# GDP Impact Analysis: EU ETS Extension to Buildings and Road Transport

Our computable general equilibrium (CGE) model analysis reveals substantial macroeconomic impacts from extending the EU Emissions Trading System (ETS) to buildings and road transport sectors (Böhringer et al., 2022). We simulate three scenarios from 2021 to 2040: a business-as-usual (BAU) baseline, ETS1 (existing sectors only), and ETS2 (extended coverage from 2027). Under the BAU scenario, we project Italy's real GDP will grow from €1789 billion in 2021 to €2346 billion by 2040, representing an average annual growth rate of 1.44% (Fragkiadakis et al., 2020). The ETS1 scenario yields a 2040 GDP of €2301 billion with 1.34% average annual growth, resulting in a GDP cost of €45 billion (-1.92% reduction) compared to BAU. The more comprehensive ETS2 scenario produces a 2040 GDP of €2264 billion with 1.25% average growth, incurring a GDP cost of €82 billion (-3.51% reduction). These findings indicate that while carbon pricing mechanisms impose short-to-medium term economic costs, they remain essential policy instruments for achieving climate neutrality targets (Antimiani et al., 2016).

# References

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