

Effect of Income Inequality on Environment Performance Index

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Commands:

Please see the attached file at the end of the document to see all the commands used and for reproducibility.

Abstract

Abstract goes here.

Introduction

Income inequality is one of the biggest issues grappling both developing and developed countries alike. While most development agendas in the past have focused heavily on poverty, it has been clearly established that income inequality is the pressing issue now. The UN Sustainable Development Goals have also put a strong emphasis on income inequality. Increased urbanization and growing reliance on international trade have increased even further the differences between the poor and the rich and through globalization it has become more visible to all. Inequality has been considered the cause of many social, political and economic crisis around the world. Plethora of research on inequality show that it affects education, healthcare (Lynch et al. 2000), the economy, and even voter turnout and elections in many countries. However, the focus of our research won't further explore any of these social or political issues. We aim to research the effect of inequality on environment. We find this interesting because climate change is one of the biggest threats of our generation, but it is very much disconnected with other social and economic issues that scholars usually talk about. Showing a relationship between inequality and environment can be extremely important to create a better roadmap for development, since policymakers may find better approaches to solve these issues if they are somehow related.

Methodology

The methodology for this paper will be divided into two broad sections:

Theoretical analysis: We will analyze scholarly sources that have influenced the discussion on the relationship between inequality and environment. We will consider various academic sources, reports by international non-governmental organizations and their findings. The United Nations has several resources on this topic but most are opinion pieces and case studies. Therefore, this gives us the perfect premise to analyze scientific empirical research on the topic. This leads us to our main methodology.

Statistical analysis: To do a statistical analysis of the issue, it is extremely important to locate data sources. The World Bank Database has all the indicators necessary to do a thorough analysis of the topic. Some of the indicators used to measure inequality are: Gini Index, Palma ratio, etc. We will do a panel data regression with the Gini index as an independent variable and emissions of CO2 per capita as a dependent variable. We could also control for GDP per capita, to test if the relationship between the two is determined by the level of income. We will use various descriptive and inferential statistics and use plots, graphs and charts to show various relationship that the model may predict.

Literature Review

A few scholars have already connected the dots and analyzed the relationship between inequality and environment. Nobel Laureate Joseph E. Stiglitz argues that inequality can contribute to environmental degradation because the poor tend to have less interest in pursuing policies designed to protect the environment and therefore good environment policies will be less supported. (Conca and Dabelko 2014) He also argues that the relationship goes both ways in the sense that good environmental policies will help build social cohesion and reduce inequality. (Conca and Dabelko 2014) J. Timmons Roberts believes that global warming is all about inequality based on who created it and who suffers from it the most. (Roberts 2001) Nazrul Islam, a Senior Economic Affairs Officer at the Development Policy Analysis Division of UN DESA provides an analytical framework to explain negative correlations between inequality and quality of environment and suggests that reducing inequality will help protect the environment. (Islam 2015) He adds that gender inequality is another dimension that affects environment thus providing us even more reason to examine this case. (Islam 2015) Wilkinson and Pickett argue that equal societies are better in terms of social cohesion and public spiritedness, which they link to being fundamental in responding to environmental issues. (Wilkinson and Pickett 2011) They show statistically that more equal countries recycle a higher proportion of their waste, a clear indication of how inequality affects the environment. (Wilkinson and Pickett 2011) Sternreview report asserts that climate change is an externality whose cause and consequence both involves deep inequalities. (Stern 2007) Several other scholars have vigorously analyzed environment and human security (Barnett and Adger 2007), climate change in poor and unequal countries (Gordon 2007), inequality and resource management (J.-M. Baland and Platteau 1999), inequality and environmental sustainability (J. Baland, Bardhan, and Bowles 2007), and inequality as a cause of environmental degradation (Boyce 1994) - all of which provide ample theoretical basis to continue this research.

Operationalization

Operationalization goes here.

Statistical Analysis

Statistical Analysis goes here.

Robustness

Robustness tests go here.

Final Analysis

Final Analysis goes here.

Conclusion

Conclusion goes here.

Bibliography

- Baland, J.M., P.K. Bardhan, and S. Bowles. 2007. *Inequality, Cooperation, and Environmental Sustainability*. Russell Sage Foundation. <https://books.google.de/books?id=w4t1agamclQC>.
- Baland, Jean-Marie, and Jean-Philippe Platteau. 1999. "The Ambiguous Impact of Inequality on Local Resource Management." *World Development* 27 (5): 773–88. doi:[http://dx.doi.org/10.1016/S0305-750X\(99\)00026-1](http://dx.doi.org/10.1016/S0305-750X(99)00026-1).
- Barnett, Jon, and W Neil Adger. 2007. "Climate Change, Human Security and Violent Conflict." *Political Geography* 26 (6). Elsevier: 639–55.
- Boyce, James K. 1994. "Inequality as a Cause of Environmental Degradation." *Ecological Economics* 11 (3): 169–78. doi:[http://dx.doi.org/10.1016/0921-8009\(94\)90198-8](http://dx.doi.org/10.1016/0921-8009(94)90198-8).
- Conca, K., and G. Dabelko. 2014. *Green Planet Blues: Critical Perspectives on Global Environmental Politics*. Westview Press. https://books.google.de/books?id=vb8/_BAAAQBAJ.
- Gordon, Ruth. 2007. "Climate Change and the Poorest Nations: Further Reflections on Global Inequality." *U. Colo. L. Rev.* 78. HeinOnline: 1559.
- Islam, S. Nazrul. 2015. "Inequality and Environmental Sustainability." UN Department of Economic; Social Affairs Working Paper. http://www.un.org/esa/desa/papers/2015/wp145_2015.pdf.
- Lynch, John W, George Davey Smith, George A Kaplan, and James S House. 2000. "Income Inequality and Mortality: Importance to Health of Individual Income, Psychosocial Environment, or Material Conditions." *British Medical Journal* 320 (7243). BMJ Publishing Group: 1200.
- Roberts, J Timmons. 2001. "Global Inequality and Climate Change." *Society & Natural Resources* 14 (6). Taylor & Francis: 501–9.
- Stern, Nicholas Herbert. 2007. *The Economics of Climate Change: The Stern Review*. Cambridge University Press.
- Wilkinson, Richard, and Kate Pickett. 2011. *The Spirit Level: Why Greater Equality Makes Societies Stronger*. Bloomsbury Publishing USA.