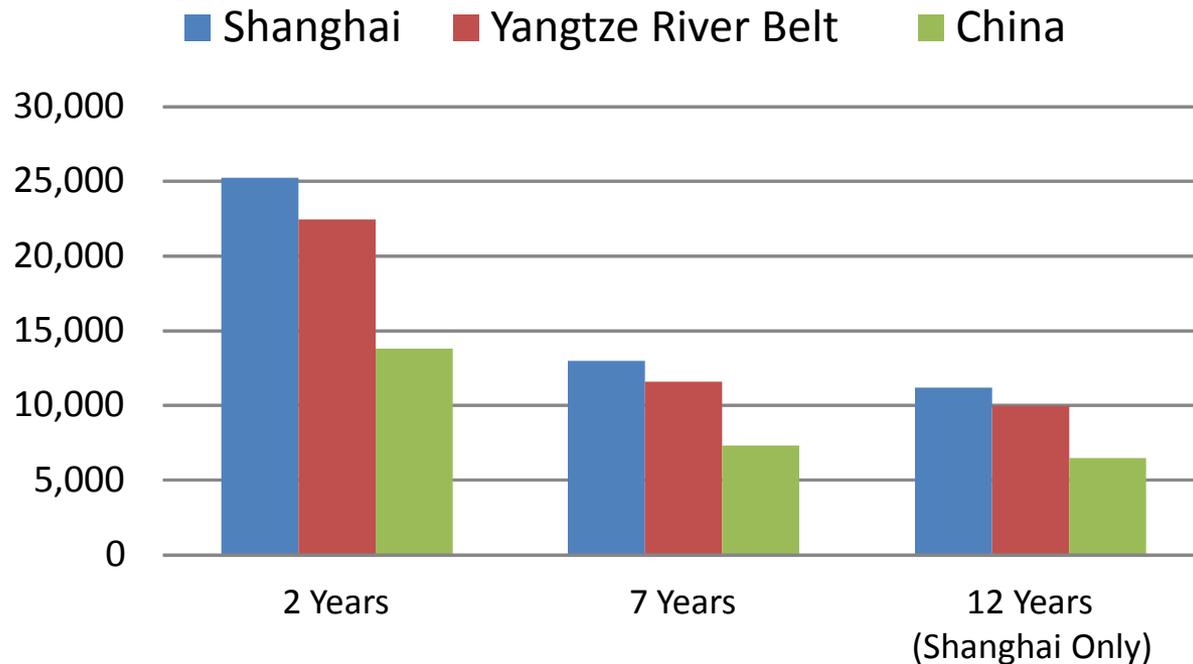
Source: Calculated by IDE-GSM.

- The economic impact of the “SHFTZ Only” scenario on China will be one-twentieth of that of the Most Likely Scenario. The results clearly tell us that the expansion of the reforms to other regions is a key to enlarge the economic impact on the country.

Alternative Scenarios (2): Faster Reduction of the Barriers

(in Shanghai Only Scenario)

(Real GDP: Million USD)

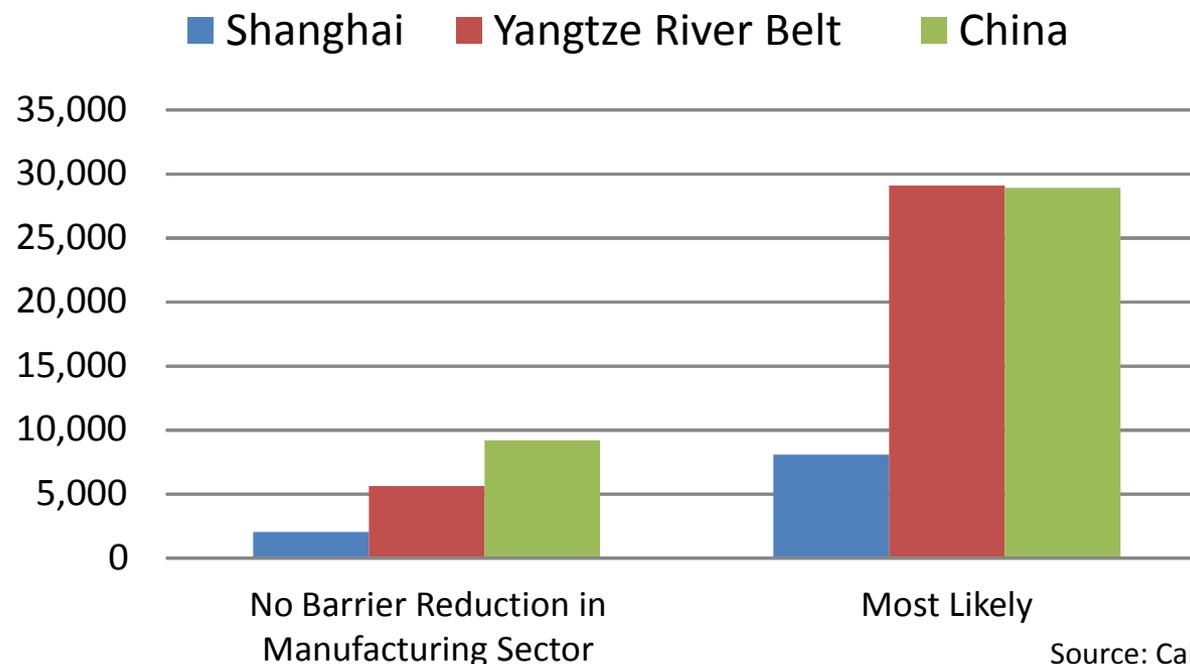


Source: Calculated by IDE-GSM.

- If the reforms are completed within 2 years, the economic impact on China will be almost doubled compared with a scenario in which it takes 12 years to complete the same reform.

Alternative Scenarios (3): No Barrier Reduction in Manufacturing Sector

(Real GDP: Million USD)



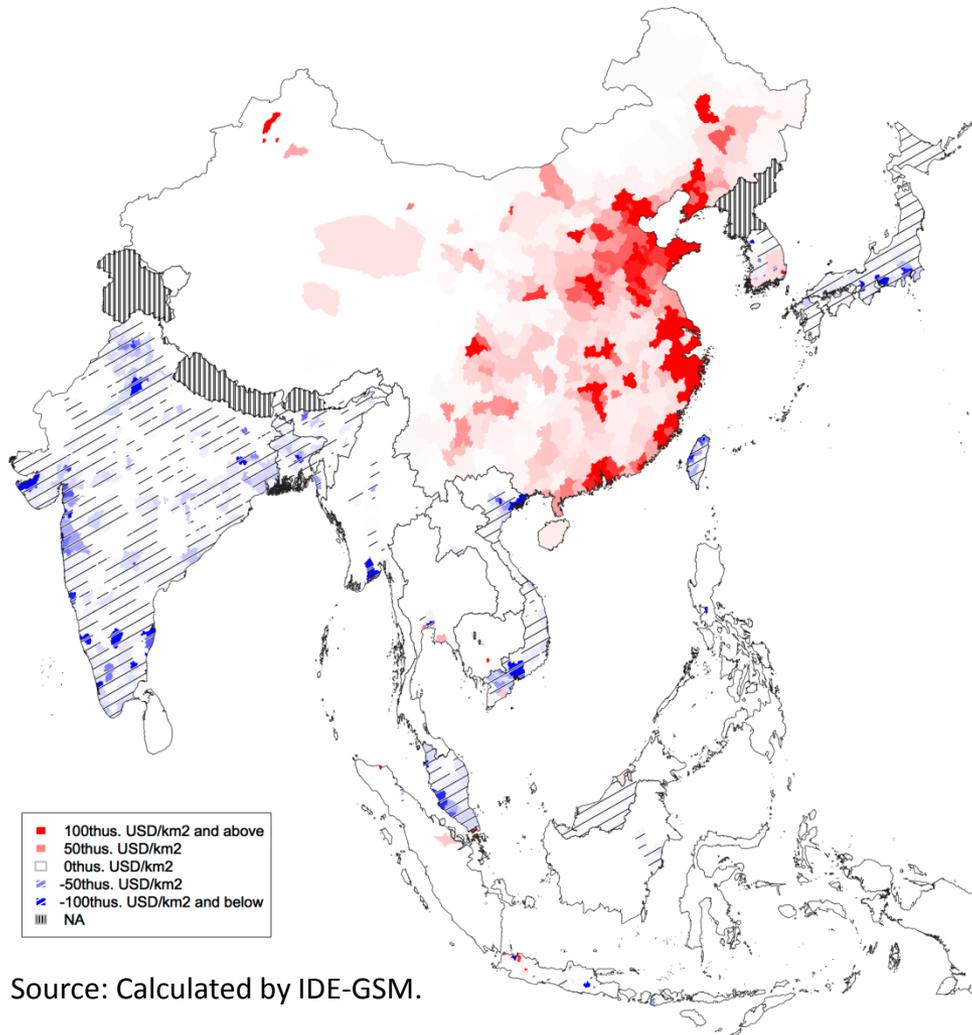
Source: Calculated by IDE-GSM.

- This is a fictitious scenario that reform in services sector doesn't reduce barriers in manufacturing sector at all. In this scenario, China as a country will have a 4.15 times larger economic impact in services sector than the Most Likely scenario, because some industries will shift from manufacturing to services in that scenario. However, impact of manufacturing sector on China will be one-twentieth of the Most Likely scenario and thus overall impact of the services-only scenario on the country will be only 31.7% of the Most Likely scenario.

Best Scenario

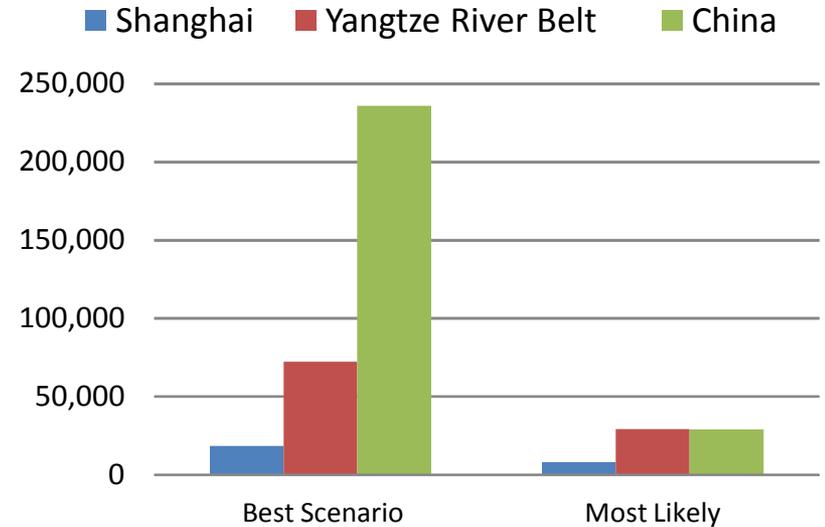
A Best Scenario	Most Likely Scenario
Shanghai City as a whole: To Hong Kong level during 2014-2025 in both Services and Manufacturing	Shanghai City as a whole: By half the Hong Kong–China difference during 2014–2025 in both Services and Manufacturing
Guangzhou and Tianjin: To Hong Kong level during 2016-2025 in both Services and Manufacturing	Guangzhou and Tianjin: By half the Hong Kong–China difference during 2016–2025 in both Services and Manufacturing
Yangtze River Economic Belt: To Hong Kong level during 2021-2025 in both Services and Manufacturing	Yangtze River Economic Belt: By half the Hong Kong–China difference during 2021–2025 in both Services and Manufacturing
The other regions: To Hong Kong level during 2021-2025 in both Services and Manufacturing	The other regions: No reduction

Results



Source: Calculated by IDE-GSM.

(Real GDP: Million USD)



- Reforms both in manufacturing and services sector up to the level of Hong Kong and applying the reforms to the whole country will bring a largest impact on China. The impact on the country will be about 8.16 times of the Most Likely scenario.

Conclusion

- Services related to manufacturing sector, such as logistics, finance and professional services, should be focused to reduce the barrier in manufacturing sector.
- Faster reduction of the barriers will bring larger economic impacts.
- The reduction of the barriers in one region with other regions unchanged causes a kind of “trade diversion effects”.
 - Neighboring economies such as Japan, Korea and ASEAN countries should reduce barriers in manufacturing sector as well as services sector.



Thank You for Your Kind Attention!