



Working Papers on Economics - Climate Risk and Access to Credit: Evidence from Colombian Potato Growers

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.

AUTHORS AND/OR EDITORS Bohórquez-Peñuela, Camilo Gáfaró-González, Margarita María Guzmán-Finol, Karelys Pérez-Libreros, Alex Fernando

The series 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: Friday, 14 of March 2025 **Abstract**We study both the ex post and ex ante effects of climate risk on credit access for small producers of potato in Colombia. First, we explore the ex post effects that come after a drought, a climate shock that affects the production value of the crop. Second, we investigate the ex ante effects through the uncertainty surrounding future climate conditions, using rainfall variability as a proxy for that uncertainty. Finally, we analyze how these two effects interact to influence farmers' use of credit as a coping mechanism for climate risk. We show that credit access (amount disbursed and number of borrowers) increases after adverse weather shocks. However, this is only true under conditions of low rainfall variability and for credits backed by a public-funded guarantee system. Moreover, we find that rainfall variability decreases disbursements of loans with private guarantees. These results suggest that risk exposure is a relevant constraint to credit access and highlight the potential effectiveness of public guarantees in mitigating these risks.

Estimates indicate a positive relationship between the duration of drought periods and the total credit granted and the number of beneficiaries at the municipal level. This relationship holds for credits whose debtors report high levels of assets or have the backing of a public guarantee fund.