

Review of: "Weathering changes – livelihood adaptation to weather shocks in rural India by disadvantaged social groups"

Liliana Paz Betancourt

Potential competing interests: No potential competing interests to declare.

Weathering changes- livelihood adaptation to weather shocks in rural India by disadvantaged social groups.

Reviewed by: Liliana Patricia Paz Betancourt

In its purpose of determining the existence of a causality between slow-evolving climate change with the migration of rural households in India and its impact on less favored population groups, the author incorporates analysis variables such as SPEI, access to networks social issues and the effect of government programs on migration, focusing on migration as an adaptation strategy based on livelihood diversification.

The source of the climate data, the analytical model and the statistical processing applied are highlighted, which determine consistency and robustness in the research. The use of the SPEI as a complete indicator correctly differentiated between agricultural drought (SPEI6) and hydrological drought (SPEI18), expressed through its interannual variability in the period 2000-2011, allows the drought periods and their intensity to be clearly identified according to the scale used. At the same time, it offers analytical coherence with the IDHS survey, used as a database of social variables.

Despite the above, causality is not established between slow-developing climate change due to drought and migration, limiting the achievement of one of the four proposed objectives, it being necessary to highlight that migration is of multifactorial origin, requiring the availability of socioeconomic and cultural databases that allow new variables to be incorporated into the analysis and include specific questions about the phenomenon studied.

The spatial resolution differentiated by district allows us to visualize the climate conditions and the behavior of SPEI 6 and SPEI 18, evidencing a regionalization of the distribution of the indices, an aspect that was not explored in depth. It would have been interesting to correlate this differentiated distribution with the number of migrants, proportion of the population in the 3 classes studied and access to the government program, providing greater elements of analysis.

The differential relationship found between the 3 population groups with migration is highlighted, migration influenced by agricultural drought events, as well as the incidence of the quality of social networks, access to government programs and the cultural limitations of each group, which determines that disadvantaged groups are the ones who face greater barriers to developing adaptation strategies. The above, in addition to making this problem visible, highlights the need to focus government policies and programs on them, seeking to guarantee equity in the distribution of adaptation measures to climate change with socially differentiated approaches.

The study analyzes the National Rural Employment Guarantee Scheme (NREGS) and its impact on migration, concluding that it effectively transfers some of the risks associated with rainfall shortage shocks away from households, allowing them to diversify their livelihoods. However, the study does not determine with its own data whether migration can be constituted as an effective livelihood diversification strategy. It would have been interesting to have related other variables from the IDHS survey to determine if this is the approach that the author wishes to support in the article.

The article refers to previous studies to support the context, results and conclusions, which adds credibility to the analytical approach, however, it is advisable to refer to sources from recent years that allow, for example, updating the data on the rural population of India. according to the World Bank, the CLlimate Change Performance Index for India.

In summary, this research is considered of great importance in contributing to our understanding of how households in rural India respond to slow-evolving climate change in terms of migration decisions using appropriate modeling techniques and relevant variables. It underlines the role of social identity, social networks and poverty alleviation programs in shaping these responses. These findings have implications for policymakers seeking to design effective strategies for climate adaptation and poverty reduction in the context of developing countries like India. Although a causal relationship between slow-evolving climate change and migration due to drought events is not found, it does determine the sensitivity of migration to changes in local climate patterns, constituting an advance in the analysis of the phenomenon.