

Is there a Nexus between Rainfall, Food Inflation and GDP of India?

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Abstract

This study seeks to gauge the linkage between rainfall, food inflation, and GDP of India. This study adopts the descriptive research design. The study covers two decades of data starting from 2000-01 to 2019-20. Descriptive statistics and cross-correlation have been applied. The study observed an all-time high rainfall in 2019-20, accompanied by high food inflation and the prevalence of persistently high inflation for many years. This study argues that the positive impact of higher rainfall on food inflation is felt only after 5 to 7 years and the negative impact of rainfall on GDP. Based on the revelation of this research, food inflation can be predicted by taking into account the rainfall received during the last seven years. Relying on these assessments, appropriate policies can be carefully drafted to manage the ill effects of high food inflation in the short & long run. This investigation observed that the recent agricultural policy initiatives by the Government of India.

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Keywords : Cross-Correlation; Food Inflation; GDP; Nexus; Rainfall; India

I. Introduction

THE INDIAN AGRICULTURE sector is rainfall-dependent (Kumar, Ashrit, Deshpande and Hansen, 2004; BIRTHAL, Negi, Aggarwal and Khan, 2014), and agriculture contributes 19.9 percent to the GDP of India in 2020-21 (GOI, 2021) while creating direct and indirect employment for 58 percent of total population. Though agriculture is the leading employment-generating sector, its contribution to GDP is declining continuously since its independence (Agarwal, 2014). Starting from 1947, the year of its

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1990s led to massive growth in the service sector. This study positively assumes that the recent agricultural policy initiatives by the Government of India focusing on promoting technology adoption will one day insulate the Indian agricultural sector from rainfall shocks (from both extreme events, namely, the drought and flood), check the prevalence of persistent long-period food inflation and ultimately, decouple the economic growth from the dependence of rainfall.

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