8. Market Mechanisms and Trade: The Rising Influence of Carbon Pricing Systems

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Abstract

As the global climate crisis intensifies, nations and industries are increasingly turning to carbon pricing as a strategic tool to reduce greenhouse gas emissions. By placing a financial cost on carbon, mechanisms such as carbon taxes and emissions trading systems (ETS) are not only driving emission reductions but also reshaping global trade dynamics. This article explores how carbon pricing influences international competitiveness, encourages green innovation and challenges the existing trade order. With rising adoption and initiatives like the EU's Carbon Border Adjustment Mechanism (CBAM), carbon pricing is poised to become a cornerstone of both climate and trade policy in the coming decades.

Carbon Pricing as an Economic Solution to Climate Change

Carbon pricing is grounded in the principle that polluters should bear the cost of the environmental damage they cause. This approach internalizes the external costs of carbon emissions, ensuring that prices reflect their true social and environmental impacts. The two most prominent carbon pricing models in use today are carbon taxes and emissions trading systems (ETS). A carbon tax directly sets a price per ton of carbon dioxide emitted, offering cost certainty. In contrast, an ETS caps total emissions and allows companies to trade allowances, leading to a market-determined carbon price. Both systems incentivize emission reductions, but ETS provides more flexibility in reaching policy goals. As of 2024, more than 70 countries and regions have implemented carbon pricing mechanisms, covering approximately 23% of global emissions (World Bank, 2023).

Sweden, for instance, has implemented one of the highest carbon taxes globally, exceeding $130 per ton. The European Union's Emissions Trading System (EU ETS) remains the world's largest carbon market and a model for international coordination (ICAP, 2024). These systems have shown effectiveness in encouraging

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companies to adopt cleaner technologies, reduce carbon intensity and shift toward renewable energy sources.

However, implementation varies widely. Many developing countries struggle with political, economic or infrastructural constraints, leading to lower or symbolic carbon prices. This disparity can lead to "carbon leakage," where businesses relocate to jurisdictions with weaker regulations, undermining global climate goals.

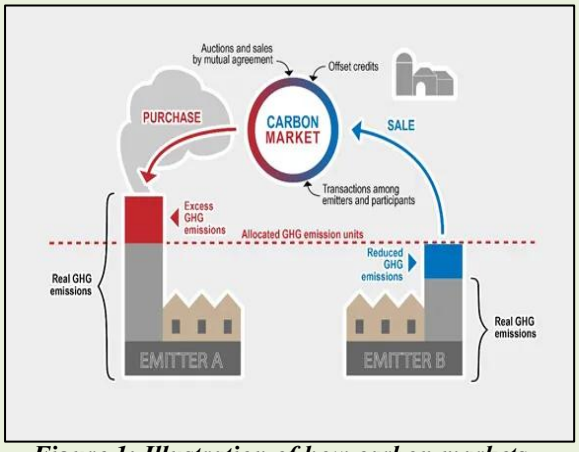

Figure 1: Illustration of how carbon markets work through the trading of emission units between high and low

Source: UNFCCC (United Nations Framework Convention on Climate Change), 2023

The Link Between Carbon Pricing and International Trade

The influence of carbon pricing is no longer confined to domestic policy. It is increasingly altering the landscape of international trade. The European Union's Carbon Border Adjustment Mechanism (CBAM) is a prime example of this shift. CBAM aims to equalize the cost of carbon between domestic EU industries and foreign competitors by imposing a carbon price on imports of high-emission goods such as steel, aluminum, cement and fertilizers (European Commission, 2023).

By doing so, the EU seeks to prevent carbon leakage and protect local industries that comply with strict environmental standards. The introduction of CBAM has significant implications for global exporters, especially those in developing countries that lack carbon pricing infrastructure. To maintain access to European markets, these countries may need to align with stricter environmental standards or implement their own carbon pricing mechanisms.

This trend represents a broader movement toward climate-conscious trade policy. As major economies incorporate environmental concerns into trade negotiations, carbon pricing could become a key determinant of competitiveness in global markets. The World Trade Organization and international climate bodies are already exploring frameworks to harmonize carbon accounting and ensure that such measures do not become tools of trade protectionism (OECD, 2022).

Businesses, too, are responding to these trends. Many multinational companies are

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adopting internal carbon pricing to assess long-term risks, guide investments and meet regulatory expectations. For example, Microsoft, BP and Unilever have introduced internal carbon prices ranging from $15 to over $100 per ton to future-proof their operations (CDP, 2023).

Challenges and the Path Forward

Despite growing momentum, carbon pricing faces several challenges. One major issue is the lack of global coordination. The varying price levels and coverage across jurisdictions can create competitive imbalances and hamper investment in low-carbon solutions. A harmonized global pricing framework could address these disparities and reduce the risk of carbon leakage, but such coordination requires political consensus that remains elusive.

Another concern is social equity. Without safeguards, carbon pricing can disproportionately affect low-income households, especially in countries where energy access is still a development priority. Governments must therefore use carbon revenue wisely—either by redistributing it through subsidies or investing it in green infrastructure and public services.

Political resistance also remains a barrier. Public backlash against rising fuel prices or new energy levies has slowed or reversed carbon tax efforts in several countries. For carbon pricing to succeed, it must be transparent, fair and accompanied by strong public engagement and communication strategies.

Nonetheless, carbon pricing is a key pillar in the transition to a low-carbon global economy. It encourages cleaner production, supports innovation in renewable energy and integrates environmental costs into business and consumer decisions. Moreover, its growing connection to trade policy—through tools like CBAM—means that carbon pricing will increasingly influence who trades, how they trade and what gets traded.

As we move toward a world that prioritizes sustainability, carbon pricing offers a powerful, market-driven lever for change. It sends the right signals to investors, industries and consumers alike, guiding the global economy onto a path that aligns profit with planetary survival.

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