
[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*). 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

Rios, David

Perez, Alex

Carabali, Jaime

Meneses, Luis

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:

Wednesday, 28 February 2024

Abstract

We study the effect of adverse weather events on retail electricity prices. We focus on the Colombian case given that this market is hydro-dominated and exposed to the El Niño phenomenon, which causes a notable reduction in the hydrological component of electricity generation. We design a structural model to understand the formation of retail prices. We then use the model to study how prices respond to severe weather events. The results show that, under normal conditions, retail firms have control over the pass-through of wholesale cost shocks to retail prices. However, we do not find evidence that the pass-through differs when El Niño is present. This implies that El Niño's effect on retail prices runs through its effect on wholesale costs exclusively. We find evidence that retail prices increase in the presence of El Niño, due to the increase in spot prices in the wholesale electricity market.