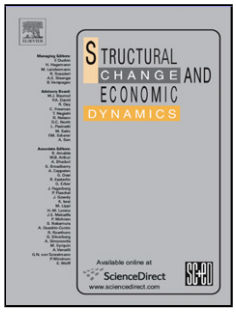

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INVESTIGATING PATTERNS OF CARBON CONVERGENCE IN AN UNEVEN ECONOMY: THE CASE OF TURKEY

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Highlights

- We check for dynamic patterns of convergence of carbon dioxide (CO_2) emissions across sectors.
- We use panel data econometrics to search for the determinants of convergence and divergence utilizing macroeconomic explanatory variables.
- Sectoral CO_2 emissions display conditional convergence mainly driven by the business cycle.
- Across sectors, high technology activities display convergence over time.
- A sectoral focus should be the main centre of emission reduction targets if the aims of 'greening' are to be taken seriously.

Turkey is known to suffer from severe volatility in its growth patterns, as well as from the uneven sectoral growth and employment. Volatile rates of emissions across sectors are further manifestations of this uneven structure. The purpose of this study is two-fold: first, we check for dynamic patterns of convergence of carbon dioxide (CO_2) emissions across sectors; and second, using evidence from panel data econometrics, we search for the determinants of these processes utilizing macroeconomic explanatory variables. We find that, based on various alternate criteria, CO_2 emissions display conditional convergence mainly driven by the business cycle. Furthermore, across sectors, high technology activities display convergence over time; and yet, medium technology sectors that constitute the bulk of the aggregate value added display either poorly convergent or divergent trends. These results reveal that much of the emissions convergence is driven by the business cycle rather than the workings of discretionary mitigation policy.