



THE PRICE OF PROTECTIONISM

Understanding the economic tradeoffs of tariffs



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Executive summary

The economic and financial impacts of tariffs are complex and multi-faceted, influencing both domestic industries and broader market dynamics.

On the one hand, tariffs aim to protect domestic industries, address trade imbalances and support emerging sectors, allowing them to develop and become competitive. They can also enhance national security by reducing dependence on foreign suppliers for critical goods and serve as leverage in trade negotiations to encourage trading partners to adopt fairer practices.

On the other hand, while tariffs are intended to achieve these positive outcomes, their broader consequences can extend beyond their original objectives. By raising the cost of imported goods, tariffs can increase consumer prices, particularly in sectors reliant on global supply chains. Over time, they may reduce efficiency by insulating less competitive firms, misallocating resources and discouraging innovation. Additionally, tariffs can limit access to advanced technologies, slowing technological progress and hindering long-term economic development.

Although substitution effects can offset some costs by encouraging shifts to domestic alternatives or trade partners, these adjustments often come with their own inefficiencies, such as higher logistical complexities, increased transportation costs and supply chain disruptions.

The impact of tariffs on financial markets is more difficult to quantify. Markets generally experience heightened volatility in response to tariff announcements, particularly in sectors heavily integrated into global trade networks. Their effect on exchange rates is nuanced, shaped by factors such as trade flows, market expectations and policy responses.

This paper explores the broader implications of tariffs, underscoring the tradeoffs inherent in tariff policy and their potential economic and financial consequences.

Introduction

In recent years, tariff policies have resurfaced as a focal point in global economic discussions.

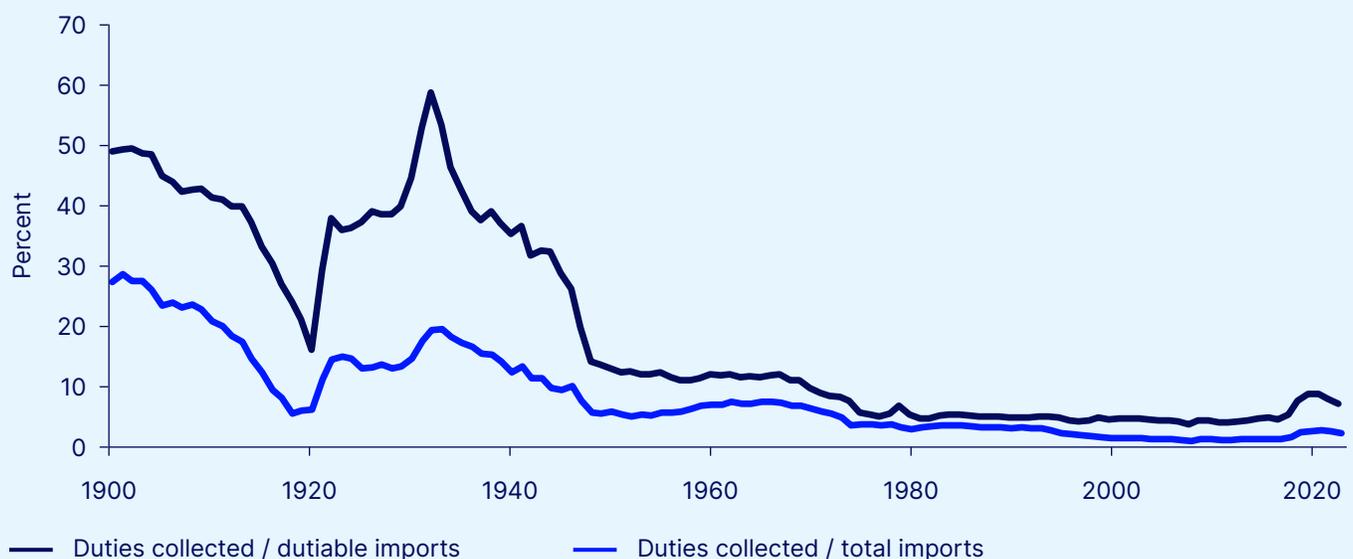
With the new United States administration's promotion of tariffs as a policy tool, it is critical to understand their potential implications. From an economic theory standpoint, tariffs are import taxes that alter the relative prices of imported goods compared to domestically produced ones.

The downstream effects can be profound, impacting inflation, exchange rates, economic growth, industrial productivity and long-term innovation.

Historically, there are limited precedents to guide us. Prior to 2018, tariffs were most prominently used in the US in the 1910s-1930s, notably with the Smoot-Hawley Tariff Act of 1930, widely regarded as a contributor to the Great Depression. In the modern era, significant tariff actions were initiated by the first Trump administration and continued under the Biden administration, targeting steel and aluminum (2018 onward), Chinese imports (2018 onward), European aircraft and agricultural products (2019-2021) and solar panels (2018 onward).

Exhibit 1: Historical effective US tariff rates

Effective US tariff rates



Source: US International Trade Commission

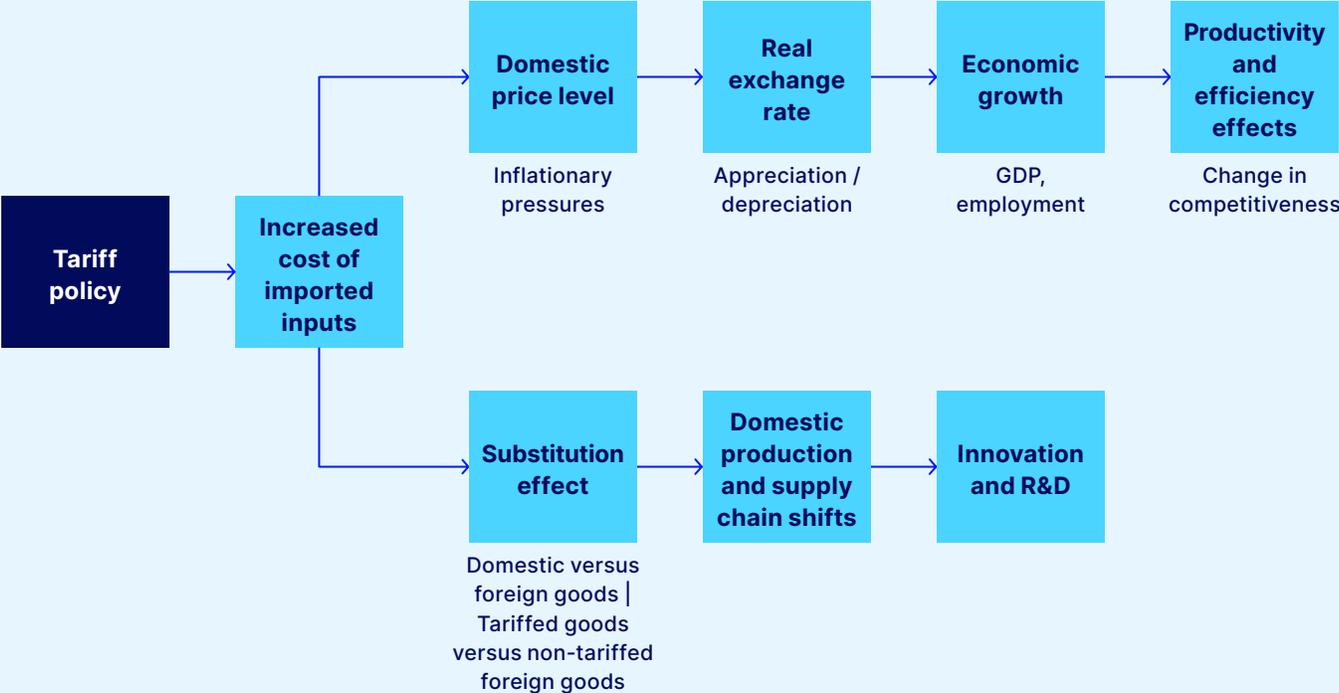
Exhibit 1 illustrates the historical decline in US-effective tariff rates from approximately 1900 to 2023, with tariffs on dutiable goods and overall imports showing a sharp decrease over time due to trade liberalization and economic integration.

This highlights the shift from protectionist policies to a more open trade environment, with a slight recent uptick reflecting renewed tariff policies.

Exhibit 2 illustrates the primary channels through which tariffs influence an economy. Arrows represent the direction of causality or impact, while text in parentheses highlights potential outcomes or intermediating factors.

Each node will be examined in greater detail in the sections that follow, starting with the more well-established economic channels and concluding with the less certain financial ones.

Exhibit 2: Holistic framework for understanding impacts of tariffs



ECONOMIC IMPLICATIONS

Tariffs and inflation

Tariffs have the potential to drive up prices by increasing the cost of imported goods. In the short term, higher costs for raw materials and intermediate goods often translate into higher prices for final goods.

When demand for these goods is inelastic, these higher costs can be passed on to consumers. For instance, the 2018 tariffs imposed by the US raised the average price of US manufacturing by approximately 1 percent, according to Amiti et al.¹ (2019). This inflationary impact was particularly pronounced in industries where imported inputs are critical, such as electronics and machinery. Additionally, sectors reliant on global supply chains faced compounded inflationary effects due to the cascading costs of tariffs across multiple production stages.

The pass-through effect on consumer prices, however, proved to be more complex. Using a combination of customs and PriceStats goods-level data, Cavallo et al.² (2021) found that while most tariffs were absorbed by US importers, end consumer prices were only significantly affected when tariffs were very high — as seen with products like washing machines, for example. In contrast, when tariffs levied were 20 percent or less — on goods such as handbags, bicycles and refrigerators — the impact on consumer prices was de minimis. The authors conclude that during the 2018-2019 Trump era, the size of the tariffs and their perceived longevity likely influenced US retailers' decision to absorb the costs through reduced margins.

Tariffs can also suppress inflation indirectly by reducing aggregate demand. Higher import prices can lead consumers to cut back on overall spending, dampening inflationary pressures in the broader economy. This duality was evident during the 2018-2019 US-China trade war, when inflationary pressures were mitigated by a decline in consumer demand for tariffed goods. Over time, inflationary pressures may also be moderated if consumers shift consumption to domestically produced alternatives — provided such alternatives exist and have sufficient supply capacity. Notably, the Federal Reserve's own [Tealbook](#)³ scenario analysis in 2018 found that a 15 percent universal tariff risked pushing the US economy into recession.

One mitigating factor of tariffs is the substitution effect, where consumers and businesses shift their consumption and sourcing patterns to adapt to higher prices on tariffed goods. When tariffs increase the price of imports, consumers may substitute these goods with domestically produced alternatives or imports from countries not subject to the tariffs. For example, during the US-China trade war, many US importers reoriented supply chains toward Vietnam, Mexico and other countries as alternative suppliers, thereby reducing direct exposure to tariffs.

While substitution can offset some negative impacts of tariffs, it is rarely a cost-free adjustment. Trade diversion often results in higher transportation costs, supply chain inefficiencies and shifts to suppliers that may not offer the same price, quality or reliability. Additionally, in industries dependent on specialized inputs, substitution may be severely constrained, amplifying economic disruptions.

The extent of substitution effects depends largely on the availability of comparable alternatives. In markets with close substitutes, the impact of tariffs may be less severe. However, in cases where substitutes are limited, businesses may face higher production costs and ultimately pass them on to consumers.

Trade diversion can also introduce inefficiencies if firms are forced to source inputs from higher-cost producers in connector countries, further complicating the overall impact of tariffs.

While tariffs have an immediate inflationary impact by raising import costs, their long-term effects depend on how businesses adjust supply chains. If firms successfully shift to alternative suppliers or increase domestic production, inflationary pressures may subside over time. However, supply chain rigidities can prolong price increases, particularly in industries dependent on specialized inputs that lack substitutes. Empirical evidence suggests that inflationary trends tend to be strongest in the short term, particularly in consumer goods sectors where price pass-through is highest.

The authors conclude that during the 2018-2019 Trump era, the size of the tariffs and their perceived longevity likely influenced US retailers' decision to absorb the costs through reduced margins.

ECONOMIC IMPLICATIONS

Tariffs and economic growth

Tariff policies are often intended to provide short-term protection to domestic industries, shielding them from foreign competition and potentially boosting employment and output.

When tariffs successfully redirect demand from foreign suppliers to domestic producers, they can temporarily increase real gross domestic product (GDP), particularly if idle capacity exists that can be swiftly utilized.

In the long term, however, tariffs have the potential to dampen economic growth. By raising costs and reducing trade volumes, tariffs can distort market dynamics, resulting in inefficiencies and lower productivity. Higher prices for imported goods may discourage consumption and investment, exerting downward pressure on overall economic output. Additionally, uncertainty surrounding tariff policy can lead businesses to delay investment decisions, further weakening long-term growth prospects.

Empirical evidence supports this view. For example, Furceri et al.⁴ (2019) found that a one standard deviation increase in tariffs results in a 0.4 percent decline in output growth over five years. Similarly, Boer and Rieth⁵ (2024) found that reversing the 2018-2019 tariff measures would have yielded a cumulative output gain of 4 percent over three years.

The negative growth impact of tariffs is particularly pronounced in economies that are heavily trade-dependent or lack viable domestic substitutes for imported goods. Furthermore, sustained tariffs can provoke retaliatory measures from trading partners, exacerbating growth constraints and amplifying economic uncertainty.

However, some historical analyses suggest that tariffs played a role in fostering economic growth under certain conditions. For instance, during the late 19th century, the US implemented tariffs to protect its burgeoning industries, which may have contributed to its rapid industrialization. This period, known as the Gilded Age, saw significant economic expansion, with tariffs providing revenue for the government and protection for nascent industries. Similarly, in the 20th century, economies like South Korea and Japan leveraged temporary trade barriers alongside aggressive export-driven industrial policies to enhance domestic competitiveness. These cases suggest that when tariffs are combined with strategic industrial policy — such as investment in technology, education and infrastructure — they may serve as catalysts for long-term economic transformation.

While these historical examples demonstrate that tariffs can contribute to economic development under certain conditions, their success has largely relied on being part of a broader industrial strategy rather than a standalone policy. Given today's globalized and interdependent economy, the effectiveness of tariffs as a growth mechanism remains highly context-dependent and requires complementary policies to mitigate unintended consequences.

Impact on productivity

Tariffs can diminish productivity by reducing competition and distorting resource allocation. By shielding domestic industries from foreign competition, tariffs may reduce the pressure on firms to innovate and improve efficiency, potentially leading to complacency and slower productivity growth.

Additionally, tariffs imposed at various points along the value chain can negatively affect value-added processes, employment and total factor productivity, particularly in industries dependent on global supply chains. These effects are often amplified during periods of economic expansion, as resource misallocation intensifies and disrupts efficient growth.

Furthermore, tariffs may allow less efficient domestic firms to survive by protecting them from foreign competition, which can distort capital allocation and divert resources away from more productive sectors.

For instance, firms relying on protectionist policies may resist adopting new technologies, further reducing aggregate productivity. Empirical evidence highlights this dynamic: Kilumelume et al.⁶ (2021) found that tariffs in South Africa were strongly correlated with capital misallocation, leading to productivity losses of 5-10 percent. This pattern of resource misallocation can stifle economic dynamism, ultimately weakening long-term growth prospects.

Tariffs also disrupt global supply chains, further hindering productivity. Firms reliant on imported materials and components face higher costs and operational inefficiencies, which can erode their competitive edge. This effect was particularly evident in the US manufacturing sector, where steel tariffs increased production costs and reduced export competitiveness. Moreover, sustained tariff regimes can deter foreign investment, as businesses seek more predictable regulatory environments.

Conversely, tariffs can enhance productivity by fostering the development of domestic industries. By protecting emerging sectors from international competition, tariffs may provide the necessary space for these industries to grow, achieve economies of scale and eventually become competitive on a global stage. This perspective, known as the "infant industry" argument, posits that temporary protections can lead to long-term productivity gains as industries mature.

While tariffs can offer short-term benefits by protecting domestic industries and potentially fostering the growth of emerging sectors, they also carry risks of long-term economic inefficiencies, reduced productivity and potential retaliatory actions from trade partners. Policymakers must carefully weigh these tradeoffs when considering the implementation of tariffs.

Impact of tariffs on innovation

Tariffs can hinder innovation by reducing competitive pressures and restricting access to advanced technologies. In many cases, when domestic industries are insulated from foreign competition, they face less urgency to invest in research and development or adopt cutting-edge technologies. This protection can foster complacency, potentially slowing technological progress and weakening long-term global competitiveness. Additionally, protectionist measures may disrupt the positive relationship between trade openness, innovation incentives and productivity gains, limiting knowledge spillovers that are crucial for technological advancement.

Beyond their direct trade effects, tariffs can also restrict technological diffusion by increasing the cost of importing technology-embedded goods, such as advanced machinery, semiconductors and specialized components. These higher costs make it harder for domestic firms to modernize production processes and enhance productivity.

This, in turn, weakens their global competitiveness, particularly in high-tech industries where continuous innovation is essential.

Empirical research underscores this effect, demonstrating that higher tariffs not only slow innovation but also reduce the efficiency with which existing technologies are utilized. While tariffs may yield short-term benefits by curbing international competition, they raise long-term economic costs by isolating domestic industries from global technological advancements and reducing firms' incentives to innovate.

That said, tariffs, when used strategically, can promote domestic innovation by encouraging firms to develop alternative solutions to overcome import restrictions. Temporary protection can also provide domestic industries the time needed to scale, mature and develop technological capabilities before being exposed to full global competition. Some historical cases, such as industrial policies in South Korea and Taiwan during their early economic development, illustrate how selective and time-bound protectionism can contribute to long-term innovation and industrial competitiveness.

While the short-term benefits of tariffs may include domestic market stabilization and profit retention, their long-term economic outcomes depend on whether firms leverage protection to invest in efficiency gains and innovation.

Scope, method of implementation and strategic purpose are important

The economic effects of tariffs depend heavily on their scope, method of implementation and strategic objectives.

First, the extent to which tariffs target specific industries, broad economic sectors or entire global trade networks significantly shapes their inflationary impact, supply chain disruptions and business responses. Targeted tariffs, such as those on steel and aluminum, aim to shield specific domestic industries but often raise costs for downstream manufacturers and consumers, creating localized inefficiencies. Broad-based tariffs, such as those levied on a wide range of Chinese imports, have far-reaching effects with a greater potential to increase inflationary pressures and exacerbate supply chain disruptions, especially when applied to essential inputs. Universal tariffs, imposed indiscriminately on all imports, represent the most severe form of protectionism, potentially leading to widespread trade contraction, elevated consumer prices and slower economic growth. The broader the tariff scope, the more pronounced its inflationary and economic consequences, increasing uncertainty and the likelihood of retaliatory actions from trade partners.

Second, the way tariffs are implemented — whether imposed as a one-time measure, gradually increased or wielded as a geopolitical instrument — also influences their economic consequences. One-time tariffs create an initial shock but allow businesses time to adjust, often limiting long-term disruptions. Although these tariffs raise prices in the short term, firms can mitigate costs by sourcing alternative suppliers or modifying production processes. In contrast, incremental or rolling tariffs can create persistent uncertainty, discouraging investment and potentially amplifying inflationary pressures as businesses delay expansion plans or pass rising costs on to consumers. Similarly, when tariffs are used as bargaining tools or instruments of economic leverage, their disruptive effects can extend beyond direct economic impacts. Even the mere threat of tariffs can deter investment, disrupt supply chains and compel firms to relocate or restructure operations, compounding inefficiencies. A predictable and transparent trade policy can help mitigate these risks by allowing firms to make informed investment decisions and develop long-term strategies to adapt to changing trade conditions.

Third, tariffs can be imposed strategically for geopolitical or strategic reasons, beyond just domestic economic protection. Retaliatory tariffs, imposed by affected countries in response to trade restrictions, introduce an additional layer of economic complexity. When a country enacts tariffs, its trade partners often respond with their own countermeasures, targeting politically or economically sensitive industries in an effort to exert pressure. These retaliatory measures not only neutralize some of the intended benefits of the original tariffs, but also escalate trade tensions, amplifying uncertainty and economic inefficiencies.

The impact of retaliation is especially pronounced in key export-dependent sectors. For example, when China responded to US tariffs on manufactured goods with tariffs on agricultural imports, US farmers faced

significant revenue losses due to reduced market access, requiring government intervention to offset the economic damage. Similar patterns have played out across the automotive, technology and consumer goods sectors, where retaliation disproportionately affects firms reliant on global demand.

Beyond immediate economic impacts, prolonged retaliatory trade disputes can lead to structural shifts and fragmentation of global trade networks. To hedge against trade uncertainty, companies may accelerate efforts to diversify or regionalize supply chains. While this strategy can reduce exposure to future tariff risks, it may introduce inefficiencies as firms are forced to invest in sub-optimal production and distribution networks that are less cost-efficient than existing supply chains.

The retaliatory measures not only neutralize some of the intended benefits of the original tariffs, but also escalate trade tensions, amplifying uncertainty and economic inefficiencies.

IMPACT ON FINANCIAL MARKETS

Stocks, bonds and exchange rates

Financial markets generally respond sharply to tariff announcements due to heightened uncertainty and risk pricing (see Exhibit 3).

US equities, particularly large-cap stocks, experienced significant volatility during the 2018-2019 US-China trade war, with the S&P 500 losing 5 percent on key tariff announcement days (CFA Institute, 2024).⁷ This volatility reflected investor concerns over the potential for higher costs, weaker consumer demand and disruptions to global supply chains.

In the medium term, the impact of tariffs differs across asset classes. Equities tend to experience pronounced short-term volatility as investors react to trade policy shifts. However, over time, higher costs, weakened consumer demand and corporate restructuring reduce earnings growth, impacting stock valuations.

Bonds, particularly US Treasuries, may benefit from tariffs if they contribute to economic slowdowns prompting central banks to lower interest rates to stimulate growth. This can make fixed-income assets more attractive. However, inflation risks can complicate bond market dynamics. If tariffs trigger sustained inflationary pressures, bond yields may rise as investors demand higher returns to compensate for inflation risks.

The ultimate financial market impact of tariffs depends on three key factors:

1. The duration and severity of trade conflicts – Long-term disputes heighten uncertainty and disrupt investment flows.
2. Prevailing monetary policy – If central banks cut interest rates in response to trade-related slowdowns, financial markets may partially offset negative effects.
3. Global capital mobility – Investors respond dynamically to shifting risk-adjusted returns, reallocating capital based on expected tariff outcomes.

In currency markets, tariffs can significantly influence exchange rates by altering:

- Trade balances – Reducing imports may improve the trade balance, strengthening the domestic currency.
- Capital flows – Uncertainty can deter foreign investment, weakening the domestic currency.
- Investor expectations – Speculative positioning can amplify exchange rate volatility.

Exhibit 3: Financial market movements on tariff announcement dates

Tariff announcement date	S&P 500 change (%)	US two-year change (bp)	US 10-year change (bp)	DXY change (%)
January 23, 2018	0.2%	-2	-4	-0.31%
March 1, 2018	-1.3%	-4	-5	-0.32%
March 22, 2018	-2.5%	-3	-6	0.08%
March 23, 2018	-2.1%	-2	-1	-0.47%
June 15, 2018	-0.1%	-2	-1	-0.10%
June 19, 2018	-0.4%	0	-2	0.27%
August 2, 2018	0.5%	-1	-2	0.54%
May 6, 2019	-0.4%	-4	-6	-0.01%
May 13, 2019	-2.4%	-8	-7	-0.01%
August 1, 2019	-0.9%	-14	-12	-0.15%
August 23, 2019	-2.6%	-8	-8	-0.54%
February 3, 2025	-0.8%	5	2	0.57%

Source: Liberty Street Economics, Bloomberg, Author's Calculation

In theory, tariffs imposed by a country can lead to currency appreciation if they improve trade balances by reducing demand for foreign goods and, consequently, foreign currency. Conversely, if tariffs lead to economic slowdowns, they may erode investor confidence, causing capital outflows and currency depreciation.

In practice, exchange rate dynamics are far more complex, as they depend on multiple macroeconomic factors beyond just tariffs, such as capital mobility, market expectations, trade elasticities and the relative economic strength of the countries involved. For instance, Jeanne and Son⁸ (2024) found that the tariffs imposed by the US in 2018-2019 did not meaningfully impact the US dollar, explaining at most one-fifth of the dollar's effective appreciation. By contrast, these tariffs significantly depreciated the Chinese yuan, accounting for around two-thirds of its effective depreciation. These findings suggest that while tariffs can influence currency markets, they often play a secondary role compared to broader dynamics such as capital flows, monetary policy and investor sentiment.

In cases of US tariffs on other countries, higher tariffs can strengthen the US dollar by reducing imports and improving the trade balance. However, they also risk weakening the dollar if economic slowdown erodes investor confidence. During the 2018-2019 trade war, the Chinese yuan depreciated significantly, illustrating the dynamic interplay between tariffs, trade policy and market forces.

The interplay of tariffs and foreign exchange also affects capital flows, as investors reassess risk-adjusted returns in response to policy uncertainties. While the US dollar is expected to strengthen in the near term due to heightened trade disruptions, prolonged tariff policies could weaken the dollar beyond 2025.

As global trade flows shift and foreign countries respond with their own protectionist measures, long-term US trade deficits may widen, eroding investor confidence in dollar-denominated assets.

The ultimate financial market impact of tariffs depends on three key factors – the duration and severity of trade conflicts, prevailing monetary policy, and global capital mobility.

Conclusion

Tariffs embody an inherent tension in economic policy: They can provide short-term political and economic gains, but can also introduce long-term inefficiencies and risks. While they can protect domestic industries, enhance trade leverage and generate government revenue, their broader implications — inflationary pressures, reduced productivity and market volatility — are deeply intertwined and require careful policy consideration.

The macroeconomic consequences of tariffs depend on their scope, duration and retaliatory risks. When used strategically and temporarily, tariffs may help foster domestic industry growth and encourage investment in alternative supply chains. Although tariffs can improve trade balances and provide short-term support to domestic industries, they can also lead to currency appreciation, reduce export competitiveness and incentivize trade diversion rather than solving trade imbalances.

Retaliatory tariffs, imposed by affected trade partners, further disrupt investment flows and corporate confidence, creating an environment

where economic growth slows due to uncertainty, rather than direct trade costs alone. Moreover, tariffs rarely resolve trade imbalances. Unless universal tariff increases are applied consistently, trade flows will simply shift to the next most cost-effective location.

Policymakers must navigate this complex landscape carefully, considering alternative policy tools such as targeted subsidies, supply chain incentives or international cooperation. While substitution effects and trade diversion mitigate some costs, they also introduce inefficiencies, further complicating policy outcomes. The emergence of connector trade flows underscores the adaptability of global markets, but also highlights possible limitations of tariffs as a sustainable policy tool.

Given the interconnected nature of the global economy, the costs of unilateral trade barriers often outweigh their benefits. The real impact of tariffs is rarely straightforward, requiring a nuanced assessment of both intended benefits and potential unintended consequences.

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