**Determinants of CO2 Emission: A Global Evidence**

**Corresponding author:**

*Jeremiás Máté BALOGH*, assistant professor

Corvinus University of Budapest,

Department of Agricultural Economics and Rural Development

H-1093 Budapest, Fővám tér 8

E-mail: jeremias.balogh@uni-corvinus.hu

 *Attila JÁMBOR*, associate professor

Corvinus University of Budapest,

Department of Agricultural Economics and Rural Development

H-1093 Budapest, Fővám tér 8

E-mail: attila.jambor@uni-corvinus.hu

**Abstract**

Our article aims to establish a link between carbon dioxide emissions and its various reasons by employing a complex model comprising economic growth, industrial structure, tourist arrivals, foreign direct investment, energy use, trade, and agriculture globally. We have employed GMM models on a panel dataset comprising of 168 countries and 24 years to test our hypotheses. Results confirm the standard EKC hypotheses together with a positive role of nuclear energy and renewable energy production in reducing CO2 emissions, while energy from coal increased environmental pollution as expected. Regarding the role of agriculture, estimates showed that while agricultural development reduces, the impact of agricultural land productivity rather stimulates environmental pollution at global level. The extension of international tourism and trade can also enhance environmental degradation by rising CO2 in the atmosphere. Finally, we found that financial development reduced air pollution.

**Keywords: CO2 emission, growth, tourism, energy, agriculture, trade**

**JEL code: Q54, Q56**