

RELATION BETWEEN CLIMATE AND INCOME

Charu Yadav
Kurukshetra University, Haryana

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ABSTRACT

Recent macro-econometric studies estimating the impact of country-level temperatures on GDP growth rates have drawn considerable attention to the impact of climate change on economic growth. Different social groups are affected differently by changes in climate factors. It is usually determined by the extent to which a given climate period affects social welfare during that time period in order to assess the economic impact of climate change. We'd like to know if there's a relationship between weather and income, as well as its sign and magnitude, and whether projected temperature increases will hinder our economies' growth potential. Compared to a scenario without warming, our results suggest that the Gini index will increase by three to four points. On the basis of a cross-national social survey, this paper also examines the relationship between national wealth and perceptions of climate change.

Keywords: - Climate, Income, Growth, Change.

I. INTRODUCTION

There is still much to learn about how climate change will impact economic outcomes, populations, and demographic groups. A rise in temperatures has been shown to have an impact on economic growth, annual income and labour productivity as well as human capital as well as demography, migration and food security, among other things Overall, these studies seem to suggest

- a) climate change is indeed an important factor in determining the future of human societies, and
- b) the magnitude and direction of climate change impacts vary by geographical and socioeconomic conditions.

It has been shown, for example, that historical temperature increases have a significant negative impact on economic growth in poor countries.

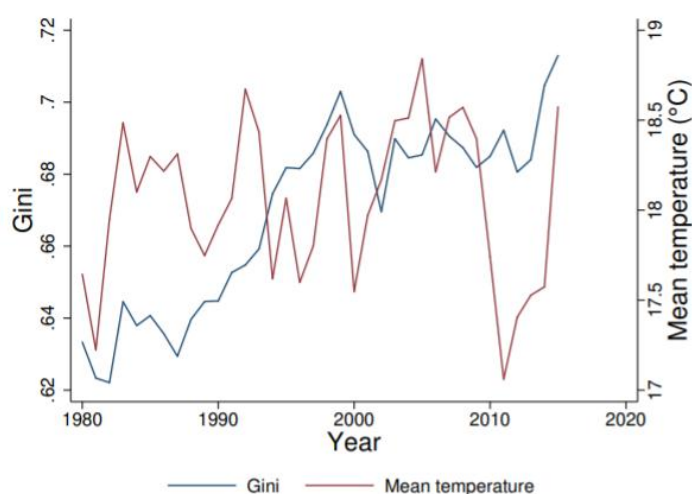
Conditions like rainfall, sunshine hours, temperature, relative humidity and flood or drought duration are used to express and describe climate. In addition, the impacts of climate change are not confined to a particular geographic area or time period Aspects such as soil erosion, chemical poisoning, and nuclear waste pose long-term threats to national and international security, while others affect daily quality of life, such as water pollution and food shortages. In other words, climate change affects different areas, sectors, and stakeholders in different ways.

We are interested in knowing how the economic system is affected by environmental conditions in light of a likely increase in global mean surface temperature. We'd like to know if there's a relationship between weather and income, as well as its sign and magnitude, and whether projected temperature increases will hinder our economies' growth potential. There are many questions and concerns that must be addressed in the very near future due to the gradual warming of the system, which is known as climate change. It is necessary to respond to most of them in a categorical, scientific manner. In this paper, we are primarily concerned with this issue.

II. RELATION BETWEEN TEMPERATURE AND INEQUALITY IN INDIA

As a result of climate change, communities' welfare and inequality have been found to decrease. Temperature has a negative impact on income, according to a study of sub-national data from 12 countries in the Americas. The climate change, according to studies of economic inequality at the global level, exacerbates the disparity between countries. Only limited evidence has been found regarding within-country inequality and its relationship to weather/climate for the majority of these studies.

According to Figure 1, the average annual temperature in India has risen steadily over time, while the Gini coefficient and average annual temperature were plotted on a box plot (right panel) based on five waves of survey data.



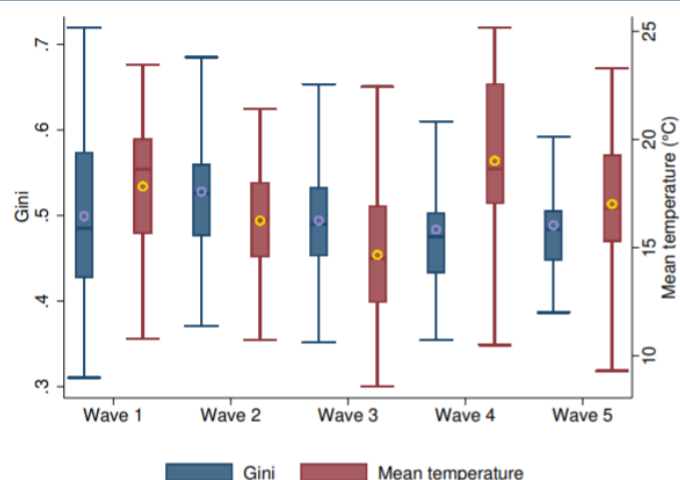


Figure 1: Inequality (NIDS) and annual mean temperature (ERA5)

III. NATIONAL WEALTH AND CLIMATE CONCERN

Increasing environmental concern in wealthy societies, according to Ronald, is due to national wealth. With the development of societies and the accumulation of wealth, Inglehart argues, people's values have gradually shifted towards post-materialism, making advanced industrial societies more environmentally conscious and active than developing societies.

Recently, researchers found that the public in wealthier countries is more supportive of environmental protection. This hypothesis assumes that there is a positive relationship between a country's economic well-being and the level of environmental wealth amongst its citizens. As a result of this hypothesis, the Inglehart (1990) theory of a positive wealth effect is supported. Recent empirical studies have provided evidence that climate change is a concern.

However, there have been reports of counter-evidence, and the post-materialist hypothesis has been attacked. Environmental degradation is a major concern in lower-income countries,

according to these cross-national studies. Environmentalism, environmental protection, and public support for environmental protection are not limited to wealthy societies, as post-materialist assumptions would have us believe.

The evidence for this alternative theory is inconclusive at this point. People in lower-income countries are more likely than those in more-affluent societies to see environmental problems as a serious threat, according to Dunlap, but the opposite is true in the other survey. However, Adeola (1998, p. 350) suggests that citizens of wealthier nations are more willing to contribute financially to environmental protection. The evidence reported by Gelissen (2007, p. 411) is also contradictory.

The data sources and survey waves used by these authors are also different, and the countries included in these surveys are also different. As an example, countries with higher incomes are overrepresented in the International Social Survey Programme (ISSP) 2010 Environment Module, while countries with lower incomes are overrepresented in the World Values Survey 2010. (WVS). Few

studies have attempted to distinguish between concepts and samples, and the results may vary depending on which combination of countries is included in the analysis. In terms of how national wealth contributes to cross-national variations in environmental concern, there is no consensus among researchers.

This paper argues that climate change concern should be understood as a function of at least two different attributes, which previous studies have implicitly or explicitly conflated. A distinction is made between perception of issue importance, which involves a judgement on the priority of a given issue, and perception of danger, which connotes a sense of insecurity and involves an assessment of the intensity of a potential threat and likelihood of the risk occurring.

This discriminatory treatment is supported by a number of national studies. Most Americans are concerned about global climate change, according to Leiserowitz (2005, p. 1440), but the majority of the American public does not consider climate change to be an imminent or high-priority danger. As Norgaard (2011) points out, global warming was both well-known and unimaginable among highly educated Norwegians at the same time. Despite being aware of climate change, the citizens of these highly developed economies do not appear to be concerned about its potentially catastrophic consequences. Less developed countries' residents may give climate change less importance than other social goals, but they are more likely to feel insecure and describe it as a serious threat to their lives. As a result, perception of issue priority does not follow perception of risk, contrary to what might be expected. Although belief in anthropogenic climate change did not change over the course of a five-year period, perceptions of climate change severity did. It

is our belief that wealth is related to perceptions of issue importance and risk in different ways, which we expand upon in this paper.

National wealth is hypothesised to have a negative correlation with risk perception in the proposed approach. An informed ignorance of a known threat may be the cause of the wealth effect. They argue that some citizens of wealthier countries feel ambivalent or guilty about their contributions to climate change because they are aware of their national contributions. Even though they are generally aware of the causes and consequences of climate change, people in fossil fuel-dependent countries are highly sensitive to economic impacts associated with mitigating climate change by reducing the use of fossil fuels. They will misinterpret or reject information or beliefs that contradict their existing values as a result of the conflict between their ideologies. To avoid the emotional and psychological entanglements and identity conflicts that arise from the knowledge that they contribute to the 'wrong thing', i.e. producing excessive amounts of greenhouse gases, richer communities are more likely to downplay the reality or enormity of climate change in order to avoid this. As a result of being aware of one's own responsibility for the problem, one's risk perception may be reduced.

Other studies have found a positive correlation between climate change concern and national wealth, but these explanations do not fully explain the relationship. A lack of concern about danger should be a result of wealth accumulation if it contributes to low perception of danger. According to the following analysis, there is no coherence. What does it mean to say that wealthier societies downplay climate change risks?



Issue importance and risk perceptions should be treated as two separate concepts. We propose that they are affected in different ways by changes in their wealth levels. A country's wealth is negatively correlated with risk perception while its importance is positively related to national wealth. The ability to adapt to climate change may also be a factor in the lower perception of danger in wealthier countries, whose citizens may feel more protected and be less concerned about climate change's consequences. Those claims will be explored in the following sections.

IV. CONCLUSION

Unemployment and poverty are also impacted by climate change. A conceptual link between inequality and poverty is examined and applied to India, a country plagued by pervasive inequality and widespread poverty. A 1oC rise in temperature in a given year, according to their estimates, reduces economic growth by about 1.3 percentage points. Rich countries' economic growth is not affected by temperature changes in a significant or observable way. As a result of using country-level data, the effect of temperature on income may be completely wiped out.

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Charu Yadav
