# Extreme weather events and high Colombian food prices: A non-stationary extreme value approach

Download Keep in mind
The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHOR OR EDITOR Melo-Velandia, Luis Fernando Parra-Amado, Daniel Orozco-Vanegas, Camilo Andrés
The series Borradores de Economía (Working Papers on Economics) contributes to the dissemination and promotion of the work by researchers from the institution. On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. This series is indexed at Research Papers in Economics (RePEc). The opinions contained in this document are the sole responsibility of the author and do not commit Banco de la República or its Board of Directors.

Publication Date: Tuesday, 4 of January 2022 Abstract Given the importance of climate change and the increase of its severity under extreme weather events, we analyze the main drivers of high food prices in Colombia between 1985 and 2020 focusing on extreme weather shocks like a strong El Niño.We estimate a non-stationary extreme value model for Colombian food prices. Our findings suggest that perishable foods are more exposed to extreme weather conditions in comparison to processed foods. In fact, an extremely low precipitation level explains only high prices in perishable foods. The risk of high perishable food prices is significantly larger for low rainfall levels (dry seasons) compared to high precipitation levels (rainy seasons). This risk gradually results in higher perishable food prices. It is non linear and is also significantly larger than the risk related to changes in the US dollar-Colombian peso exchange rate and fuel prices. Those covariates also explain high prices for both perishable and processed foods. Finally, we find that the events associated with the strongest El Niño in 1988 and 2016 are expected to reoccur once every 50 years.

Fuente: https://www.banrep.gov.co/en/extreme-weather-events-and-high-colombian-food-prices-non-stationary-extreme-value-approach