2025 CQUMCM

Problem C: U.S. Tariff Wars

A U.S. tariff war refers to the act by which the United States uses tariffs as a means to engage in trade confrontation with other countries in order to achieve its economic, political, and other objectives. Its core measures include imposing punitive tariffs, setting import quotas, and levying anti-dumping duties. The following is some information about U.S. tariff wars:

1. A Historical Review of U.S. Tariff Wars

1897: William McKinley signed the Dingley Tariff Act, which significantly increased tariffs on goods such as wool, cotton textiles, silk, and sugar. This raised the average U.S. import tariff rate to 52%, leading to a sharp rise in the prices of imported goods in the United States and escalating global trade tensions.

1930: Herbert Hoover signed the Smoot-Hawley Tariff Act, which imposed high tariffs on more than 20,000 types of imported goods. This triggered retaliation from other countries, causing U.S.-European trade volume to plummet by two-thirds and pushing the U.S. economy deeper into the Great Depression.

1971: Richard Nixon announced the suspension of the convertibility of the U.S. dollar to gold and, at the same time, imposed a 10% surcharge on all goods imported into the United States. This strained the United States' relations with its major trading partners and led to the collapse of the Bretton Woods system.

2002: The George W. Bush administration announced a 3-year plan to impose tariffs of up to 30% on 10 categories of imported steel products. Although this created some jobs in the U.S. steel industry, it caused steel prices to soar and the costs of downstream industries to surge. In the end, the World Trade Organization ruled that the U.S. tariffs were illegal, and the Bush administration had to revoke this policy ahead of schedule.

2025: Since Donald Trump took office again, the United States has frequently wielded the "tariff stick," affecting many countries around the world, including Mexico, Canada, and China, as well as the European Union.
February 13, 2025 (local time): U.S. President Donald Trump signed a memorandum requiring relevant departments to determine "reciprocal tariffs" with each foreign trading partner.

April 2, 2025 (local time): Trump signed two executive orders on the so-called "reciprocal tariffs," announcing that the United States would set a "minimum baseline tariff" of 10% on its trading partners and impose higher tariffs on certain trading partners.

April 4, 2025: In response to the United States' typical unilateral bullying behavior, China announced a series of countermeasures. Countries and organizations such as Canada and the European Union also retaliated against the United States.

April 9, 2025 (local time): The U.S. "reciprocal tariff" policy officially took effect.
From May 14, 2025: China's adjusted measures to impose additional tariffs on imported goods originating from the United States came into force.

July 17, 2025: U.S. President Donald Trump stated that he was prepared to impose tariffs of 10% to 15% on goods from 150 countries with small economic sizes.

September 29, 2025 (local time): U.S. President Donald Trump ordered the imposition of additional tariffs on imported lumber and cabinets starting from October 14.

October 2025: The United States announced that it would impose an additional 10% tariff on imported buses starting from November 1.

The "reciprocal tariff" vigorously promoted by the Trump administration, under the pretext of "pursuing fairness," adopts a one-size-fits-all approach to tariffs. In essence, it violates the basic principles of economics, breaches WTO rules, and ignores the differences in economic development among countries. It is a new tool for practicing trade protectionism, confined to the mindset of "zero-sum game." This move is bound to severely damage the multilateral trading system, disrupt global supply chains, and further escalate international trade tensions and global economic fragmentation.

2. The Impact of Tariff Wars

2.1. Impact on the Economies of Participating Countries

In the short term, a tariff war will reduce the scale of import and export trade of participating countries. Domestic export enterprises will face higher foreign tariffs, which will hinder product exports and reduce orders, leading to a decline in corporate revenue and even potential losses and layoffs. At the same time, the prices of imported goods will rise, increasing consumers' purchase costs and curbing consumer demand.

In the long term, a tariff war will undermine the optimization and upgrading of the domestic industrial structure. Due to the lack of external competitive pressure, enterprises will have insufficient motivation for innovation, which will affect the long-term development of industries. For example, during a prolonged tariff war, the export orders of the textile industry in a certain country decreased significantly, leading to difficulties in corporate capital turnover. As a result, the industry had to cut R&D investment, and its development fell into a stalemate.

2.2. Impact on the Global Economy

Tariff wars undermine the stability of global industrial chains and supply chains. Due to the detailed division of labor in the global industry, the production of many products requires the collaboration of multiple countries. Tariff wars hinder the circulation of raw materials and components, increase corporate production costs, and reduce production efficiency.

At the same time, tariff wars will also trigger a contraction in global trade and affect global economic growth. According to research reports by international economic organizations, during a severe tariff war, global trade volume showed a significant decline, and the global economic growth rate also decreased accordingly.

2.3. Impact on Global Politics

Tariff wars escalate trade frictions between participating countries into political confrontations. For instance, in the China-U.S. trade frictions, the United States continuously imposed additional tariffs, triggering reciprocal countermeasures from China. The tense situation between the two countries in the economic and trade field has spread to other areas such as diplomacy and technology.

In the international geopolitical landscape, such tensions will prompt countries to reevaluate their foreign policies and alliance relationships, affecting regional and even global political stability. Against the backdrop of tariff wars, countries will adjust their trading partner relationships and diplomatic alliances to reduce risks and pursue development. Some countries may strengthen intra-regional cooperation, promote the process of regional economic integration, and form new economic and political alliances.

Please collect data, build a model, and complete the following tasks:

a) Analyze the short-term impact of the tariff war launched by the United States in 2025 on the total U.S. economic output.

b) Analyze the impact of the tariff war launched by the United States in 2025 on China's economic trends, considering both short-term and long-term trends.

c) Depict the impact of the tariff war launched by the United States in 2025 on global economic changes.

The model should include an assessment of the uncertainty/accuracy of predictions and evaluation indicators to measure the model's performance.

Your PDF solution of no more than 25 total pages should include:
• One-page Summary Sheet.
• Table of Contents.
• Your complete solution.
• References list.
• AI Use Report (If used does not count toward the 25-page limit.)

Note: There is no specific required minimum page length for a complete MCM submission. You may use up to 25 total pages for all your solution work and any additional information you want to include (for example: drawings, diagrams, calculations, tables). Partial solutions are accepted. We permit the careful use of AI such as ChatGPT, although it is not necessary to create a solution to this problem. If you choose to utilize a generative AI, you must follow the COMAP AI use policy. This will result in an additional AI use report that you must add to the end of your PDF solution file and does not count toward the 25 total page limit for your solution.