

Linkages Between Climate Change, Agricultural Productivity, Food Security and Economic Growth

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Abstract : This study analyzed the relationships between Tunisia's economic growth, food security, agricultural productivity, and climate change using the ARDL model for the period from 1990 to 2022. The ARDL model reveals a positive correlation between economic growth and lagged agricultural productivity. Additionally, the vector autoregressive (VAR) model highlights the beneficial impact of lagged agricultural productivity on economic growth and the negative effect of rainfall on economic growth. Granger causality analysis identifies unidirectional relationships from economic growth to agricultural productivity, crop production, food security, and temperature variations, as well as from temperature variations to crop production. Furthermore, a bidirectional causality is established between crop production and food security. The study underscores the impact of climate change on crop production and suggests the need for adaptive strategies to mitigate these climate effects.

Keywords : economic growth, agriculture, food security, climate change, ARDL, VAR

Conference Title : ICAACS 2024 : International Conference on Agriculture, Agronomy and Crop Sciences

Conference Location : Tunis, Tunisia

Conference Dates : October 24-25, 2024