

## Chapter 7

# An Empirical Study on Unique Sustainability Nexus: Evidence From Developed and Developing Nations

**Megha Jain**

*Daulat Ram College for Women, India*

**Aishwarya Nagpal**

*University of Delhi, India*

### **ABSTRACT**

*In order to understand the role of sustainability in the era of development, the broader purpose of the chapter is to examine the quantitative linkages between HDI and environmental performance for the selected developed and developing nations from 2002 to 2017. To test if the degree of economic expansion and standard of living has a systematic relationship with the level of environmental deterioration (existence of Kuznets curve hypotheses) in a country, the study employs fixed effects panel modeling on the selected country set. Several other macroeconomic and capital flow variables are considered in the extended empirical model development in order to supplement the holistic review of the situation. In addition, the study finds its novelty by considering relevant governance indicators in order to map the umbrella view. The findings of the panel analysis discover HDI to be positively associated with EPI, depicting higher human capital accumulation leading to lower environmental damage and better environmental performance. Additionally, the results confirm the deviation from EKC hypotheses in the context of developing nations while the same is established in case of developed nations.*

## **INTRODUCTION**

Sustainability is a strategic confrontation in the 21st era for the policy makers and the commercial and professional fraternity on the planet. Undeniably, impending climate change is tangible and the entire world is already facing its unfavorable impacts. Today, development agendas that promote food security, climate change policies and social protection, contributing to sustainable development are all of equal interest for most of the young researchers. Most of the growth strategies that primarily stimulate food insecurity, climate depletion, nation's fragility (refer Table 1 and 2) and social unrest add to unsustainable development. Both developed and developing nations are not untouched by this ongoing climatic sustainable economic growth challenge. Long since, westernized nations have realized that sustainable business growth could not be possible without environmental issues handling simultaneously. Unfortunately, developing nations are yet to realize the same and therefore are found more prone to face the impending unanticipated risk due to the same. With respect to economic growth, it is quite pertinent that emerging nations' planet face arduous challenge that stems from the aggravated third generation's concerns of population growth and reliance on non-fossil fuel based energy sources. Transition towards green growth and sustainability is indispensable. While there is evidence of declining energy consumption accompanying the development process, but for many of these countries, it remains unclear what path economic output will follow or whether it is likely to translate into rising CO<sub>2</sub> emissions over the long term. The climate policy is considered to foreplay for most of the nations to take place in their respective economic policies to ensure long term perpetual economic growth with limited reliance on fossil fuel based energy sources.

Both peace and stability have long been acknowledged as pre-requisites for sustainable advancement. The Fund for Peace, Fragile States Index (FSI) determines state fragility based on twelve factors - migration and displacement, demographic pressures, group grievance, uneven economic development, state legitimacy, human rights and factionalism. Not only does fragility hamper development, but insufficient or uneven development increases fragility.

Table 1 clearly depicts that the World's most fragile states status across the cluster of developed and developing nations. According to the recent scores and rankings, Nepal and Pakistan are found to be the most unbalanced states amongst the developing nations (the higher the ranking, the less stable the country is considered) followed by Bhutan, Sri Lanka, Russia and India. Brazil and South Africa are found to be less fragile among the developing nations (innermost circle in the radar chart, Fig 1A), confirming BRICS as the region's most dense with relatively less fragile states in comparison to South Asian Region. The fragility index for most of the developing nations is found to exceed 70. The radar chart (in the lower panel below the tables) confirms the same where the countries which are at the outermost circle of radar indicate more fragility (refer Fig 1A).

At the same time, developed nations are better off in terms of less fragility and vulnerability, in comparison to the most of the developing nations (refer Table 2). The fragility index for most of the developed nations is found to be less than 50. Amongst the developed nations, the most fragile nations (obtaining the highest FSI) are Italy and Spain, followed by Japan, USA and France. The radar chart (refer Fig 1B) confirms the above where Italy, Spain and Japan remain at the outermost circle of the radar with least fragility for nations like Australia and Canada.

Undoubtedly, implementing the Sustainable Development Goals in fragile framework should be a vital part of the push in order to reunite the global targets. One common concurrence in both the devel-

21 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/an-empirical-study-on-unique-sustainability-nexus/230587](http://www.igi-global.com/chapter/an-empirical-study-on-unique-sustainability-nexus/230587)

## Related Content

---

### Segmentation of Visitors to Contribute to the Sustainability of a Cultural Festival in an Emerging Country

Guillermo Antonio Dávila, Estefanía Sánchez-Cevallos, Tania-Jackeline Ochoa-Ochoa and Christian Viñán-Merecí (2025). *Promoting Sustainability in Psychosocial Travel Techniques* (pp. 1-24).

[www.irma-international.org/chapter/segmentation-of-visitors-to-contribute-to-the-sustainability-of-a-cultural-festival-in-an-emerging-country/357737](http://www.irma-international.org/chapter/segmentation-of-visitors-to-contribute-to-the-sustainability-of-a-cultural-festival-in-an-emerging-country/357737)

### Sustainable Environmental Service - Knowledge Management: A Case of Bangkok MSW Management

Pitchayanin Sukholthamanand Kunio Shirahada (2020). *Sustainable Infrastructure: Breakthroughs in Research and Practice* (pp. 709-729).

[www.irma-international.org/chapter/sustainable-environmental-service---knowledge-management/240868](http://www.irma-international.org/chapter/sustainable-environmental-service---knowledge-management/240868)

### Remittances and Economic Growth

Mustafe Pillana and Aida Tmava (2016). *International Journal of Sustainable Economies Management* (pp. 47-64).

[www.irma-international.org/article/remittances-and-economic-growth/176623](http://www.irma-international.org/article/remittances-and-economic-growth/176623)

### Value Creation and Commercialization in Insular Ecosystems

João Lopes, Luís Farinha and João J. Ferreira (2018). *International Journal of Social Ecology and Sustainable Development* (pp. 92-102).

[www.irma-international.org/article/value-creation-and-commercialization-in-insular-ecosystems/206196](http://www.irma-international.org/article/value-creation-and-commercialization-in-insular-ecosystems/206196)

### Picking the People up from Poverty: Urban Labour Market Deregulation Vs. Encouraging the Development of Micro-Enterprises

Abu Saleh Mohammad Sowad (2016). *International Journal of Sustainable Economies Management* (pp. 1-9).

[www.irma-international.org/article/picking-the-people-up-from-poverty/176619](http://www.irma-international.org/article/picking-the-people-up-from-poverty/176619)