



“Gheorghe Asachi” Technical University of Iasi, Romania



INFLUENCE OF FOREIGN DIRECT INVESTMENT ON CARBON DIOXIDE EMISSIONS IN NEWLY INDUSTRIALIZED COUNTRIES: A PANEL ARDL-PMG APPROACH

Mehmet Metin Dam^{1*}, Ali Rıza Gökbnar², Bülent Yıldız¹, Şahin Bulut³

¹*Aydın Adnan Menderes University, Department of International Trade and Finance, Nazilli, Aydın, 09800, Turkey*

²*Department of Finance and Banking, Manisa Celal Bayar University, Manisa, 45000, Turkey*

³*Department of Economy, Aydın Adnan Menderes University, Aydın, 09000, Turkey*

Abstract

In this study, the effect of foreign direct investment on carbon dioxide emissions was analyzed using annual data for the 1990-2016 period for the newly industrialized countries. The study was analyzed using Panel Pooled Mean Group-Autoregressive distributive lag cointegration test and Dumitrescu and Hurlin panel causality test. As a result of the long-term analysis, the foreign direct investment, energy consumption and trade openness have a positive and significant impact on carbon dioxide emissions whereas economic growth has negative and significant impact on carbon dioxide emissions. It has been analyzed that a 1% increase in foreign direct investment increases carbon dioxide emission by 0.03%. According to Dumitrescu and Hurlin panel causality tests analysis results, a bidirectional causality relationship between energy consumption and carbon dioxide emissions; a unidirectional causality relationship from economic growth and trade openness to carbon dioxide emissions and from carbon dioxide emissions to foreign direct investment has been determined.

Key words: CO₂ emissions, foreign direct investment, NIC countries, PMG panel ARDL

Received: February, 2021; Revised final: February, 2022; Accepted: March, 2022; Published in final edited form: May, 2022

* Author to whom all correspondence should be addressed: e-mail: metindam@adu.edu.tr; Phone: +90 256 347 70 11; Fax: +90 256 214 66 87