International Trade

L8

Terms of Trade

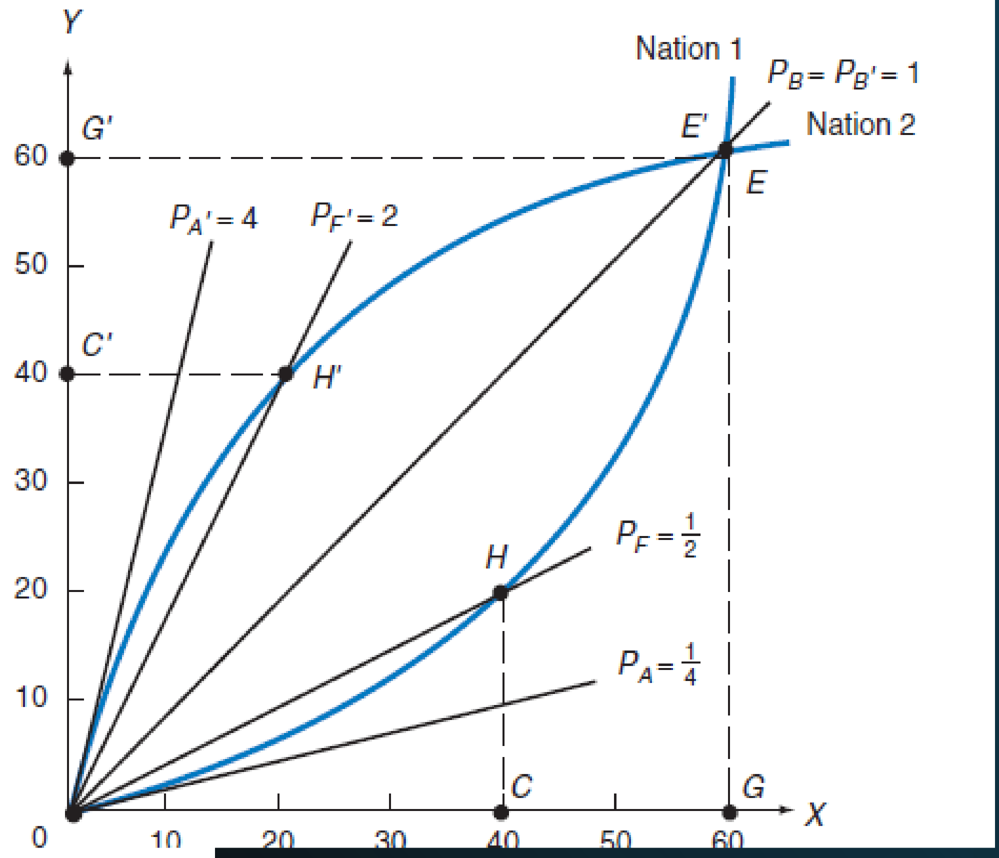
- The **terms of trade (ToT)** of a nation are defined as **the ratio of the price of its export commodity to the price of its import commodity.**
- Since in a two-nation world, the exports of a nation are the imports of its trade partner, the terms of trade of the latter are equal to the inverse, or reciprocal, of the terms of trade of the former.
- In a world of many (rather than just two) traded commodities, the terms of trade of a nation are given by the **ratio of the price *index* of its exports to the price *index* of its imports**. This ratio is usually multiplied by 100 in order to express the terms of trade in percentages.
- These terms of trade are often referred to as the **commodity or net barter terms of trade** to distinguish them from other measures of the terms of trade.
- An improvement in a nation's terms of trade is usually regarded as beneficial to the nation in the sense that the prices that **the nation receives for its exports rise relative to the prices that it pays for imports**.

Terms of Trade

- Nation 1 exports commodity X and imports commodity Y, the terms of trade of Nation 1 are given by P_x/P_y.

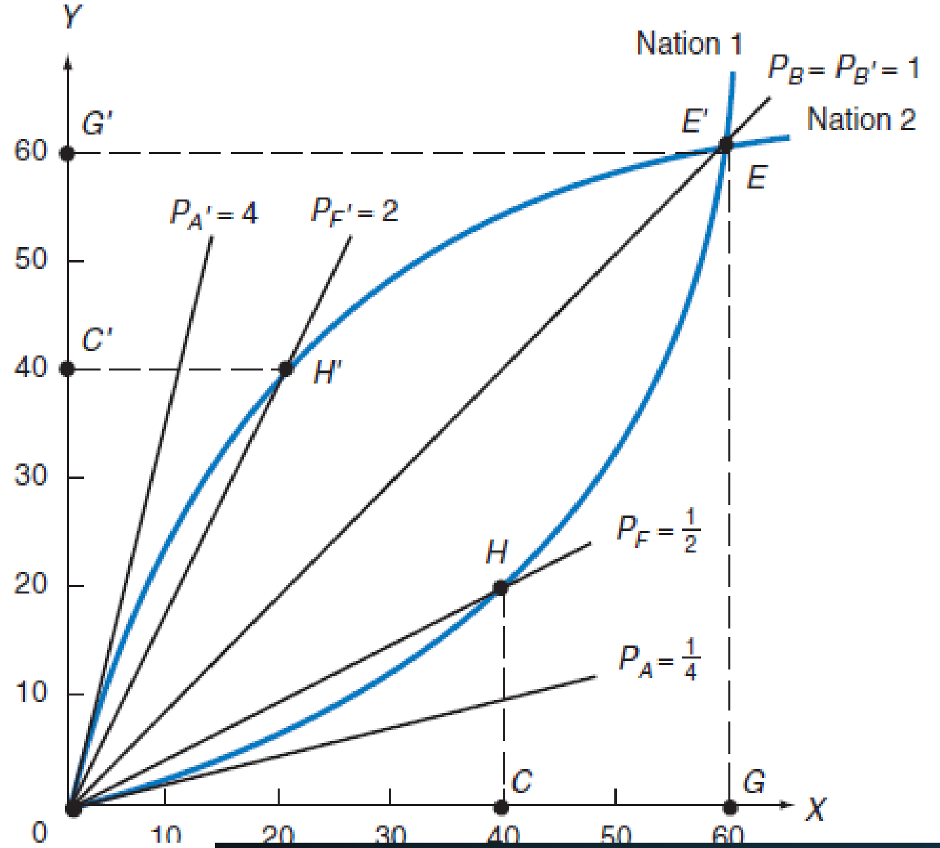
- In Figure, ToT are P_x/P_y = *PB*= 1 (or 100 %)

- If Nation 1 exported and imported many commodities, P_x would be the *index* of its export prices, and P_y would be the *index* of its import prices.



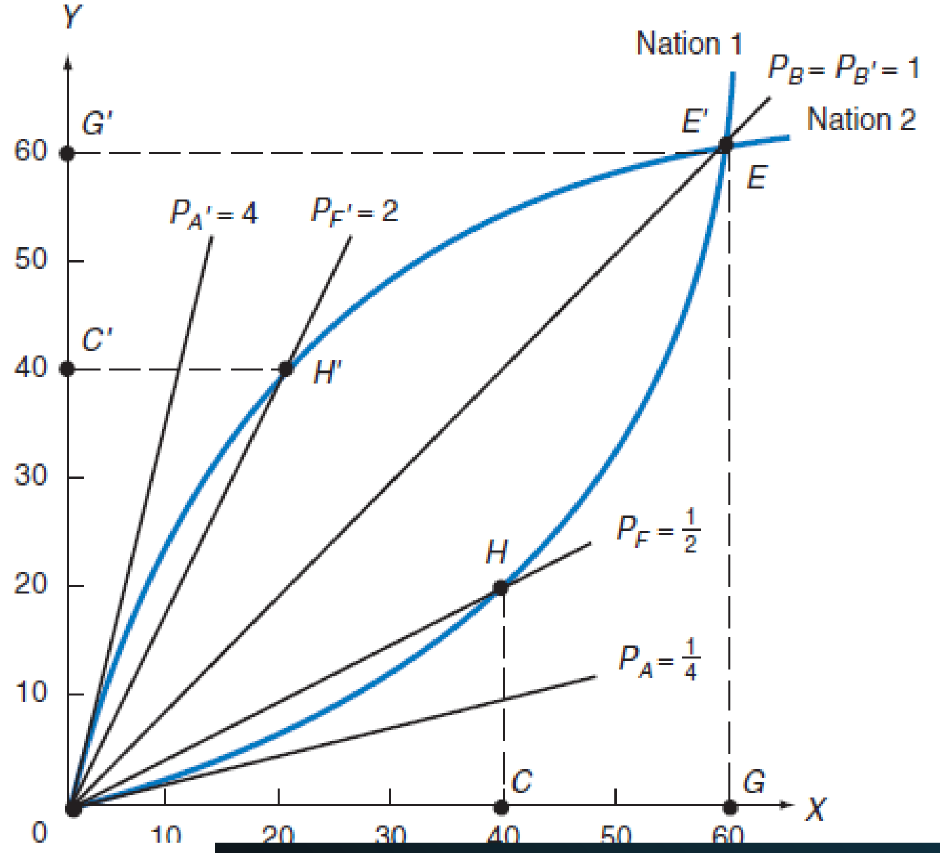
Terms of Trade

- Since Nation 2 exports commodity Y and imports commodity X, the terms of trade of Nation 2 are given by P_y/P_x .
- This is the inverse, or reciprocal, of Nation 1's terms of trade and also equals 1 or 100 (in percentages) in this case.



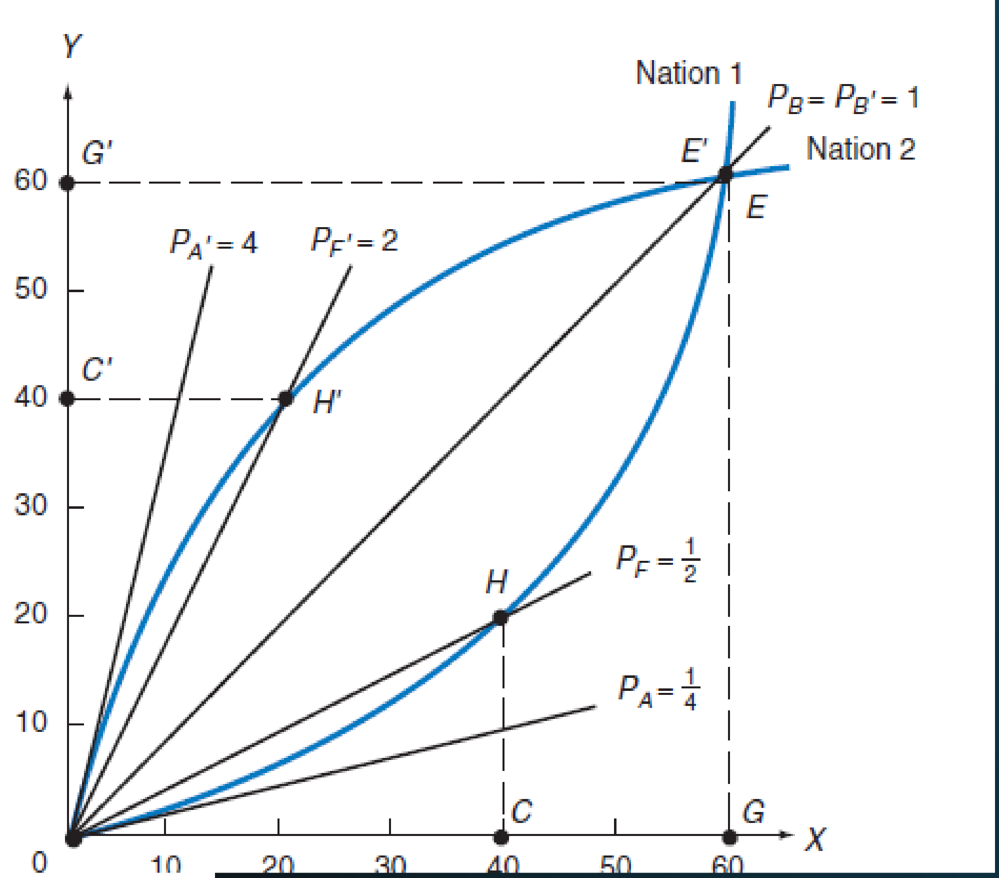
Terms of Trade

- If through time the terms of trade of Nation 1 rose, say, from 100 to 120, this would mean that Nation 1's export prices rose 20 percent in relation to its import prices.
- This would also mean that Nation 2's terms of trade have ?



Terms of Trade

- If through time the terms of trade of Nation 1 rose, say, from 100 to 120, this would mean that Nation 1's export prices rose 20 percent in relation to its import prices.
- This would also mean that Nation 2's terms of trade have ? Deteriorated from 100 to 83 ((100/120)*100)
- Hence, we usually set a nation's ToT equal to 100 in the base period and measure the changes in ToT over period in percentage



Terms of Trade

Even if Nation 1's terms of trade improve over time, we **cannot conclude** that Nation 1 is ***necessarily*** **better off** because of this, **or** that Nation 2 is **necessarily** **worse off** because of the deterioration in its terms of trade.

Changes in a nation's **terms of trade** are the result of **many forces** at work both in that nation and in the rest of the world, and we cannot determine their net effect on a nation's welfare by simply looking at the change in the nation's terms of trade.

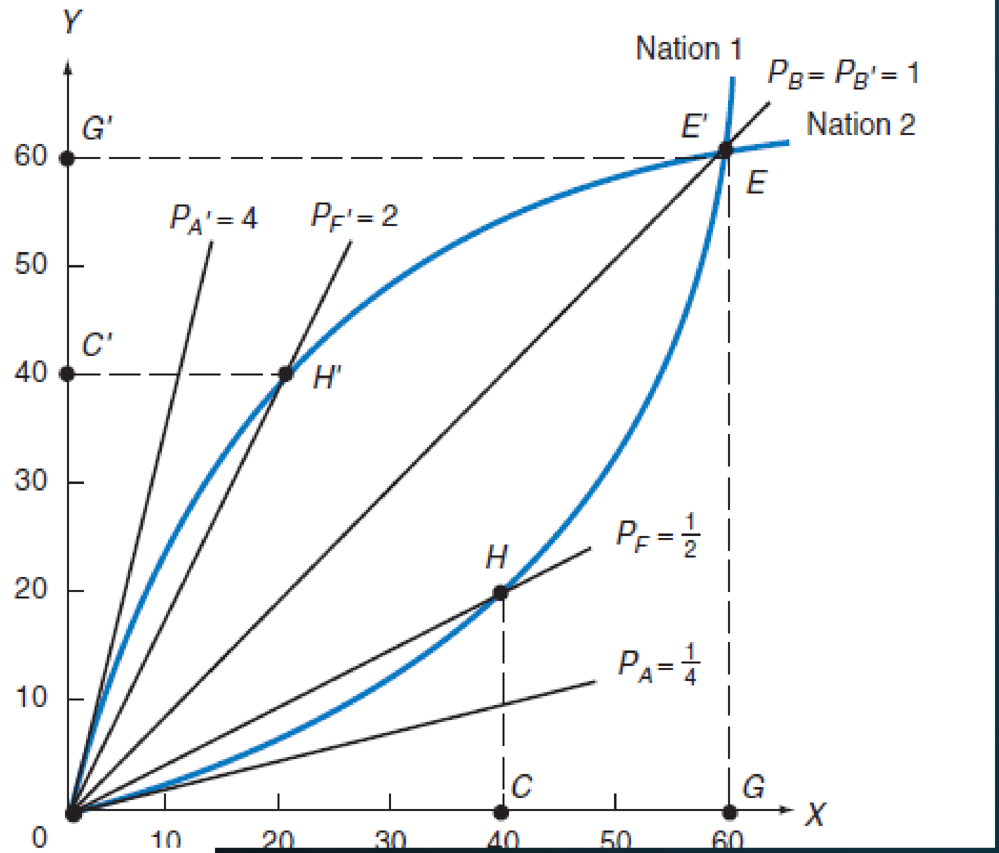


TABLE 4.2. The Terms of Trade of the G-7 Countries, Selected Years, 1972–2011 (Export Unit Value ÷ Import Unit Value; 2000 = 100)

	1972	1974	1980	1985	1990	1995	2000	2005	2010	2011	% Change 1972–2011
United States	127	107	90	103	101	103	100	97	97	95	−29
Canada	96	109	107	94	97	97	100	117	120	122	24
Japan	109	81	59	66	84	115	100	83	68	60	−58
Germany	118	105	98	94	110	108	100	105	103	99	−18
United Kingdom	107	82	103	102	101	100	100	105	103	103	−4
France	101	89	90	89	100	107	100	111	100*	100*	−1*
Italy	106	80	78	78	94	96	100	101	99	96	−10

Terms of Trade

Misconceptions about comparative advantage

Productivity and Competitiveness

Myth 1: Free trade is beneficial only if your country is strong enough to stand up to foreign competition.

This argument seems extremely plausible to many people. For example, a well-known historian once criticized the case for free trade by asserting that it may fail to hold in reality: “What if there is nothing you can produce more cheaply or efficiently than anywhere else, except by constantly cutting labor costs?”

The problem with this commentator’s view is that he failed to understand the essential point of Ricardo’s model—that gains from trade depend on *comparative* rather than *absolute* advantage.
But an absolute productivity advantage over other countries in producing a good is neither a necessary nor a sufficient condition for having a *comparative* advantage in that good

The competitive advantage of an industry depends not only on its productivity relative to the foreign industry, but also on the domestic wage rate relative to the foreign wage rate. A country’s wage rate, in turn, depends on relative productivity in its other industries.

Misconceptions about comparative advantage

The Pauper Labor Argument

Myth 2: Foreign competition is unfair and hurts other countries when it is based on low wages.

This argument, sometimes referred to as the **pauper labor argument,** is a particular favorite of labor unions seeking protection from foreign competition. People who adhere to this belief argue that industries should not have to cope with foreign industries that are less efficient but pay lower wages.

In our example, Home (in our example US) is more productive than Foreign (here, UK) in both industries, and Foreign's lower cost of cloth production is entirely due to its much lower wage rate.

low wages does noForeign's lower wage rate, however, is irrelevant to the question of whether Home gains from trade. **Whether the lower cost of cloth produced in Foreign is due to high productivity or low wages does not matter**.

All that matters to Home is that it is cheaper *in terms of its own labor* for Home to produce wheet and trade it for cloth than to produce cloth for itself.

Factor Endowments and The Heckscher–Ohlin Theory

Heckscher–Ohlin Theory

- We have seen in previously that the difference in relative commodity prices between two nations is evidence of their comparative advantage and forms the basis for mutually beneficial trade.
- First, we explain the reason, or cause, for the difference in relative commodity prices and comparative advantage between the two nations.
- Second, we extend our trade model is to analyze the effect that international trade has on the earnings of factors of production in the two trading nations. That is, we want to examine the effect of international trade on the earnings of labor as well as on international differences in earnings.

Comparative advantage reasons:

- According to classical economists (Smith, Ricardo), comparative advantage was based on the difference in the *productivity of labor* (the only factor of production they explicitly considered) among nations, but they provided no explanation for such a difference in productivity, except for possible differences in climate

- The Heckscher–Ohlin theory goes much beyond that by extending the trade models to examine the basis for comparative advantage and the effect that trade has on factor earnings in the two nations

Heckscher-Ohlin Theory: Assumptions

1. There are two nations (Nation 1 and Nation 2), two commodities (commodity X and commodity Y), and two factors of production (labor and capital).

2. Both nations use the same technology in production.

3. Commodity X is labor intensive, and commodity Y is capital intensive in both nations.

4. Both commodities are produced under constant returns to scale in both nations.

5. There is incomplete specialization in production in both nations.

6. Tastes are equal in both nations.

7. There is perfect competition in both commodities and factor markets in both nations.

8. There is perfect factor mobility within each nation but no international factor mobility.

9. There are no transportation costs, tariffs, or other obstructions to the free flow of international trade.

10. All resources are fully employed in both nations.

11. International trade between the two nations is balanced.

Assumption 2: Both nations have same technology

- Assumption 2 means that both nations have access to and use the same general production techniques.
- Thus, if factor prices were the same in both nations, producers in both nations would use exactly the same amount of labor and capital in the production of each commodity.
- Since factor prices usually differ, producers in each nation will use more of the relatively cheaper factor in the nation to minimize their costs of production.

Assumption 3

- **Assumption 3** (that commodity X is labor intensive and commodity Y is capital intensive) means that commodity X requires relatively more labor to produce than commodity Y in both nations.
- In a more technical and precise way, this means that the labor–capital ratio (L/K) is higher for commodity X than for commodity Y in both nations at the same relative factor prices.
- This is equivalent to saying that the capital–labor ratio (K/L) is *lower for X than for Y* .
- But it does not mean that the K/L ratio for X is the same in Nation 1 and Nation 2, only that K/L is lower for X than for Y in both nations.

Assumption 4: CRS

- **Assumption 4** (constant returns to scale (CRS) in the production of both commodities in both nations) means that increasing the amount of labor and capital used in the production of any commodity will increase output of that commodity in the same proportion.
- For example, if Nation 1 increases by 10 percent both the amount of labor and the amount of capital that it uses in the production of commodity X, its output of commodity X will also increase by 10 percent. If it doubles the amount of both labor and capital used, its output of X will also double. The same is true for commodity Y and in Nation 2.

Assumption 4: CRS

- CRS implies if production function of X is given as:

$$X = F(K, L)$$
$$F(\lambda K, \lambda L) = \lambda F(K, L) = \lambda X$$

- CRS example: Cobb-Douglas Production function

$$X = F(K, L) = AK^{\alpha}L^{1-\alpha}$$

$$\begin{aligned}
&F(\lambda K, \lambda L) \\
&= A(\lambda K)^{\alpha}(\lambda L)^{1-\alpha} \\
&= \lambda^{\alpha+(1-\alpha)}AK^{\alpha}L^{1-\alpha} \\
&= \lambda AK^{\alpha}L^{1-\alpha} = \lambda X
\end{aligned}$$

A5 & A6

- **Assumption 5** (incomplete specialization in production in both nations) means that even with free trade both nations continue to produce both commodities. This implies that neither of the two nations is "very small."

- **Assumption 6** (equal tastes in both nations) means that demand preferences, as reflected in the shape and location of indifference curves, are identical in both nations. Thus, when relative commodity prices are equal in the two nations (as, for example, with free trade), both nations will consume X and Y in the same proportion.

A7

- **Assumption 7** (perfect competition in both commodities and factor markets) means that producers, consumers, and traders of commodity X and commodity Y in both nations are each too small to affect the price of these commodities.
- The same is true for each user and supplier of labor time and capital.
- Perfect competition also means that, in the long run, commodity prices equal their costs of production, leaving no (economic) profit after all costs (including implicit costs) are taken into account.
- Finally, perfect competition means that all producers, consumers, and owners of factors of production have perfect knowledge of commodity prices and factor earnings in all parts of the nation and in all industries.

A8:

- **Assumption 8** (perfect internal factor mobility but no international factor mobility) means that labor and capital are free to move, and indeed do move quickly, from areas and industries of lower earnings to areas and industries of higher earnings until earnings for the same type of labor and capital are the same in all areas, uses, and industries of the nation.
- On the other hand, there is zero international factor mobility (i.e., no mobility of factors among nations), so that international differences in factor earnings would persist indefinitely in the absence of international trade.

A9, A10 & A11

- **Assumption 9** (no transportation costs, tariffs, or other obstructions to the free flow of international trade) means that specialization in production proceeds until relative(and absolute) commodity prices are the same in both nations with trade.
- If we allowed for transportation costs and tariffs, specialization would proceed only until relative (and absolute) commodity prices differed by no more than the costs of transportation and the tariff on each unit of the commodity traded.
- **Assumption 10** (all resources are fully employed in both nations) means that there are no unemployed resources or factors of production in either nation.
- **Assumption 11** (international trade between the two nations is balanced) means that the total value of each nation's exports equals the total value of the nation's imports.

News Analysis

Trump Trade Wars | India must look at FTAs and change its tariff structures

The reason a global trade war is feared is because it can slow down international trade and disrupt economic growth in large parts of the world.

The much-dreaded trade war has finally been launched with the imposition of aggressive import tariffs by the United States. The world has been waiting for the blows to land ever since Donald Trump's election as president, given his pronouncements on the need for steep tariff hikes. The first salvos have been fired against Canada and Mexico along with China. Others like the European Union (EU) and South Africa are also on the firing line, judging by Trump's latest comments.

Global markets had hoped that Trump's tariff threats were more bark than bite, but the US president proved otherwise, delivering on his hardline trade stance. Contrary to expectations of a more measured approach, Trump went ahead with sweeping tariff hikes, hitting Canada, Mexico, and China first. Imports from Canada and Mexico now face a steep 25 percent tariff, except for Canadian oil and gas, which are subject to a 10 percent duty, while Chinese imports have been slapped with a 10 percent levy.

The response from affected nations was swift, opening the doors for an imminent trade war. Canada retaliated with 25 percent tariffs on $155 billion worth of US goods, including Tesla vehicles, while Mexico and China also announced their own counter-measures, setting the stage for escalating trade tensions.

India’s Union Budget 2025: How President Donald Trump’s trade policies could reshape the nation’s economic strategy

Synopsis
India’s Union Budget 2025 is greatly influenced by global trade dynamics, especially the actions of Donald Trump. With India facing rising imports and stagnant exports, the country’s budget will need to address trade imbalances and secure better relations with the US.

The story of India’s **Union Budget 2025** is significantly shaped by global factors including the ongoing influence of Donald Trump. His stance on trade and international relations casts a large shadow over India's economic policies, especially as the country grapples with slowing GDP growth, rising inflation, and trade imbalances. The key challenge lies in balancing the need for fair trade relations with the US while ensuring India’s manufacturing sector remains competitive and doesn't face the brunt of any tariffs or restrictions imposed by the US.

How Trump's trade stance affecting India's budget?

Donald Trump's approach to trade, which includes focusing on a "fair" bilateral relationship, directly impacts India's budget decisions. The recent challenges in India's trade balance, marked by increased imports and stagnant exports, have heightened the need for the government to respond strategically The focus is on securing favorable terms with the US, especially in sectors like pharmaceuticals and gems, which are critical to India's exports.

How can India's Union Budget address trade challenges?
India's Finance Minister, Nirmala Sitharaman, is under pressure to adjust the tax framework and trade tariffs to address these issues. The expectation is that she may reintroduce a concessional tax rate for new manufacturing units in India, as part of the government's broader push to boost domestic manufacturing. This could be crucial in balancing the needs of trade with the US and ensuring that India's industries remain competitive on the global stage.

The upcoming Union Budget could also see adjustments in trade tariffs to ease tensions with the US, especially concerning sectors like dairy and wheat. However, the challenge remains in making sure these adjustments don't flood the Indian market with cheaper Chinese goods. The Finance Minister will need to carefully balance these competing interests, ensuring that India's economic policies support both domestic growth and international trade

Budget 2025: Will Donald Trump's policies shape India's Budget? THESE American goods may become cheaper

Reports suggest that Finance Minister Nirmala Sitharaman might announce tariff cuts on US imports in the upcoming Union Budget

With Donald Trump back as the US President, global trade is expected to see major changes. According to reports, the US may reduce tariffs on its own products, making them cheaper in international markets. This could pressure countries like India to lower import duties on expensive American goods.

Reports suggest that Finance Minister Nirmala Sitharaman might announce tariff cuts on US imports in the upcoming Union Budget on February 1. This would benefit American exporters while making imported goods like steel, high-end motorcycles, and electronics more affordable for Indian consumers.

The US is one of India's biggest trading partners. In 2023-24, trade between the two nations crossed $118 billion, with India enjoying a trade surplus of $41 billion. The US buys a significant portion of India's agricultural exports, including 18 million tons of rice in 2024.

Budget 2025- India’s response

Amid Trump Tariff Threats, India Cuts Import Duty On American Bikes, Cars In Boost To Harley And Tesla

Trump tariffs are becoming global trade disruptors, leaving the market uneasy. With import tax cuts, India would be able to deal better with ar otherwise unpredictable year.

New Delhi: In its Union Budget 2025-26, India has significantly slash customs duties on high-end motorcycles, cars and smartphone part a move that seems to give a boost to American companies like Harle Davidson, Tesla and Apple, after US President Donald Trump called New Delhi as a "tremendous tariff maker."

However, according to Finance Minister Nirmala Sitharaman, custom duty rationalisation was introduced to ensure the Indian economy becomes *aatmanirbhar* (self-reliant), and was not a signal amid Mr Trump's tariff announcements.

Is India really immune to Trump’s tariff threats? A look at India’s strategic response

According to sources familiar with the developments, the US has not raised any substantial trade issues directly with India in recent years.

Amid ongoing global trade tensions, India has managed to largely sidestep the tariff battles ignited by US President Donald Trump. While countries like China, Mexico, and Canada have been the focus of his tariff hikes, India has avoided direct measures so far. But is India truly immune to the US president's tariff threats, or is it carefully navigating this volatile situation?

India’s position in global trade

India’s relative immunity from US tariff threats can be attributed to the nature of its exports. Unlike China or Mexico, which directly compete with US industries in sectors like technology and manufacturing, India’s key exports” pharmaceuticals, auto components, chemicals, textiles, and gems do not directly overlap with major US industries.

As Ajai Sahai, Director General of the Federation of Indian Export Organisations (FIEO), explains, “India is less likely to feel the heat as we are generally not competing with US companies.”

The sectors India specializes in are not a significant threat to US companies, which makes retaliatory tariffs less likely. Sahai further points out that the tariff threat may be a tactic to pull India to the negotiating table, rather than a prelude to actual tariff impositions. “The threat of tariffs on us will be a ploy to bring us to the negotiating table for better market access for U.S. goods and services,” he adds. In this context, India is working to find a balance, reducing tariffs selectively to ease tensions while not sacrificing domestic interests.

India’s 2025 Budget adjustments and trade tariffs

Although India has been largely spared from direct tariff measures, it is not completely unaffected by global trade pressures. In its 2025 budget, India made strategic cuts to import duties on goods like high-end motorcycles, including those from Harley-Davidson. The tariff on motorcycles with engine capacities above 1,600 cc was reduced from 50% to 30%, signalling India’s openness to trade.

Finance Secretary Tuhin Kanta Pandey underscored that India’s policies are not protectionist. In an interview to newswire Reuters, he said: “We don’t want to give anybody any signal that we would like to be protectionist.”

TRADE WAR

Article from Economic Times (06-02-2025)

‘Donald Trump’s tariff threats are causing huge trade uncertainty now — ‘beggar-thy-neighbour’ steps benefit none, including the US’

***Maurice Obstfeld**, former Chief Economist at the International Monetary Fund (IMF), teaches at th University of California, Berkeley. Speaking to Srijana Mitra Das, he discusses burgeoning tariffs — and their effects on prosperity:*

Maurice Obstfeld, former Chief Economist at the International Monetary Fund

Q. What do Donald Trump's tariffs mean for the US economy?

A. Currently, he's backed off on the Mexican and Canadian tariffs but he has put additional tariffs on China, which brings the total effective rate on Beijing to around 30% — this means higher prices for imports from China and increased costs for goods produced in the US which use these. That spells lower profitability for such companies and higher prices for their customers.

Meanwhile, China's applied tariffs of its own on coal, liquid natural gas, etc. – this hurts US exporters. They are also forbidding exports to the US of some critical minerals used in manufacturing.

Why would Trump, a populist leader, raise costs for Americans?

Trump denies tariffs raise prices — he says these will restore manufacturing jobs and increase wages. Another theory is that he simply sees these as a bargaining chip to get what he wants from other countries, whether that's better border enforcement, territory or a buyer for TikTok. There's quite a range of things he seems to want — and tariffs are apparently his go-to means of coercion.

What does this imply for the dollar?

Economic theory says tariffs strengthen a country's currency — the more wide-ranging they are, the bigger the effect. We've seen this recently in foreign exchange markets as well — when it appears President Trump is serious and tariffs are imminent, the dollar strengthens. If he enforces tariffs on Canada and Mexico — which, with China, are the largest trading partners of the US — the dollar would significantly strengthen.

How do you view BRICS facing threats?

Trump threatened BRICS if they proceeded on a common BRICS currency — I don't view those plans as very realistic. However, individual BRICS countries do face pressures on a bewildering range of issues. Trump has spoken of South Africa's land policies, which he views as penalising white landowners. He's threatened to stop aid and tariffs could follow. Last October, Scott Bessent, now the US Treasury Secretary, suggested India could face tariffs if it didn't stop purchasing Russian oil. Brazil's negotiating an agreement with the European Commission, the Mercosur countries and EU discussing free trade — if Brazil signs, it will divert trade from the US to Europe, replacing some American imports as trade barriers will be lower. Brazil is one of only seven major US trading partners, out of 23, with which it has a bilateral trade surplus — will Trump threaten Brazil to withdraw from this? China's already been hit with tariffs while Russia remains under sanctions.