Climate Policy Stringency and International Investments: A Global Overview

Solomon N. Nakouwo | Research Institute of Economics and Management, Southwestern University of Finance and Economics, Chengdu, China.

Globally, governments increasingly implement stringent climate policies to mitigate environmental risks and transition toward sustainable economies. However, policymakers face the dual challenge of ensuring ecological sustainability without deterring international investments. Understanding the nuanced impacts of environmental policy stringency (EPS) on Foreign Direct Investment (FDI) flows is thus critical for informed decision-making. This review utilizes empirical data to examine global EPS trends and their evolving relationship with FDI inflows, providing pragmatic recommendations for policymakers and international investors.

The OECD Environmental Policy Stringency Index evaluates a country's environmental regulatory ambition, taking into account factors such as emission standards, carbon pricing, and enforcement rigor (OECD, 2023). Figure 1 presents the average Environmental Policy Stringency (EPS) scores from 2010 to 2020 for six major economies. France and Sweden exhibit consistently high and upward trends, reflecting long-standing, ambitious climate governance. Germany maintains moderate stringency with incremental progress. The United States has demonstrated a gradual upward trajectory, mainly since 2015, signaling a renewed focus on climate policy. India remains comparatively lower, with only modest gains over the decade. Notably, China exhibits a strong upward trend, reflecting a decade-long expansion of environmental regulations and increased climate ambition, which underscores its emerging leadership in the global energy transition. These varying trajectories highlight global disparities in policy ambition and implementation capacity, which are essential for striking a balance between ecological goals and economic competitiveness (Chateau et al., 2024).

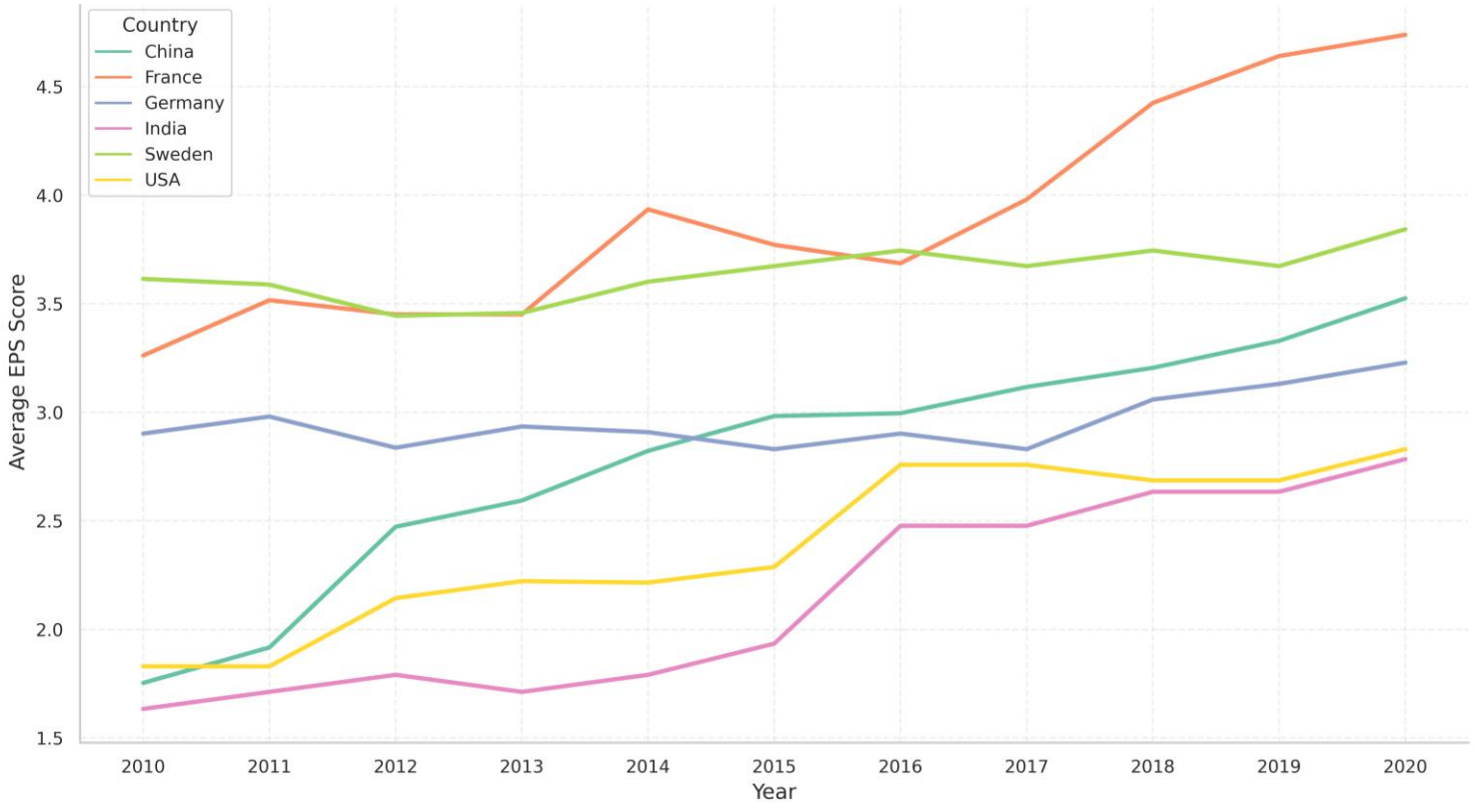

Figure 1: EPS Trend Over Time (2010–2020): Selected Countries

Foreign Direct Investment is pivotal for economic growth, technological advancement, and employment generation. Global FDI flows fluctuate significantly due to macroeconomic factors, geopolitical dynamics, and global crises, including the COVID-19 pandemic. Theoretical frameworks suggest stringent environmental regulations could either deter FDI by elevating compliance costs or attract investments through enhanced regulatory stability and incentivized green innovation (Maghyereh et al., 2025). Empirical research provides mixed evidence. Alsagr (2023) demonstrates that stringent policies positively affect renewable energy investments by ensuring predictable and transparent regulatory environments. However, Zhou et al. (2025) identify increased capital costs and heightened risk perceptions among investors in countries with stringent climate policies, which may hinder foreign direct investment (FDI) inflows.

Utilizing OECD and UNCTAD data (OECD, 2023; UNCTAD, 2024), Figure 2 presents a multi-period analysis (2010, 2015, 2020) exploring the relationship between EPS scores and FDI inflows. Consistently weak or slightly negative correlations across these periods suggest that heightened policy stringency alone neither significantly deters nor strongly attracts FDI. The minimal negative correlation suggests regulatory frictions, particularly in the absence of clear institutional signals or offsetting incentives. However, the absence of strong negative trends indicates growing investor resilience toward predictable environmental regulations (Corrocher & Mancusi, 2021). Moreover, Figure 3 segments this analysis by country income levels, distinguishing high-income from emerging economies. High-income countries exhibit a more apparent negative trend, indicating that short-term capital inflow deterrence is absent in the absence of supportive signals for innovation or stable governance. Emerging markets exhibit flatter relationships, indicating that macroeconomic factors, such as infrastructure quality and institutional risks, influence investment decisions beyond EPS alone. Satoğlu and Salmon (2024) reinforce this by demonstrating that income levels significantly mediate the EPS-FDI relationship, with higher-income countries leveraging stringent policies more effectively as competitive advantages. Chu et al. (2024) similarly underscore how EPS fosters corporate innovation, potentially enhancing long-term investment attractiveness despite short-term compliance costs.

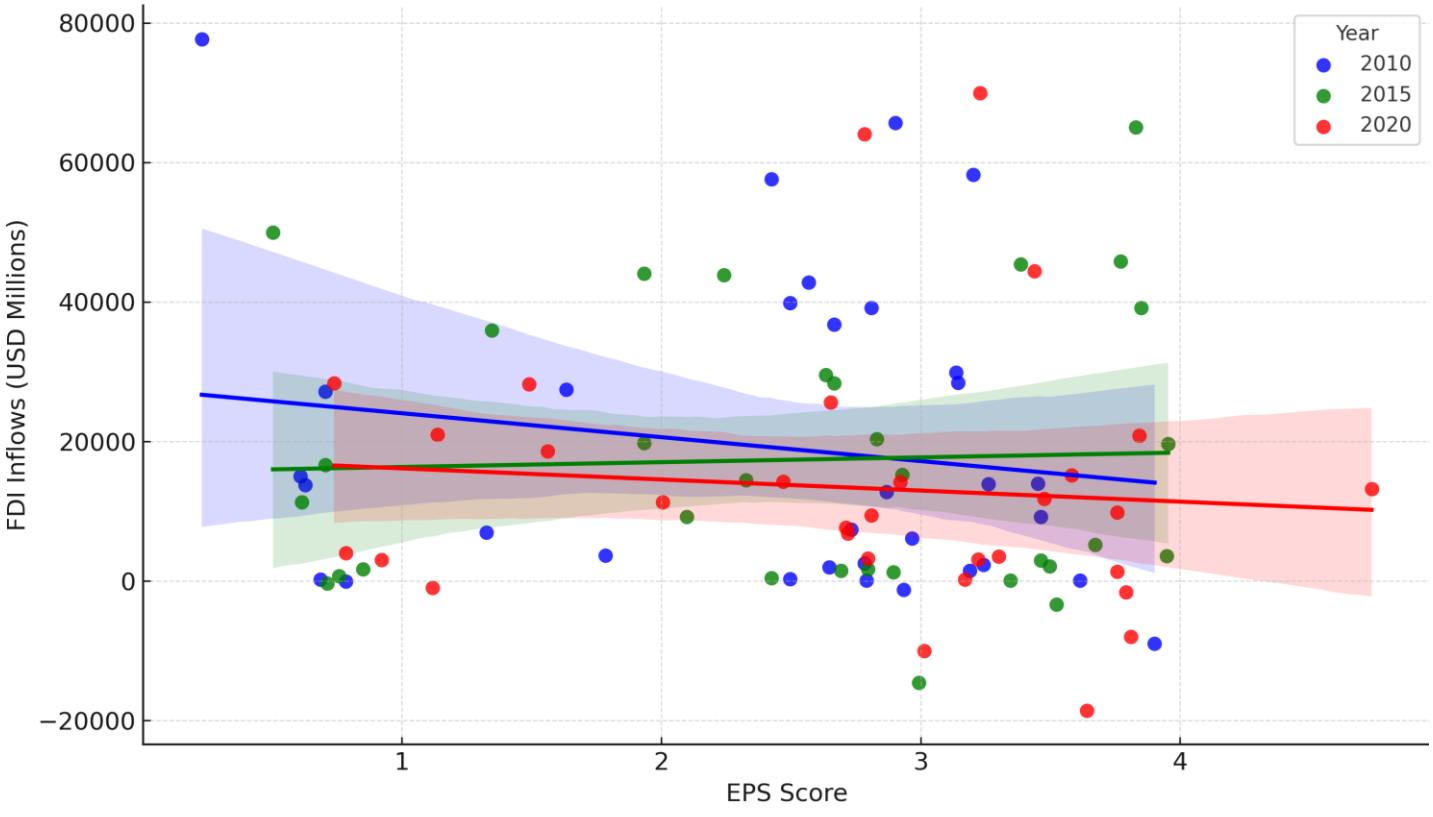

Figure 2: Relationship Between EPS Scores and FDI Inflows (2010, 2015, 2020)

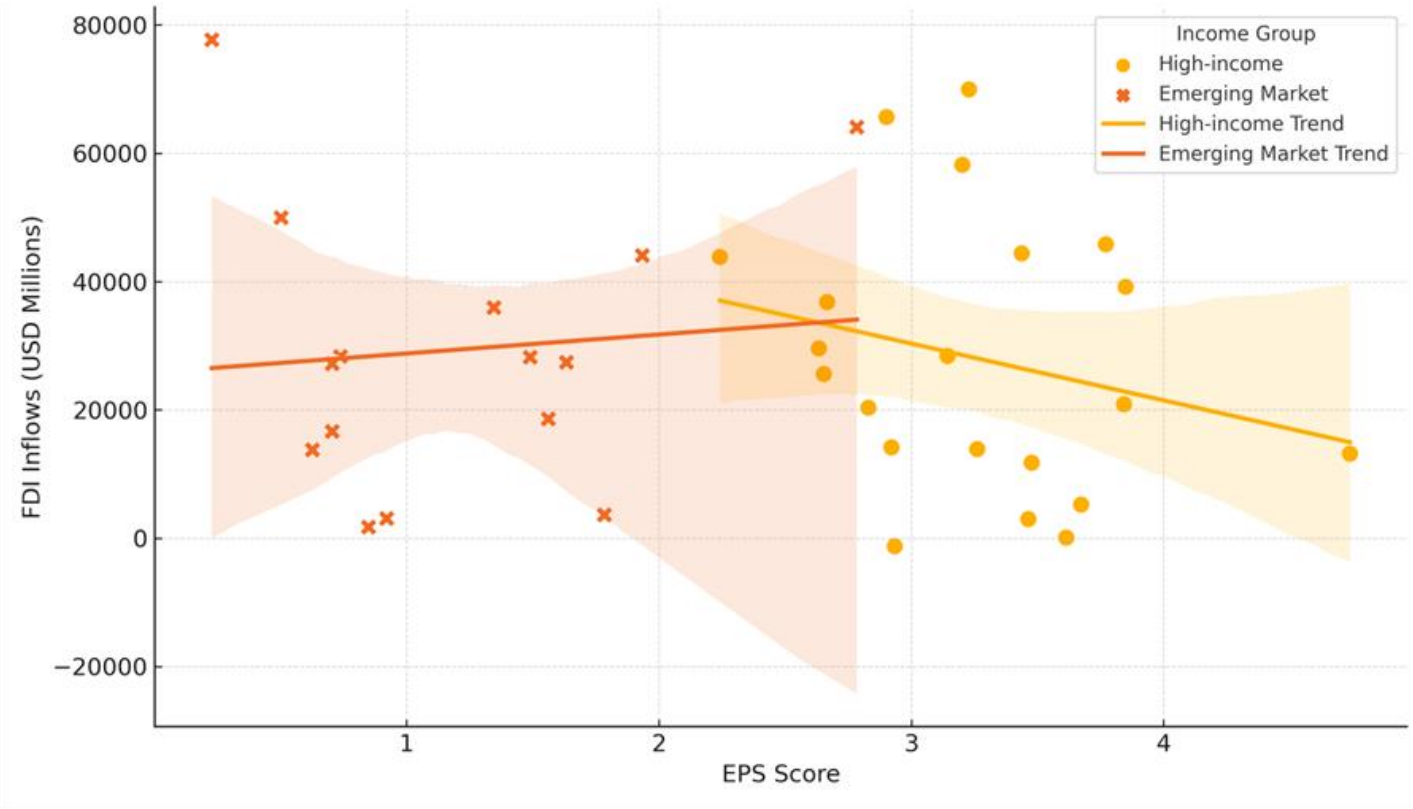

Figure 3: EPS vs. FDI Inflows by Income Group (2010, 2015, 2020)

The analysis underscores that stringent climate policies alone do not definitively drive or deter international investments. Policymakers should adopt multifaceted strategies that integrate clear regulatory frameworks, financial incentives, stable governance, and international cooperation. Countries that successfully balance ambitious environmental policies with robust investment attractiveness, such as Germany and Sweden, exemplify best practices through consistent regulatory clarity and targeted incentives that support innovation and sustainable technologies (Maghyereh et al., 2025; Chateau et al., 2024). For international investors, the findings recommend prioritizing nations that offer predictable and stable regulatory environments. Investments should focus strategically on sectors explicitly supported by governmental incentives, notably renewable energy and sustainable infrastructure, to optimize returns and support global sustainability objectives (Alsagr, 2023).

This review highlights that while robust environmental policies are critical for ecological sustainability, their isolated influence on international investments remains limited. Adequate climate finance and investment strategies must be nuanced, integrating clear regulatory frameworks, economic incentives, and global collaboration. Future research should further explore additional factors that influence investment decisions beyond EPS alone, thereby contributing to a more comprehensive understanding of sustainable investment dynamics.

References

Alsagr, N. (2023). How environmental policy stringency affects renewable energy investment? Implications for green investment horizons. *Utilities Policy, 83,* 101613. https://doi.org/10.1016/j.jup.2023.101613

Chateau, J., Jaumotte, F., & Schwerhoff, G. (2024). Global climate policy with differentiated carbon price floors. *Climate Policy, 24(4),* 515-528. https://doi.org/10.1080/14693062.2023.2205376

Chu, Z., Zhang, Q., Tan, W., & Chen, P. (2024). Assessing the impact of climate policy stringency on corporate energy innovation: Insights from China. *Energy Economics, 140,* 107959. https://doi.org/10.1016/j.eneco.2024.107959

Corrocher, N., & Mancusi, M. L. (2021). International collaborations in green energy technologies: What is the role of distance in environmental policy stringency? *Energy Policy, 156,* 112470. https://doi.org/10.1016/j.enpol.2021.112470

Maghyereh, A., Boulanouar, Z., & Essid, L. (2025). The dynamics of green innovation and environmental policy stringency in energy transition investments. *Journal of Cleaner Production, 487,* 144649. https://doi.org/10.1016/j.jclepro.2024.144649

Organisation for Economic Co-operation and Development [OECD] (2023). OECD Environmental Policy Stringency Index. Available at: https://data-explorer.oecd.org/vis?lc=en&df[ds]=dsDisseminateFinalDMZ&df[id]=DSD_EPS%40DF_EPS&df[ag]=OECD.ECO.MAD&dq=.A..&pd=%2C&to[TIME_PERIOD]=false

Satoğlu, E. B., & Salmon, J. R. (2024). Environmental policy stringency and foreign direct investment: A study considering the impact of country-income level. *Energy, 312,* 133403. https://doi.org/10.1016/j.energy.2024.133403

United Nations Conference on Trade and Development [UNCTAD] (2024). Global FDI flows database. Available at: https://unctadstat.unctad.org/datacentre/dataviewer/US.FdiFlowsStock

Yıldırım, M., Destek, M. A., & Manga, M. (2024). Foreign investments and load capacity factor in BRICS: the moderating role of environmental policy stringency. *Environmental Science and Pollution Research, 31(7),* 11228-11242. https://doi.org/10.1007/s11356-023-31814-9

Zhou, X. Y., Caldecott, B., Shrimali, G., & Zhang, H. (2025). An empirical analysis of climate and environmental policy risk, the cost of debt, and financial institutions' risk preferences. *Energy Economics, 144,* 108323. https://doi.org/10.1016/j.eneco.2025.108323