POLICY DIALOGUES

The Impact of Climate Variability on Inequality: Evidence from Vietnam

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MAIN MESSAGE

Climate instability in Vietnam leads to reduced incomes and greater inequality, especially in areas most affected by climatic events related to El Nino, such as the Central Highlands, Southeast and Mekong Delta regions.

New research finds that ethnic minority, rural, and poor households are the most affected groups in the population. In addition, rural and ethnic minority households might be using remittances and transfers as insurance against climate hazards during periods of higher climate variability.

The study notes that climate change and climate variability may have disproportionately larger effects on disadvantaged populations in places like South East Asia with high risks of climate hazards, and potentially lower ability to absorb and recover from the damage.

The authors investigate whether climate variability in Indonesia and Vietnam has any regressive effects on income stability and inequality, unpacking which household characteristics drive the relationship.

CONTEXT & MOTIVATION

Climate variability in Vietnam has been remarkable in the past 20 years. In 2015/16, climatic events related to El Nino caused extensive droughts in many provinces, especially the Central Highlands.[1] Mountainous areas in the northern regions are also increasingly experiencing devastating floods; and with more than 70% of the population living in coastal areas and low-lying deltas, Vietnam is highly exposed to riverine and coastal flooding.

Previous research suggests that the biggest losses are faced by agriculture, which is the biggest income source for poorer people in Vietnam: the livelihoods of 96% of the poor population depend on it. Other studies suggest that agriculture is not the only sector affected by climate variability.

The country's rapid development has moved many people out of farm activities to wage and non-farm employment. Some are the most marginalized and disadvantaged, such as women and ethnic minorities or migrants often employed in construction activities as wage employees far from home. Their living and working conditions are precarious and highly exposed to climatic conditions. This coupled with scarce political representation, marginalization, and social norms often hinder their capacity to access a diversified set of productive assets, improve their economic status and reduce their vulnerability to climate hazards.

The study examines whether climate variability has a regressive effect and, if so, among which households in Indonesia and Vietnam.[2]

METHODS

The authors analyze the direct effects of annual and seasonal temperatures on income and income inequality over time. They explore this for each country's population as a whole and also investigate how these impacts change for the most vulnerable and marginalized groups.

They analyze nine rounds (2002-2018) of the provincially, regionally, and nationally representative Vietnam Household Living Standard Survey (VHLSS),

Authors Grazia PACILLO, Cuong NGUYEN VIET, Silvi HAFIANTI, Kseniya ABANOKOVA , Hai-Anh DANG, Achicanoy Estrella HAROLD ARMANDO, Peter LADERACH

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Themes Economics; Inequality; Climate; Poverty

Find out more about this project: *www.afd.fr/en/carte-des-projets/climate-variability-indonesia-and-vietnam*

RESULTS

The analysis shows that income growth for Vietnam's poorest, agricultural, rural and ethnic minority households has been much slower than the rest of the population.

The divide between the richest and poorest has significantly increased since 2002 especially in regions more densely populated by ethnic minorities, such as Northern mountainous regions (+12%) and Central Highlands (+14%) (Figure 1).

The study shows that climate variability can explain these regressive trends as incomes have reduced and inequality increased mostly in the regions affected by El Nino events (the Central Highlands and Mekong Delta).

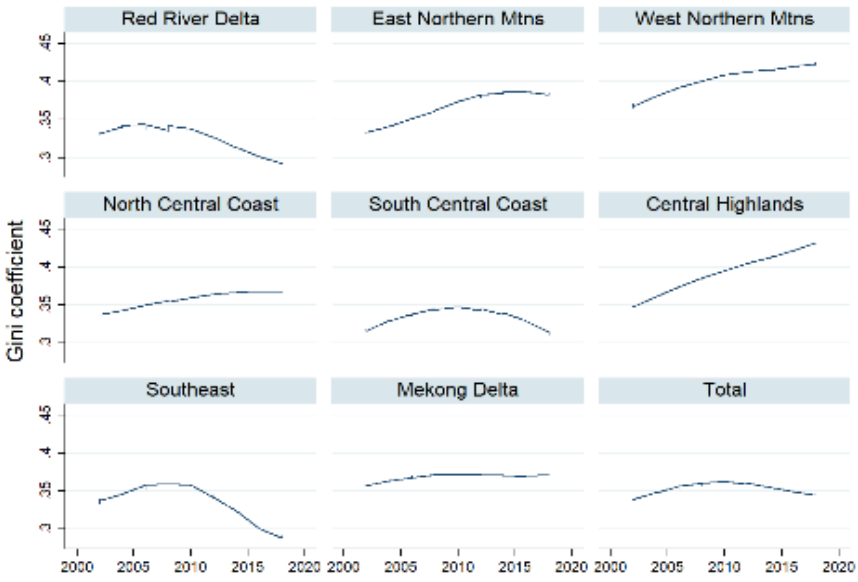
Ethnic minority, rural, and farming households are bearing the biggest burden of these impacts and have a lower probability of escaping poverty.

Short term coping capacities have, however, been adopted. This study suggests that rural and ethnic minority households use transfers and remittances as insurance in times of higher climate variability. These solutions are, nonetheless, unable to protect households in the long term, especially for farming households.

In addition, ethnic minority households in Vietnam tend to bear a larger burden of changes in climatic conditions.

The marginalization and vulnerability of ethnic minority has been extensively documented and this study confirms the need to design *ad-hoc* solutions for these groups in light of increasing climate impacts.

Figure 1: Historical trends in the distribution of Gini coefficients across Vietnamese regions



Source 1 Authors' calculation using VHLSS data (2002-2018)

RECOMMENDATIONS

- Vietnam has low capacity to provide timely support to groups most vulnerable to climate hazards. The government should aim for real-time monitoring of climate impacts across rural and agricultural households.
- The use of transfers and remittances as a coping strategy is not sustainable. Government ministries should work with national and international research institutes to encourage adoption of longer-term approaches, such as 'climate-smart' practices and technologies, especially by rural and agricultural households.
- Agriculture is not the only sector that is vulnerable to climate variability. Poor and marginalized people are increasingly employed in construction, which is as exposed to climatic conditions as farming. Providing enhanced social protection and formalizing the employment status of the least skilled, poorest and most marginalized groups in this sector would enhance their capacity to respond to climate hazards.
- Since ethnic minorities and migrant workers are bearing the biggest burden of climate variability, policy action should be tailored to their needs.

[1] FAO, (2016). 'El Nino' Event in Vietnam: Agriculture Food Security and Livelihood Needs Assessment in Response to Drought and Salt Water Intrusion. Food and Agriculture Organization of the United Nations, Rome.

[2] Pacillo, G. et al. (2020). Who bears the burden of climate variability? A comparative analysis of the impact of weather conditions on inequality in Vietnam and Indonesia, AFD Research Papers No.147, 2020.

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Agence française de développement (AFD)
5, rue Roland Barthes | 75012 PARIS | France

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