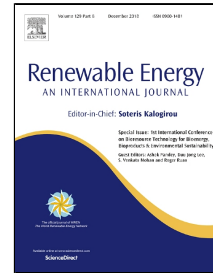


# Accepted Manuscript

Renewable energy consumption, carbon emissions, and development stages:  
Some evidence from panel cointegration analysis

Kim Hanh Nguyen, Makoto Kakinaka



PII: S0960-1481(18)31019-X  
DOI: 10.1016/j.renene.2018.08.069  
Reference: RENE 10496  
To appear in: *Renewable Energy*  
Received Date: 16 April 2017  
Accepted Date: 20 August 2018

Please cite this article as: Kim Hanh Nguyen, Makoto Kakinaka, Renewable energy consumption, carbon emissions, and development stages: Some evidence from panel cointegration analysis, *Renewable Energy* (2018), doi: 10.1016/j.renene.2018.08.069

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26

## **Renewable energy consumption, carbon emissions, and development stages: Some evidence from panel cointegration analysis**

Kim Hanh Nguyen<sup>1</sup>  
Makoto Kakinaka<sup>2</sup>

**Abstract:** Renewable energy consumption has been promoted to mitigate climate change problems under various schemes, such as the Kyoto Protocol and the Paris Agreement. A country's choice of energy resources depends on the balancing of economic growth and environmental degradation, which will be closely related to its development stage. This study examines how the relationship between renewable energy consumption and carbon emissions is associated with the development stage by applying a panel cointegration analysis to 107 countries during the period from 1990 to 2013. The analysis shows the clear differences between the groups of low- and high-income countries. For low-income countries, renewable energy consumption is positively and negatively associated with carbon emissions and output, respectively. However, for high-income countries, renewable energy consumption is negatively and positively associated with carbon emissions and output, respectively. These results have important implications for policymakers, since the discrepancies in these relationships mean that a country's renewable energy policies should be highly compatible with its development stage.

**Keywords:** Renewable energy consumption; carbon emissions; panel cointegration analysis.

---

<sup>1</sup> Department of International Business, College of Economics, Can Tho University, Campus II, 3/2 street, Ninh Kieu district, Can Tho city, Viet Nam. Email: nkhanh@ctu.edu.vn.

<sup>2</sup> Graduate School for International Development and Cooperation, Hiroshima University, 1-5-1 Kagamiyama, Higashi-Hiroshima, Hiroshima 739-8529, Japan. Tel: +81-82-424-6932. E-mail: kakinaka@hiroshima-u.ac.jp.

Download English Version:

<https://daneshyari.com/en/article/11001205>

Download Persian Version:

<https://daneshyari.com/article/11001205>

[Daneshyari.com](https://daneshyari.com)