



# The Role of Trade Policy in the Twin Digital and Green Transitions

Trade policy has a central role in accelerating the green and digital transition, also known as the twin transition. Open, predictable, and rules-based trade conditions can help firms access the technologies, data, services, and markets needed to decarbonise production and scale sustainable solutions, while reducing the risk that the transition becomes fragmented and exclusionary.

This brief examines how trade policy can support the twin transition by enabling the development and diffusion of solutions across markets in support of a just transition.

## Trade as an enabler of the twin transition

Trade is one of the most important channels through which green and digital technologies spread across borders. Firms rely on imports of intermediate goods, components, digital services, environmental goods, technical expertise, and data-driven solutions to adapt their production processes. Trade also enables companies to scale sustainable business models beyond national markets. At the same time, the green and digital transitions will require significant amounts of energy, land, water and other resources, including for the expansion of digital infrastructure such as data centers. This creates a need for trade policy not only to manage potential challenges between the two transitions, but also to support the diffusion of cleaner technologies, renewable energy solutions and resource-efficient practices. As more markets develop their own climate-related requirements, access to the tools needed to understand, meet and demonstrate compliance with these requirements is becoming increasingly important for firms' ability to access and participate in international trade.

From a private-sector perspective, many European firms are already using digital tools to support sustainability strategies. AI, data analytics, digital twins, sensors, and platform-based services can improve resource efficiency, support emissions monitoring, reduce waste, and enable new circular business models. Digitalisation is therefore not only a parallel transition. It is also a practical enabler of the green transition. Trade policy can support this process by reducing barriers to trade in environmental goods and services, promoting interoperability of standards, enabling trusted cross-border data flows, and strengthening regulatory co-operation. These conditions are important for firms that need predictable market access to invest in new technologies.

At the same time, trade policy must recognise that not all countries and firms start from the same position. The ability to benefit from the twin transition depends on infrastructure, institutions, financing, skills, and regulatory preparedness. Where these conditions are weak, the transition may increase exclusion rather than opportunity.

## Digitalisation, AI and market access

The twin transition also raises questions about access to AI, data and digital infrastructure. As global value chains become increasingly complex and interconnected, firms' ability to optimise production and operations through digital tools is becoming essential for maintaining competitiveness and accessing international markets.

Available studies reveal significant disparities in countries' levels of AI development. The Stanford HAI's Global AI Vibrancy tool<sup>1</sup> compares countries across a broad set of indicators related to AI capacity, including research output, investment, innovation, talent, infrastructure, and governance. The results indicate that AI capacity is unevenly distributed globally, with a relatively small group of countries leading the development while many others are lag behind. This suggests that AI is not only a technological issue, but also a matter of international competitiveness, institutional readiness, and long-term economic development.

This creates a risk that new structures of inequality will emerge. Firms with access to these tools will be better positioned to meet future trade requirements and access markets. Firms without such access may face higher compliance costs, weaker visibility in value chains and reduced ability to demonstrate climate performance.

This is particularly relevant for developing countries and least developed countries. Many producers may need to document embedded emissions, comply with digital product information requirements, participate in traceability systems or use data-based certification tools. Without the infrastructure or technical capacity to do so, exclusion from markets may follow even when products are competitive. This is already a challenge for many producers, but the gap risks widening further as digitalisation becomes increasingly necessary to manage the growing information requirements that shape firms' ability to adapt, comply and participate in trade during the transition.

The issue is therefore not only whether digitalisation creates opportunities. It is also whether the benefits of digitalisation are distributed in a way that supports inclusive trade<sup>2</sup>. This also raises questions about the ownership of AI systems, platforms and data infrastructures. As firms increasingly rely on these systems to manage reporting, compliance and market access, the actors that own and control them may assume a growing role in shaping how digitalisation supports participation in international trade.

## Energy infrastructure as a foundation

The twin transition requires energy. AI systems, data centres, connectivity infrastructure, electrified production and smart logistics all depend on reliable and increasingly low-carbon electricity. At the same time, the climate transition requires digital tools to manage energy systems, monitor emissions, support flexibility and improve efficiency.

Energy infrastructure is therefore a foundation for both transitions. Countries that lack reliable access to electricity, grid capacity or renewable energy solutions will face difficulties in developing digital industries and decarbonising production. This directly affects their ability to trade.

From a private-sector perspective, there are many examples of initiatives that can support the twin transition. In Sweden for example, significant investments have been made in technologies and solutions linked to the climate and energy transition, including carbon capture and storage, fossil-free industrial production, electrification, and smart energy

1 [Which countries are leading in AI? | Stanford HAI](#)

2 The twin transition, particularly in relation to digital transformation, also raises broader questions about the changing organisation of markets: who controls digital intermediation, how firms gain visibility, and whether new forms of structural dependency emerge. National Board of Trade Sweden (2026), [Collective Societal Risks: A Blind Spot in AI Governance: Implications for EU and International Trade](#).

systems etc. These are examples of technologies that can help address future challenges. However, the impact of these initiatives will depend on whether they are supported by the right conditions in international markets, and whether trade and cooperation can help diffuse and scale these solutions in response to the shared challenges of the transition.

## **The risk of fragmented support**

A recurring challenge in international cooperation is that financing is often fragmented across many small initiatives. Even when the total amount of funding is significant, it may be divided into narrow programmes, pilot projects and thematic funds. This allows actors to demonstrate initiative, but it may fail to mobilise resources at the scale required to address systemic challenges.

The twin transition requires large-scale investments in energy systems, digital infrastructure, data governance, skills development, standards capacity, and industrial upgrading. These are not isolated needs. They are mutually reinforcing. A country cannot fully benefit from digital trade without connectivity and trusted data systems. Participation in low-carbon value chains requires emissions measurement capacity and access to cleaner technologies. Green investment requires reliable energy infrastructure and predictable regulatory conditions. The challenge is therefore not only the volume of finance, but also how funds are organised. Fragmented support risks producing fragmented efforts.

The approach should therefore consider whether existing support mechanisms are sufficiently coordinated and strategic. Small-scale initiatives can be valuable when they test solutions, build capacity, or address specific bottlenecks. But they should not replace larger, more coherent efforts to build the infrastructure and institutions that many countries need to participate in the twin transition.

This is particularly important from a trade perspective. If support is too fragmented, countries may struggle to meet the emerging requirements of global markets. Participation in individual projects may still leave broader trade opportunities out of reach.

## **Global rulemaking and the new conditions for trade**

The global conditions for trade are increasingly shaped by rules and practices linked to digitalisation, climate investment, and carbon accounting. Examples include climate-related reporting requirements, carbon credit markets, methodologies for calculating emissions, digital standards, data governance frameworks and sustainability-related market access conditions.

These developments are necessary in many respects. Better emissions data can support climate action. Digital standards can improve trust and interoperability. Climate finance can mobilise investment. However, a just transition in trade policy requires that countries affected by new green and digital requirements are not only expected to adapt, but are also involved in shaping the conditions for adaptation and supported in accessing the tools needed to do so.

It is therefore important to recognise that countries affected by new green and digital requirements may need different forms of support to adapt to changing trade conditions. This includes recognising where support is needed to keep pace with regulatory, technological, and market developments, as well as ensuring access to the digital tools, trusted data systems, and technical capabilities required to respond to new requirements. Compliance capacity is becoming increasingly important for access to low-carbon value chains and, in turn, for meeting the future requirements that shape participation in international trade.

Trade policy should therefore promote greater coherence between climate policy, digital policy, development cooperation, and trade.

## Policy considerations

- Trade policy should treat the twin transition as an integrated agenda and support technology diffusion and trade in environmental goods and services, while international cooperation helps ensure that countries requiring additional support are able to participate in the transition.
- Support for developing countries should focus on systemic capacity, not only project-based interventions. Financing should help build the institutions, infrastructure, and skills needed to participate in green and digital trade over time.
- Climate finance and digital development support should be better coordinated. Fragmented funding risks producing limited results. Larger, more coherent initiatives may be needed to address shared global challenges such as energy infrastructure.
- Trade-related development cooperation should include support for AI readiness, data governance, and digital infrastructure. These are becoming increasingly important for market access, especially as sustainability requirements become more data-intensive.
- International cooperation on carbon accounting, climate credits, and digital standards should include the perspectives of countries that may otherwise struggle to comply. The challenge is not only to develop robust methodologies, but also to ensure that countries and firms have the knowledge, infrastructure, and implementation capacity needed to apply them in practice and meet the requirements that increasingly shape market access.

## Concluding remarks

The twin green and digital transitions can make trade more sustainable, efficient, and resilient. But they can also deepen existing inequalities if access to technology, finance, data, infrastructure, and standards capacity remains uneven. Private-sector initiatives already demonstrate how trade and cooperation can support the transition.

A just transition in trade policy must therefore address the conditions that enable countries and firms to participate in the transition. This includes access to clean energy infrastructure, digital tools, trusted data systems, climate finance, emissions accounting capacity, and open markets.

Overall, harnessing the full potential of the twin transition requires alignment across trade policy, private-sector innovation, and international cooperation. Trade can play an enabling role by supporting the diffusion of green and digital technologies, including services. Open, predictable, and rules-based trade conditions can help firms access the inputs, data, expertise, and markets needed to scale sustainable solutions, while reducing barriers to trade in environmental goods and digital services can lower costs and accelerate adoption. Trade policy can therefore help make the twin transition faster, more inclusive, and more resilient.

This paper is authored by Shaza Aziz, Trade Policy Adviser at the National Board of Trade Sweden. National Board of Trade is an independent government agency and its views do not necessarily reflect those of the Swedish government.

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