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Tariffs, automation and inequality: why US jobs won't return but developing countries will still lose

Headlines around Trump's sweeping tariffs have focused on trade wars, inflation and the geopolitical fallout. But a more profound shift is taking place, argues Viet Nguyen-Tien. Rather than restoring American jobs, these tariffs may accelerate automation, undermining the export-led industrialisation model that has lifted millions in developing countries out of poverty. Why does this matter, and what must developing countries do in response?

President Trump's tariff strategy is often framed as a method to bring manufacturing jobs back to the United States. In reality, however, economists highlight two key reasons why this is unlikely. First, even if production returns, the **absence of coordinated labour market and industrial policies** – a glaring omission in Trump's platform – means American workers may see little benefit.

Second, and more fundamentally, the US economy **is structurally biased toward automation**. MIT economist Daron Acemoglu points out that decades of policy have favoured capital over labour, through tax incentives like accelerated depreciation and investment credits, while providing weak support for worker training and social protections. This imbalance encourages firms to automate rather than hire.

This shift is no longer theoretical. US automakers installed nearly **10.7 per cent more robots** in 2024 than in 2023. Commerce Secretary Howard Lutnick has **celebrated robotics** as key to a new "manufacturing renaissance." Meanwhile, Elon Musk – Tesla CEO and Trump adviser – predicts his Optimus humanoid robot could eventually generate over **\$10 trillion in revenue**.

As **Acemoglu told TIME**, "If tariffs persist, firms will have no choice but to bring some of their supply chains back home – but they will do it via AI and robots." Meanwhile, empirical evidence from both **the United States** and **China** shows that while new technologies can **create jobs**, recent automation tends to displace more than it replaces.

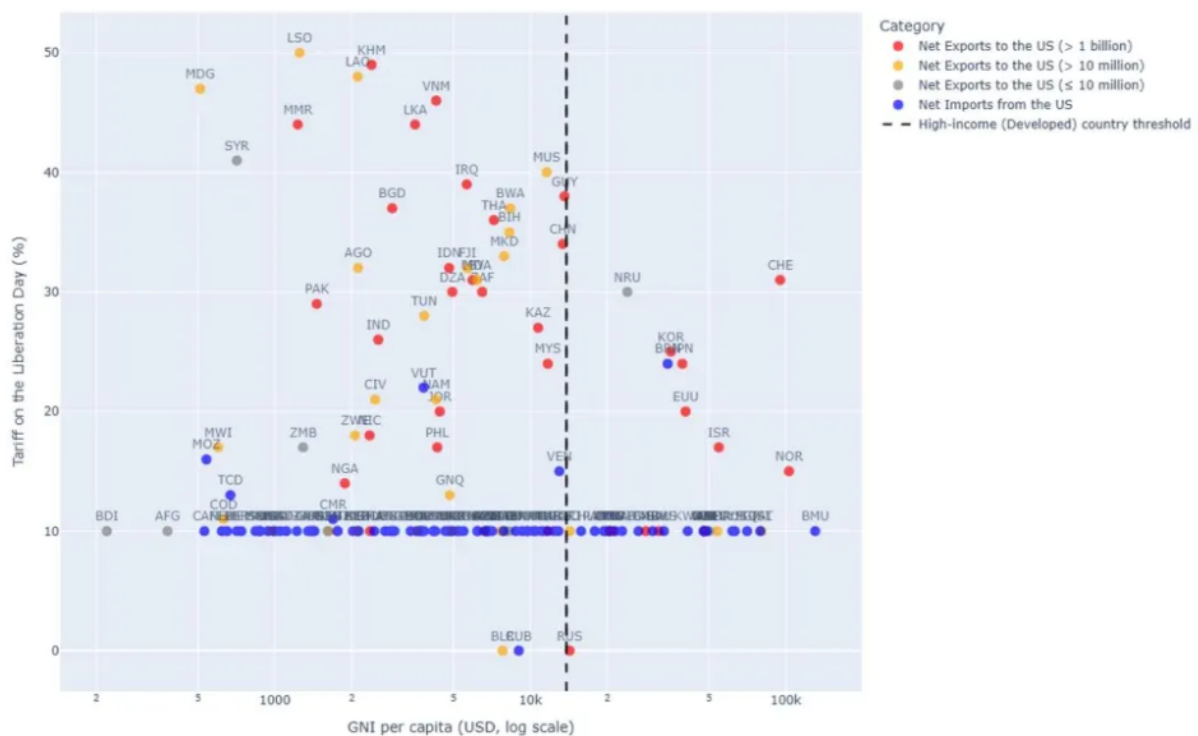
And while this is bad news for US jobs, the implications for developing countries look even bleaker...

Tariffs are devastating but developing countries should worry about something else

President Donald Trump justified sweeping “reciprocal tariffs” announced on April 2, 2025 – dubbed *Liberation Day* – as a defence against what he described as unfair taxes, subsidies and regulations imposed by America’s trading partners. Under a complex but *theory-light formula*, tariff rates are set in proportion to each country’s *goods* trade deficit with the United States – ignoring the services balance – with a minimum rate of 10 per cent.

As shown in Figure 1, developing countries – particularly middle- and low-income countries, which are shown to the left of the dashed line – tend to be hit hardest, as indicated by the higher tariff levels on the vertical axis. These are often countries with comparative advantages in labour- and resource-intensive manufacturing, and whose supply chains complement that of the US economy.

Figure 1 – Liberation Day tariffs with higher rates for poorer countries



Author’s own calculations. Data sources: GNI (up to 2023) from *World Bank*, Trade data (2022) from *WITS*, tariff data from *White House* (2025) (previous existing tariffs on China are not included). The scatter points are labelled using *3-letter alphabetic country codes (ISO3)*.

According to *UN Trade and Development*, 28 countries would face tariffs ranging from 11 per cent on the mineral-exporting Democratic Republic of Congo to 50 per cent on textile-exporting Lesotho, even though each contributes less than 0.1 per cent to the overall US trade deficit. This underscores a key issue: “reciprocal” tariffs do not produce reciprocal impacts. Although they have been temporarily suspended for 90 days and may be renegotiated, reversed, or even intensified,

developing countries should also look at a longer-term, irreversible threat triggered by protectionism: automation.

Automation undermines the development ladder

For developing countries, automation's rise in high-income economies like the United States is not just a technological concern – it directly **threatens the export-led industrialisation model** that fuelled East Asia's economic miracles and lifted hundreds of millions out of poverty.



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At the core of this disruption is the labour-saving potential of new technologies, particularly robotics and AI. Traditional **comparative advantage theory** posits that developing countries benefit by specialising in labour-intensive goods, which they produce more cheaply than wealthier nations due to lower wages. But as automation replaces human labour, especially in manufacturing, this advantage gets eroded.

Imagine US factories using robots to produce goods like circuit boards – or even automate parts of textile production such as T-shirts – at costs comparable to Bangladesh or Vietnam, without risks from global logistics or regulations. This weakens the economic case for offshoring. While full automation of garments remains difficult, ongoing progress suggests that even labour-intensive sectors are becoming less dependent on low-cost labour abroad.

In this environment, export-led growth becomes a far riskier proposition. The low-skill, labour-intensive manufacturing jobs that once served as a ladder out of poverty are rapidly disappearing. Instead of **absorbing surplus rural labour into factories**, many developing countries risk being stuck with stagnant informal sectors and rising unemployment. Without industrialisation as a mass employment engine, their structural transformation stalls.

What can developing countries do?

Paradoxically, China – the main target of US tariffs – is among the least likely to suffer from this kind of threat. It has already transitioned away from labour-intensive production and is now a leader in AI and automation (Figure 2), well-positioned to benefit from the very technologies that threaten others.

Figure 2 – China’s position among top countries in industrial robots and AI technologies

Panel A: Robot density in the manufacturing industry, 2022 (International Federation of Robotics)

Panel B: Global “AI vibrancy” ranking: Top ten countries, 2023 (Stanford Institute for Human-Centered Artificial Intelligence)

For many other developing countries, the risks are more acute. Still reliant on low-skill, labour-intensive exports, they face the prospect of automation closing off the development path that once drove rapid convergence with richer economies.

The only good news – if we can call it that – is that the full impact of automation may take time to unfold. As Acemoglu notes, firms tend to delay costly automation investments amid uncertainty.

But if protectionist policies persist, the economic pressure to automate will only intensify. This lag provides a narrow but crucial window for developing countries to act.

To remain competitive, developing countries must prioritise technology adoption and innovation, not as an afterthought, but as a core development strategy. This means investing in critical infrastructure, broadband, power, logistics, telecommunications, water and transport, alongside developing human capital through technical education, digital literacy and upskilling. At the same time, fostering innovation ecosystems that support small and medium-sized enterprises (SMEs), research and development and public-private partnerships is essential to help firms adopt and adapt new technologies.



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Protecting existing export sectors requires building strong intra- and cross-sectoral linkages to reduce the risk of reshoring, especially as automation becomes viable in traditionally labour-intensive industries like garment manufacturing. These linkages, combined with robust infrastructure and a supportive technological environment, strengthen industrial resilience and allow developing countries to better withstand global shifts.

Rather than relying solely on manufacturing, developing economies should **diversify** into sectors less vulnerable to automation but rich in employment potential, such as healthcare, education, tourism and digital services. Strategic industrial policies should also promote tech-enabled agriculture and green industries, boosting productivity while creating jobs.

A narrowing path to development

While tariffs dominate headlines, automation poses the deeper, longer-lasting threat to export-led growth. As firms adapt through labour-saving technologies, the development model that once lifted millions is losing traction.

Technology will continue to raise global productivity, but it will not lift all boats equally. Without bold action, developing countries risk exclusion from global value chains and stalled structural

transformation.

The challenge now is not just to industrialise, but to leapfrog. This means investing in infrastructure, skills and sectors less vulnerable to automation, like tech-enabled agriculture, resilient services and sustainable industries.

The path is narrow, but there is still a route for those who move strategically.

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Viet Nguyen-Tien is an applied economist at the Centre for Economic Performance, contributing to the Growth and Innovation and Diffusion Programmes. His widely covered research has been published in World Economy, Journal of the Association of Environmental and Resource Economists, Nature Energy, Energy Economics, among others. He has also contributed to LSE policy reports on labour and technology.

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