

MACROECONOMIC IMPACT OF ALTERNATIVE HYPOTHETICAL TRADE SCENARIOS

In the light of the trade policy announcements made by the new US administration, the Banco de España *Annual Report 2024* analyses how different hypothetical scenarios regarding future tariff developments across economic areas and their various transmission channels might affect growth and inflation worldwide and in Spain.

To this end, two multi-country general equilibrium models were used: the NiGEM model, which includes most of the major economies, but lacks a sectoral breakdown, and the Banco de España's multi-country, multi-sectoral model.¹ The latter covers a smaller number of countries

or blocs (8 in total), but takes into account intermediate consumption and provides a detailed sectoral breakdown. This allows for an analysis of how the output of different sectors is affected, based on their position in production chains.

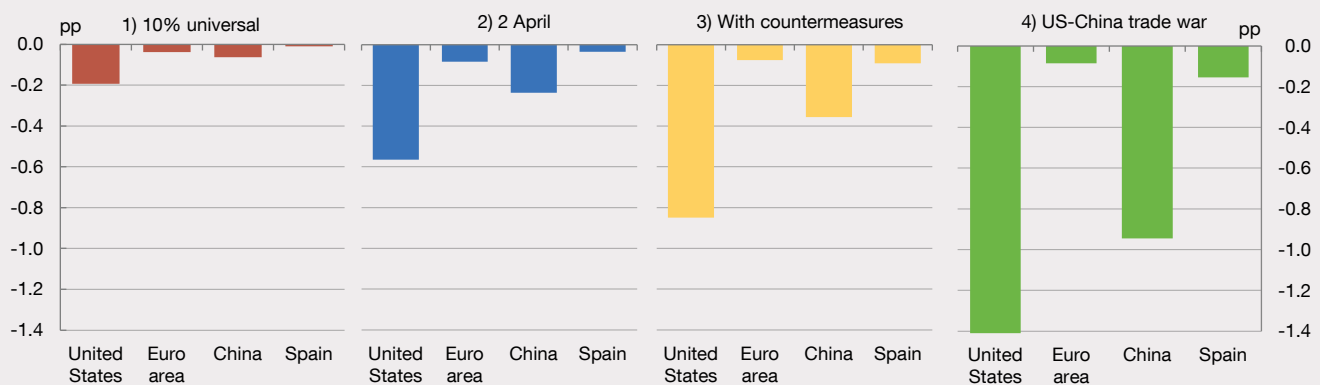
Tariff scenarios

The analysis considered the effects transmitted through trade channels under four alternative scenarios:

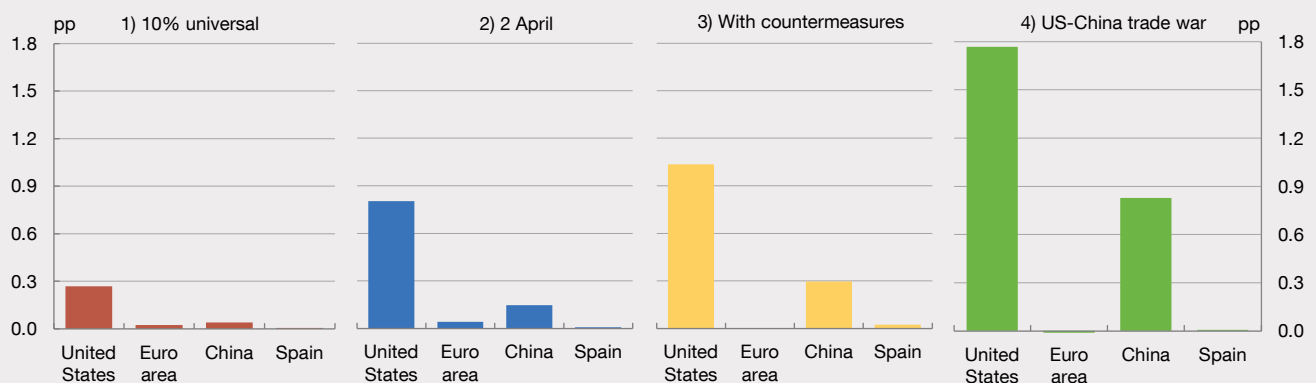
- 1. Universal 10% tariff:** the United States imposes a 10% tariff on all imports of goods, except energy products.

Chart 1
Impact on activity and inflation through trade channels (a)

1.a Impact on GDP (percentage deviation from baseline)



1.b Impact on inflation (percentage deviation from baseline)



SOURCE: Banco de España, using NiGEM and the multi-sectoral model (Aguilar, Domínguez-Díaz, Gallegos and Quintana, 2025).

a The figures correspond to the average annual impacts according to the two models considered during the first three years following the tariff hike.

¹ See Pablo Aguilar, Rubén Domínguez-Díaz, José Elías Gallegos and Javier Quintana (2025), "The Transmission of Foreign Shocks in a Networked Economy", Documentos de Trabajo - Banco de España. Forthcoming.

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2. 2 April tariffs: the United States imposes specific tariffs on US imports from China, the EU and other countries, in line with President Trump's announcements on 2 April.

3. Countermeasures: in response to the US tariffs, the rest of the world raises its tariffs on US exports symmetrically.

4. US-China trade war: escalation of the tariff conflict between the United States and China, with high reciprocal tariffs.

Impact on economic activity and inflation through trade channels

The rise in tariffs reduces global economic growth under all the scenarios simulated (Chart 1). The higher the general

tariff rate, the larger the impact, so that growth is reduced most under the countermeasures and trade war scenarios.

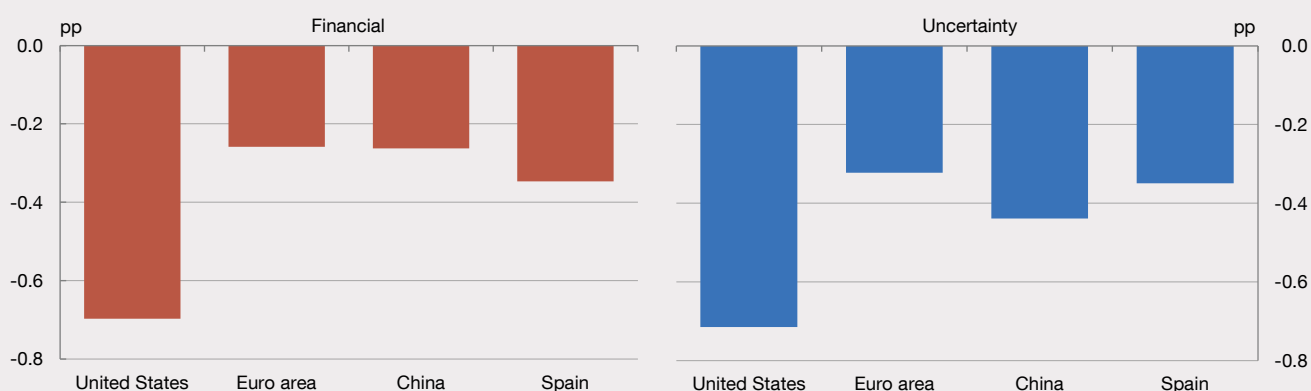
By geographical area, the negative impact is considerably stronger in the United States than in the rest of the world. Under the US-China trade war scenario, China would also experience a significant contraction in GDP. Conversely, the effects are very moderate in the euro area and Spain.

This pattern is also seen in the analysis of the effects of tariff measures on prices. The United States would face greater inflationary pressures under all the scenarios considered. Meanwhile, in the euro area and in Spain, inflationary pressures would arise, mainly as a result of the depreciation of the nominal effective exchange rate of

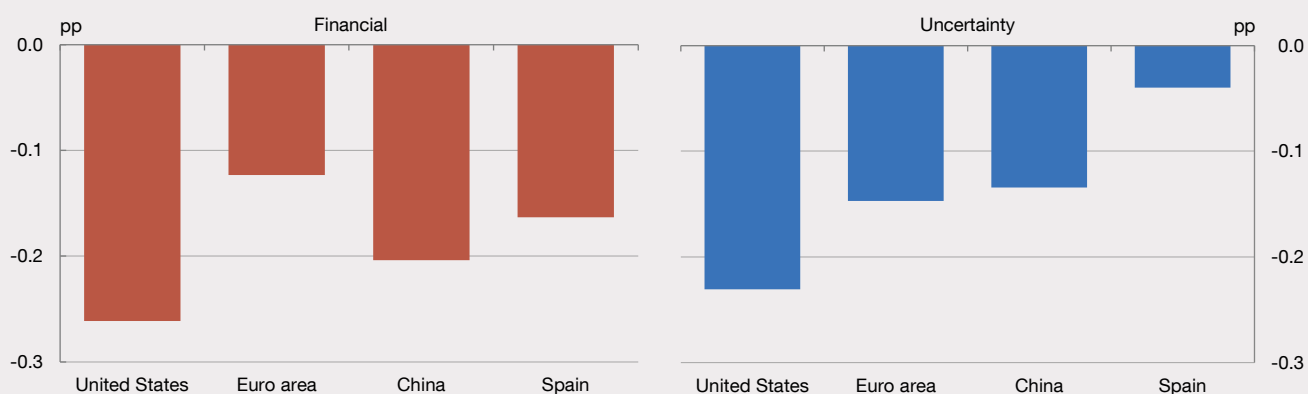
Chart 2

Importance of the financial and uncertainty channels (a)

2.a Impact on GDP (percentage deviation from the baseline)



2.b Impact on inflation (percentage deviation from the baseline)



SOURCE: Banco de España, using NiGEM.

a The figures represent the average annual impacts during the first three years following the tariff hike.

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the euro, but they would be much more limited owing to certain offsetting factors: lower activity and trade diversion effects (which involve a shift to the euro area of exports from other countries that would otherwise have gone to the United States).

Under the 2 April tariffs scenario, the sectors most affected in the euro area and in Spain are pharmaceuticals, chemicals and basic metals, in the latter case owing to their prominent role as inputs in many goods exporting sectors. At the same time, the most indirectly exposed services sectors are those that provide intermediate services for goods exports, such as transport or professional services, while tourism exports may benefit from a possible depreciation of the euro.

Amplifying effects

The above simulations show that, when only pure trade channels are considered, the increase in tariffs would only have significant effects in the United States and, possibly, in China. However, other channels potentially amplifying such effects should also be considered.

In this regard, the Banco de España *Annual Report 2024* explores two of these channels, the impact of which has become visible following the various announcements by the new US administration of policy changes in a number of fields, particularly in trade:

- Financial channel: this operates through the deterioration in financial conditions owing to the increases in sovereign bond yields and corporate spreads, and the declines in stock market indices.
- Uncertainty channel: this has been calibrated in the analysis on the basis of the surge observed in April in the economic policy uncertainty (EPU) index.

In line with the extensive empirical evidence available, simulations using the NiGEM model confirm that these channels may have significant negative effects on domestic demand (consumption and investment) and, therefore, on economic activity (Chart 2). As a result, deflationary pressures would tend to predominate in the euro area and in the Spanish economy, while the rise in inflation would be partially mitigated in the United States and China.