

# Prescription for made in America? Tariffs and U.S. drug manufacturing

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## Abstract

Tariffs on U.S. pharmaceutical imports have been recently proposed. This article examines the potential effects of tariffs on U.S. domestic drug manufacturing, focusing on the differential impact on branded and generic drugs. We contend that generic manufacturing is labor-intensive, operates on thin profit margins, and has strong competition that usually constrains price increases. However, where supply is dominated by a tariff-affected country, capacity limits may lead to spot-market price increases. Unless tariff-driven global price increases outweigh the amortized costs of relocation and higher domestic production costs, U.S. reliance on foreign suppliers for generics is likely to continue. By contrast, branded manufacturers have greater incentives to reshore production. Branded manufacturers' patent-protected monopolies provide sufficient pricing power to absorb the costs of relocation. Branded manufacturers also have an incentive to relocate production of active pharmaceutical ingredients (APIs) to the U.S. Domestically-produced branded APIs could be exported for final processing at lower costs and imported back into the U.S. as finished drugs without incurring tariffs. Tariff policy uncertainty may influence manufacturers' relocation decisions. Among the possible unintended consequences from the added pressure from tariffs on global pharmaceutical manufacturers, compromised product quality, drug shortages, higher prices, retaliatory actions like export quotas or bans, and reciprocal tariffs stand out.

## Lay summary

Tariffs on U.S. pharmaceutical imports from various countries are likely to have a differential impact on branded and generic drug manufacturing. Generic manufacturers have little incentive to onshore production due to its labor-intensive industry and thin profit margins. Spot-market prices may rise when supply is dominated by a tariff-hit country. Branded manufacturers' patent-protected monopolies provide sufficient pricing power to absorb the costs of relocation and higher production costs.

**Key words:** prescription drugs; drug importation; pharmaceutical industry; supply chain; tariff; onshoring; domestic production.

A stated rationale for recent U.S. tariffs imposed on U.S. imports from various countries is to encourage domestic manufacturing. Historically, prescription drugs have been exempted from U.S.-imposed tariffs to avoid increasing healthcare costs, but recent announcements have signaled the Administration's intention to create tariffs specifically on pharmaceuticals.<sup>1</sup> Amid escalating geopolitical tensions, the uncertainties around tariffs and the possible responses from other countries have prompted pharmaceutical manufacturers to evaluate contingency scenarios. In this article, we examine the potential effects of tariffs on U.S. domestic drug manufacturing, focusing on the differential impact on branded and generic drug manufacturers.

The U.S. relies on a global network of manufacturers for its prescription drug supply, and U.S. drug manufacturers also often depend on foreign countries for the supply of active pharmaceutical ingredients (APIs). In 2024, more than 100 countries exported finished pharmaceuticals or APIs to the U.S.<sup>2</sup>

Generic drugs represent more than 90% of prescriptions filled in the U.S. annually but <20% of pharmaceutical spending.<sup>3</sup> Over 92% of the facilities manufacturing generic APIs

for the U.S. market are located overseas, predominantly in India, China, and Italy.<sup>4</sup> The U.S. reliance on global generics suppliers has yielded significant cost savings through international competition, but it has also left the U.S. supply chain vulnerable to disruptions and drug shortages. Shortages are an ongoing public health concern, reaching a record high of 323 active instances in early 2024. By early 2025, 90 shortages persisted, more than 80% of which involved generics.<sup>5</sup> Manufacturing quality problems are among the primary contributors to drug shortages. The low profitability of generic drugs often reduces manufacturers' incentives to invest in continuous process improvement, maintain redundant manufacturing capacity, or remain in the market altogether.

Branded drugs, on the other hand, represent <10% of prescriptions filled in the U.S. yet account for more than 80% of pharmaceutical spending.<sup>3</sup> Branded drug manufacturers include many of the world's largest pharmaceutical companies. Most branded drug imports to the U.S. originate from countries such as Ireland, Switzerland, and Germany that have sophisticated technological prowess.<sup>2</sup> The monopolistic

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environment in these patent-protected markets sustains elevated prices but also incentivizes investments in manufacturing quality. As a result, branded drug shortages are uncommon and typically occur when demand unexpectedly exceeds production capacity.

Given the fundamental differences between the markets, imposed or proposed tariffs would likely affect brand name and generic drug manufacturers differently. In the short term, the key question is the extent to which tariffs would increase drug prices. The magnitude of price increases would depend largely on the share of supply for each product imported from different tariff-affected countries and the capacity of the supply chain to absorb or offset the added costs.

In the generic drugs market, the short-term impact on prices will depend on the share of the drug coming from tariff-affected countries. Although intense global competition allows buyers to shift demand toward lower-cost suppliers in countries unaffected by tariffs, capacity constraints mean that such transitions may take time and are not always feasible. If a drug is predominantly produced in a single tariff-affected country, buyers may not have an alternative to it in the short-term, so their willingness to pay may rise.

In the branded drugs market, manufacturers' monopolistic positions afford greater flexibility to pass tariff-related costs onto consumers through price increases. At the same time, higher profit margins may enable branded drug manufacturers to absorb some of the added costs, at least temporarily. All manufacturers have some incentive to absorb part of the added costs to protect their market share, but the ability to absorb costs is higher among firms with higher margins.

The likelihood that price increases will be passed through to buyers can be reduced, in the short term, by existing contractual agreements with supply chain participants such as distributors and group purchasing organizations, which can protect buyers from price increases for 1-3 years. In addition, government regulations that penalize manufacturers who raise prices faster than inflation—such as Medicaid rebates and the 340b program—may deter manufacturers from increasing the price, especially for drugs with high utilization in such programs.<sup>6</sup>

Over the long term, a key question is whether the increased costs and shifts in demand resulting from tariffs would be substantial enough to motivate manufacturers to relocate production to the U.S. Relocation decisions would depend on the short-term price impacts and on manufacturers' expectations of recovering upfront investments and higher production costs from relocation through tariff relief and future revenues.

Without much pricing cushion, generic drug manufacturers are unlikely to relocate production to the U.S. Generic manufacturing is labor-intensive, operates on thin profit margins, and offers little room for raising prices due to competition. Competition offers the possibility that buyers may choose to buy from cheaper markets, as long as capacity permits. However, if a product is sourced mostly from a tariff-affected country and traded in spot markets, capacity constraints can still push prices upward. In addition, recent experience such as the COVID-19 pandemic and the trade war during the first Trump administration suggests that external shocks may give even low-margin firms greater freedom to raise prices, which manufacturers could exploit when facing new tariffs.<sup>7</sup> Unless tariff-driven global price increases outweigh the amortized costs of relocation and higher domestic production costs, the U.S. reliance on foreign suppliers for generic drugs is likely to continue.

By contrast, branded manufacturers have greater incentives to relocate production. Branded manufacturers' patent-protected monopolies provide sufficient pricing power to absorb the costs of relocation or reshoring. In 2025, large branded-drug manufacturers unveiled new U.S. manufacturing plants as well as plans for multi-billion investments on U.S.-manufacturing expansions.<sup>8,9</sup> However, the role of tariffs in driving such investment decisions remains unclear. The uncertainty of whether tariffs are here to stay—especially since the newest tariffs have been created by executive orders rather than congressional mandates—may mitigate some of the incentives for any manufacturer to relocate.

Of unique consideration is the production of APIs, which must be transformed into finished drugs before clinical use. APIs typically account for 20% to 30% of drug manufacturing costs. For U.S. generic drug manufacturers, higher prices of foreign-sourced APIs would increase production costs, potentially threatening these manufacturers' competitiveness in the global market. Given the global availability and competitive pricing of generic APIs, manufacturers have little incentive to relocate generic API production to the U.S.

Manufacturers of finished generic drugs, however, may have an incentive to change their API sources if tariffs are applied differentially across countries. If tariffs were created only for China, for example, finished generic-drug manufacturers would have an incentive to purchase API from non-Chinese manufacturers, essentially incentivizing generic API production to relocate, but not necessarily to the US.

For branded drug manufacturers, there may be a distinct incentive to relocate API production to the U.S. Converting APIs into finished drugs such as capsules, tablets, and solutions often does not meet the legal threshold of "substantial transformation" required to establish the country of origin of a drug for tariff purposes.<sup>10</sup> Therefore, branded APIs produced domestically could be exported for final processing at lower costs abroad and subsequently imported back into the U.S. without incurring tariffs, as the finished drug would retain its U.S. origin status.

Several unanswered questions and unintended consequences could shape the net impact of tariffs on the U.S. pharmaceutical supply. Of greatest concern is the added pressure tariffs would place on global generic drug manufacturers, potentially leading to compromised product quality. Facing higher costs, generic manufacturers may have even less incentives to invest in quality, increasing the risk of substandard products entering the U.S. market. Substandard generic drugs and generic APIs could harm patients and worsen drug shortages. Notably, relocating branded drug or branded API production to the U.S. would do little to mitigate these risks.

Additional consequences may arise from economic or political responses by tariff-affected countries. Retaliatory actions like export quotas or bans, could disrupt the U.S. access to essential medicines. Reciprocal tariffs could raise prices of U.S.-made drugs, reducing their global competitiveness and weakening the incentive to reshore. If tariffs are implemented but later lifted, costlier U.S.-manufactured drugs may struggle to compete globally.

Concerns about the short-term, long-term, and unintended consequences of tariffs highlight the need for comprehensive and transparent monitoring of U.S. pharmaceutical supply chains, including the origin of both finished drugs and APIs. To support reshoring, policymakers should consider complementary tools such as grants, low-interest loans, tax credits, and advance purchasing commitments from public programs.

Long-term tracking of supply chain shifts, pricing trends, manufacturing capacity, and shortages is paramount to ensure a stable and resilient U.S. supply of essential medicines.

## Supplementary material

Supplementary material is available at *Health Affairs Scholar* online.

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## Notes

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