China Macro Thematic Report

Impacts of trade protectionism on US and Chinese economies

During his presidential campaign, Donald Trump proposed adopting trade protectionist policies (e.g. 45%/35% tariffs on China/Mexico) in a bid to revive the US manufacturing sector and bring jobs back to the US. Will these policies boost US growth? What will be the implications for its major trading partners, such as China?

The uneven distribution of the benefits of globalization leads to the rise of trade protectionism, shaping the external policies of the incoming US government. With deepening specialization, the US manufacturing sector, especially labor-intensive industries, have gradually lost their competitiveness. Over the past two decades, the US has faced increasing income inequality. Its current account deficit remained substantial, even after it narrowed from the peak of 5.8% of GDP in 2006. Against this backdrop, President-elect Trump’s proposals to protect domestic employment and revive US manufacturing through trade protection were well received.

We conduct a simple quantitative analysis on the potential impacts of trade protectionist policies on the US and Chinese economies. As trade deal renegotiation, anti-dumping and other measures may eventually all raise import prices – such as tariffs – we put trade protection in perspective by considering a 5ppt rise in the average US import tariff.

- It would push up US GDP growth by 0.12ppt, inflation by >0.24ppt and fiscal revenue to GDP ratio by 0.79ppt.
- It would drag the world GDP growth down by >0.06ppt.
- It might directly impact China’s GDP growth by >0.07ppt.

Thus, the impact of trade protection on US inflation would be more significant than that on US growth. In addition, some medium-/long-term impacts also merit attention:

- Short-term impact may be larger than the medium-/long-term impact, given the spillover effect of the world trade setback.
- The impact on financial markets may be greater than that on the real economy, considering the role of expectations in asset prices.
- The impact on other emerging markets may be more visible than that on China, from the global value chain perspective.

Facing external demand uncertainties, China should refocus on domestic demand. The China-US trade imbalance is clearly an important concern for the incoming US government. The external pressure highlights the importance for China to push forward structural reforms and promote domestic demand.

Nevertheless, if China-US trade frictions escalate, China will not lack policy options. The main US exports to China include aerospace equipment, electronic equipment, machinery and plant products. In particular, the US is highly dependent on China’s demand for Boeing aircraft, soybeans and integrated circuits. If China were to retaliate by raising tariffs or launching anti-dumping probes, these US industries would come under non-trivial pressure.

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Impacts of trade protectionism on the US and Chinese economies

During his presidential campaign, Donald Trump proposed bringing jobs back to the US and reviving US manufacturing through import tariffs (e.g. 45%/35% tariffs on China/Mexico), anti-dumping, trade negotiations, and even withdrawal from the WTO. Can trade protectionist policies stimulate US economic growth? What are the implications for its major trading partners, such as China? How should China respond? To answer these questions requires quantitative analysis.

Trade protectionism rising in the US

The uneven distribution of the benefits of globalization has led to the rise of trade protectionism, which has profoundly shaped the external policies of the incoming US government. With deepening specialization, the US manufacturing sector, especially labor-intensive industries, gradually lost its competitiveness. Since the beginning of the 21st Century, the number of manufacturing workers in the US has declined by 4.96mn and the unemployment rate of the manufacturing sector has been well above that of the financial industry (Figures 1 & 2). Over 2000~15, the average weekly wage in the US manufacturing sector grew 2.4% per annum, lower than the 2.7% growth for all sectors. Over the same period, the real income of US median households fell 2.4%, while that of the top 5% high-income families grew 6.1% (Figure 3); the US Gini coefficient rose from 40.5 to 41.1, indicating increased income inequality. At the same time, the US current account deficit continued to expand due to massive goods imports, peaking at 5.8% of GDP in 2006; even after narrowing to 2.6% of GDP in 2015, it remained substantial (Figure 4). Against this backdrop, US President-elect Donald Trump’s proposals to protect domestic employment and revive the US manufacturing sector through trade protection were well received; possible measures include withdrawing from the Trans-Pacific Partnership (TPP), renegotiating the North American Free-Trade Agreement (NAFTA), identifying ongoing trade activities that violate trade agreements, and imposing high tariffs on China and Mexico.

Figure 1: The number of manufacturing workers in the US has declined by 4.96mn since 2000

Figure 2: US manufacturing unemployment rate 2.3ppt higher than that of finance since 2000

Source: Haver Analytics, CICC Research

Source: Haver Analytics, CICC Research

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Some quantitative analysis is needed to better understand the impact of trade protectionism. Free trade facilitates a more efficient allocation of production factors on a global scale to leverage on countries’ comparative advantages and results in greater output; but if the benefits are enjoyed by only a few people, it is bound to trigger social resistance. Global trade growth has slowed significantly since the 2008 global financial crisis, down from an average of 12.7% over 2000~08 to an average of 0.9% over 2009~16 (Figure 5). At a time when the global economic recovery is weak and unbalanced, trade protectionist policies are more likely to be welcomed by social groups who have not fully shared in the benefits of free trade. However, to what extent can trade protectionist policies bring about change? This requires quantitative analysis. While trade deal renegotiation, anti-dumping and other measures have different transmission mechanisms, they may eventually all raise import prices, such as tariffs. Therefore, we put trade protection in perspective by considering a 5ppt rise in the average US import tariff, to provide a basic reference for assessing the impact of trade protection.

Figure 3: Real income of US median households has fallen since 2000

Figure 4: US current account deficit continued to expand due to massive goods imports
Short-term impact of trade protection: a simple quantitative analysis

If the average US import tariff were to be raised by 5ppt (Figure 6):

► In the short term, it would push up US GDP growth by 0.12ppt, inflation by >0.24ppt and fiscal revenue to GDP ratio by 0.79ppt. The current average US import tariff is ~1.6% (Figure 7). If it were to be raised by 5ppt, the increase in tariffs would be partially passed on to import price through the bargaining between import and export enterprises, and is expected to push import prices up by 1.5%. According to our estimate of US import demand elasticity, such a price change would reduce US imports by 1.76%, or 0.29% of US GDP. The rise in import price would make domestic goods and services more attractive and increase domestic market demand. We calculate the US import substitution elasticity which reflects the degree of substitution between domestic and imported goods: the rise in import price would increase US domestic market demand by ~0.12% of GDP. In other words, raising tariffs by 5ppt would boost US GDP growth by 0.12ppt and the rise in import price would directly push up the overall price level by 0.24%. But considering the increase in domestic market demand would further push up the prices of domestic goods and services, the actual rise in inflation should be >0.24ppt. In addition, raising tariffs would lead to an increase in US tax revenue, which is expected to be equal to 0.79% of GDP.

► It would drag world GDP growth down by >0.06ppt. In 2015, the US accounted for 13.8% of total world imports and 22% of world GDP. If US imports were to decline 1.76% due to higher tariffs, the decline in other countries’ exports would be equal to 0.06% of world GDP. Taking into account the boost from exports to the economy and trade retaliation taken by China and other trading partners, the impact on world GDP growth would be larger.

Figure 7: The current average US import tariff is ~1.6%

![Average US tariff rate](chart1.png)

Source: Haver Analytics, CICC Research

Figure 8: China’s exports to US are concentrated in electronic equipment, machinery and clothing

![China’s exports to US](chart2.png)

Source: UN Comtrade, CICC Research

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1 We refer to the results of a New York Fed study (https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr537.pdf) and assume a transmission coefficient of 0.3 from tariffs to import price.

2 If the increased tax revenue is used to expand infrastructure investment, it would further boost US GDP growth and drive up inflation, but since the federal spending plan still needs to be passed by the Congress, there is great uncertainty and it is not taken into account here.
It might directly impact China’s GDP growth by >0.07ppt. In 2015, China’s exports to the US accounted for 18% of its total exports and 3.7% of its GDP. If US imports from China were also to decline 1.76%, the decline in China’s exports would be equal to 0.07% of its GDP. Given that Trump’s trade protectionist policies are specifically aimed at China, this proportion may underestimate the actual impact. China’s exports to the US concentrate in industries such as electronic equipment (23.3% of total China’s exports to the US), machinery (20.6%) and clothing (8.0%) (Figure 8). These industries have relatively high import substitution elasticity and may be affected more significantly by China-US trade frictions (Figure 9).

Thus, the impact of trade protection on US inflation would be more significant than that on US growth. The simple quantitative analysis shows that all things being equal, raising the price of imported goods would have a more pronounced and direct effect on US domestic inflation; it would also give a boost to US domestic demand, but this largely depends on import substitution and is more indirect. In addition, since the US is still an important source of global demand, its policy shift will inevitably impact other major trading nations, such as China.

Medium-/long-term impact and China’s policy options

Besides the simple quantitative analysis, some medium-/long-term impacts also merit attention. The above analysis focuses on the first round of shocks of trade protection and assumes that other conditions remain unchanged. But other conditions will likely change, especially when trading partners make necessary responses. We believe that:

Figure 9: Industries which account for China’s exports to US have high substitution elasticity

![Figure 9](image)

Source: Feenstra, Luck, Obstfeld and Russ (2014)³, CICC Research

Figure 10: Breakdown of US headline trade deficit and value added of trade deficit by country

![Figure 10](image)

Source: Haver Analytics, OECD, CICC Research

Note: *East Asia ex. China and Southeast Asia under the US trade deficit in 2015 include Japan, South Korea, Hong Kong, Taiwan, Singapore, Malaysia, Indonesia, Philippines and Thailand.

The short-term impact may be larger than the medium-/long-term effects. In the medium-/long-term, the decline in GDP growth of the rest of the world as a result of higher US tariffs would in turn reduce import demand for US goods and services, dragging down US export and GDP growth. At the same time, the trading partners will likely take some retaliatory measures in response to the US trade policy, further dampening US exports. On average, a 5ppt rise in US tariffs may boost US GDP growth by <0.12ppt, while its inflationary effect may be more sustained.

The impact on financial markets may be greater than that on the real economy. The quantitative analysis above does not take into account the role of expectations. In financial markets, the impact of trade protection on inflation and global trade patterns may show more quickly and obviously in asset prices such as exchange rates and interest rates through the effects of expectations. On the one hand, the impact of trade protection on US short-term inflation would accelerate the pace of Fed rate hikes, pushing up the dollar index. On the other hand, trade protectionist policies would reduce the export competitiveness of trading partners and increase the need of other countries to devalue their currencies, putting further pressure on the US dollar to appreciate. The impact of the rising US interest rates, together with a strengthening US dollar on global capital flows and emerging economies’ macroeconomic policy operations should not be underestimated.

The impact on other emerging markets may be more visible than that on China. Processing trade contributes to 59% of China's trade surplus, showing that China acts as an important "assembler". From the global value chain perspective, China's share in value added of US trade deficit is only 30%, well below its share of headline US trade deficit (49%) (Figure 10). If the US were to strictly implement trade protectionist policies, there could be a larger impact on other emerging market economies in the value chain of China's exports (especially economies in East Asia and Southeast Asia). In particular, those small open economies with high dependence on exports, undiversified industrial structure and insufficient domestic demand are more likely to fall victim. China should have sufficient room to maneuver given its large economy, great market and complete industrial structure.

Facing external demand uncertainties, China should refocus on domestic demand. Whether or not Trump will impose 45% tariffs on Chinese goods, the China-US trade imbalance is clearly an important concern for the incoming US government. In recent years, China's share of global trade was still rising despite the significant appreciation of the renminbi's real exchange rate. The external pressure highlights the importance for China to push forward structural reforms and promote domestic demand.

Nevertheless, if China-US trade frictions escalate, China will not lack policy options. The main US exports to China include aerospace equipment (13.3% of total US exports to China), electronic equipment (11.0%), machinery (10.6%) and plant products (9.5%), etc. (Figure 11). In particular, the US is highly dependent on China's demand for Boeing aircraft, soybeans (Figure 12) and integrated circuits. If China were to retaliate by raising tariffs or launching anti-dumping probes, these US industries would come under non-trivial pressure. In addition, China can provide more export subsidies to partially offset the impact of US tariffs.
Figure 11: The main US exports to China are aerospace and agricultural products

Source: UN Comtrade, CICC Research

Figure 12: US soybean exports are highly dependent on the Chinese market

Source: CEIC, CICC Research
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