

Doubling Farmers' Income:

A Review of Progress

How Risky is Farming in India?

There is no denying that Agriculture is an inherently uncertain and precarious source of livelihood. The Economic Survey 2016-17 had identified six different types of risks in agriculture along with their key causes (Department of Economic Affairs [DEA] 2017):

- **Production Risks:** Causes include pests, diseases, and shortage of inputs like seeds
- **Weather and Disaster-related Risks:** Causes include low irrigation coverage, droughts, floods, hailstorms, and unseasonal rains
- **Price Risks:** Primarily caused due to lower than remunerative selling price
- **Credit Risks:** Causes include heavy dependence on informal credit sources, and lack of capital
- **Market Risks:** Causes include changes in domestic and international demand/supply
- **Policy Risks:** Causes include uncertain government policies and regulations

All these risks, in isolation or combination with each other, have the potential to make farming households vulnerable to economic insecurity. A key indicator that reflects this vulnerability is the extent of the farmers' indebtedness. This is because borrowing credit or loans is the most common response to alleviate economic shocks. Policy measures aimed at making agriculture less risky for the average farmer could lead to better incomes, increase profits, and reduce indebtedness in the long run (DEA 2017).

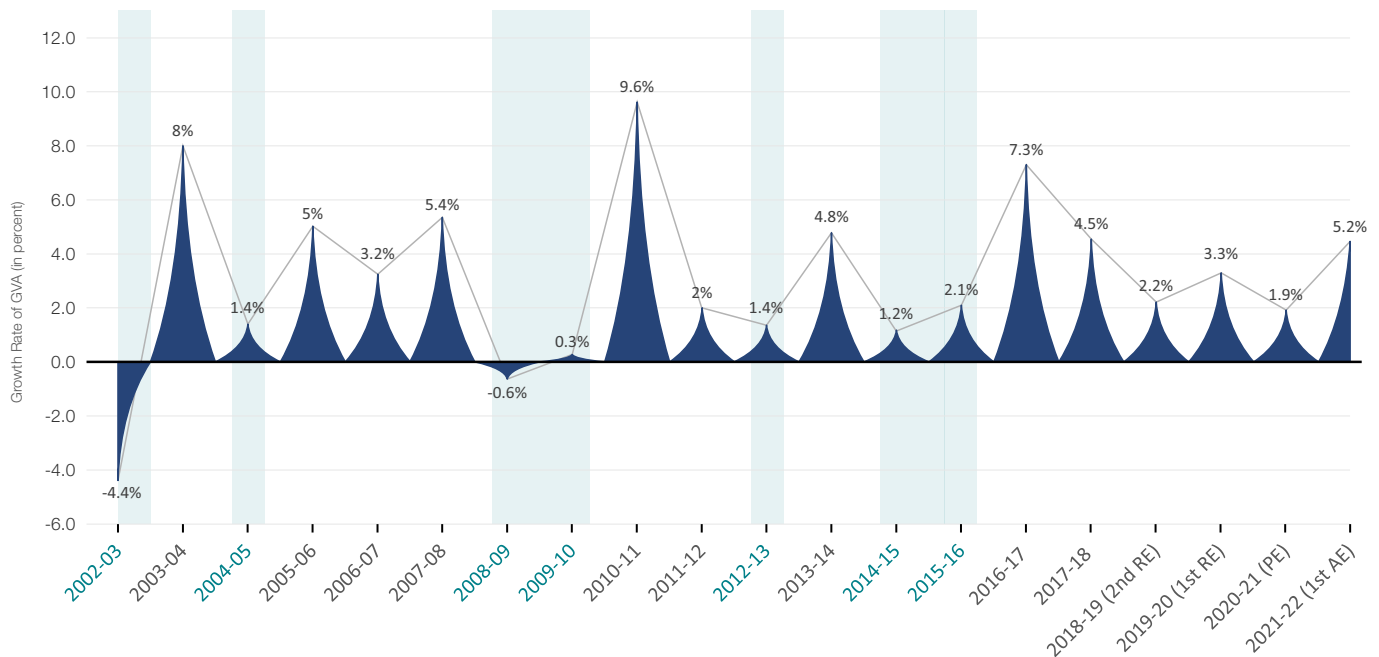
This is SPRF's second factsheet reviewing the progress of the central government's Doubling Farmers' Income [DFI] initiative. The factsheet seeks to review weather-based risk in agricultural practice which, alongside market risks, is the most prominent type of risk (Committee on Doubling Farmers' Income [DFI] 2018). This is because weather anomalies are beyond human control. Human-made systems can only respond by either correctly predicting such inconsistencies or responding to their detrimental impacts.

To gauge whether agriculture has become less risky, the factsheet looks at Gross Value Added [GVA] from agriculture and data on indebtedness among farmers. Since crop insurance schemes form the majority of central government's response to manage risks in agriculture, the factsheet also briefly reviews progress made under various crop insurance schemes.

Stability in Agriculture

To understand stability of incomes in agriculture, we require a look at trends in GVA growth in agriculture and allied sectors. This is because GVA indicates the contribution of a sector to the Indian economy, while also indicating the level of production within that sector. Here, we look at GVA growth in agriculture over the last 20 years. This overview enables an understanding of the long-term trend in stability of production. As can be seen in figure 1, the growth rate fluctuates heavily going from a low of -4.4% in 2002 to a high of 9.6% in 2011-12. This variation is particularly evident in and after major drought years of the last two decades.

Annual Growth Rates of Real Gross Value Added for Agriculture and Allied Sector at Constant Prices (2011-12 series)



Legend: Drought Years

Source: National Statistical Office

Notes: PE : Provisional Estimates, RE: Revised Estimates AE: Advance Estimates

Indebtedness among Farmers

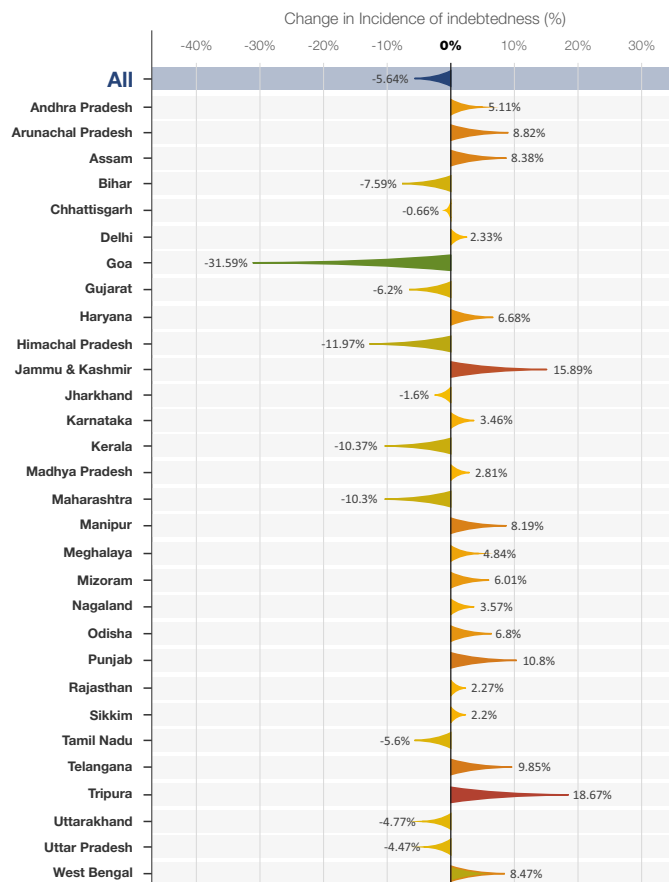
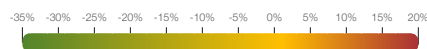
The government of India conducts a periodic survey called the All India Debt and Investment Survey [AIDIS]. It assesses debts and investments across various sectors of the economy. For the agriculture sector, part of the larger rural economy, the survey categorises the population engaged in agriculture as 'cultivators'. Cultivators are "all households having operated area of land 0.002 hectares or more during the last 365 days preceding the date of survey" (National Statistical Office 2021 : 19).

There are three key indicators that reflect the level of indebtedness among cultivators:

- Incidence of Indebtedness [IOI]: indicates percentage of indebted households
- Average Outstanding Debt [AOD]: indicates average amount of cash dues for households
- Debt to Asset Ratio [DAR]: indicates the actual burden of debt on a household; calculated by dividing AOD by average amount of assets and multiplying by 100

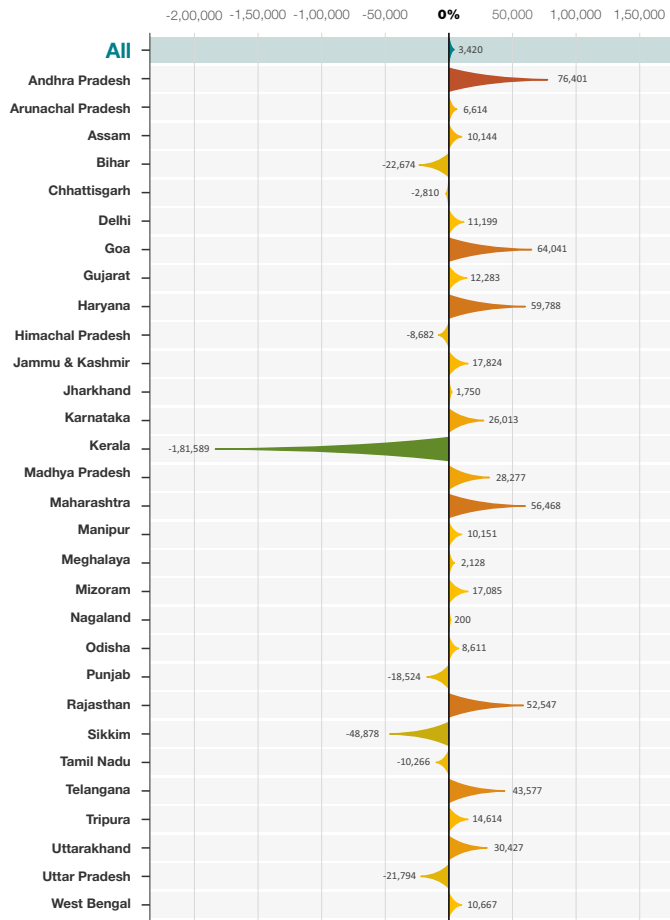
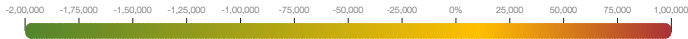
Here, we look at the change in IOI, AOD, and DAR between the AIDIS data for 2013 and 2019 across all states and union territories in India. A negative value for change in all three indicators means that IOI, AOD, and DAR have all decreased, which should be the desired outcome of any policy measure to decrease indebtedness.

Change in Incidence of Indebtedness in Percentage (%)



Source: Authors' calculations based on National Statistical Office (2014) and National Statistical Office (2021)

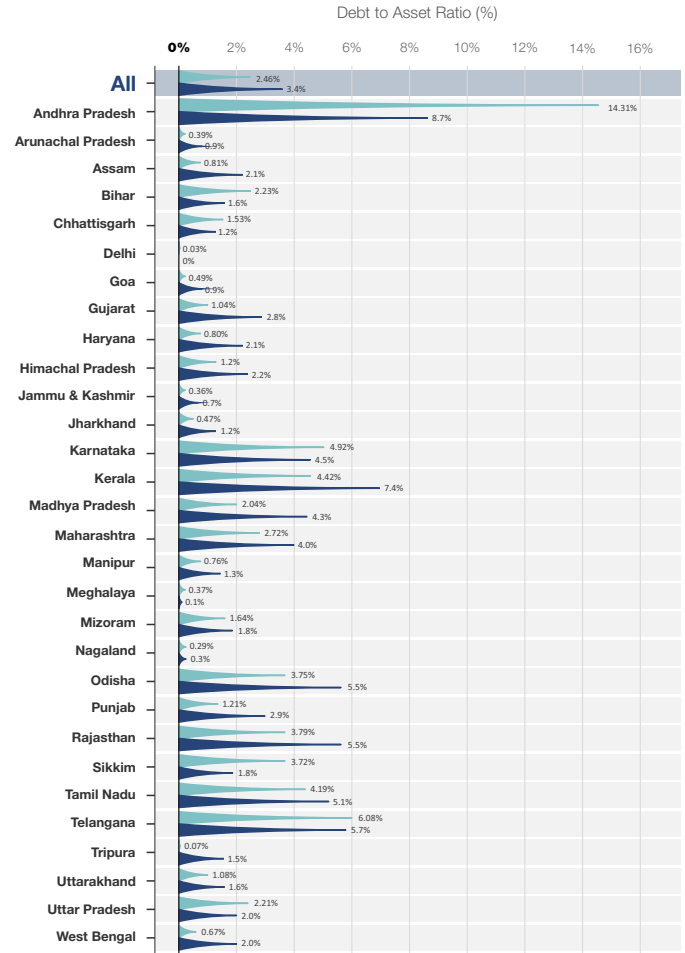
Change in Average Outstanding Debt in Rupees (Rs.)



Debt to Asset Ratio (DAR)

2013 and 2019

2013 2019



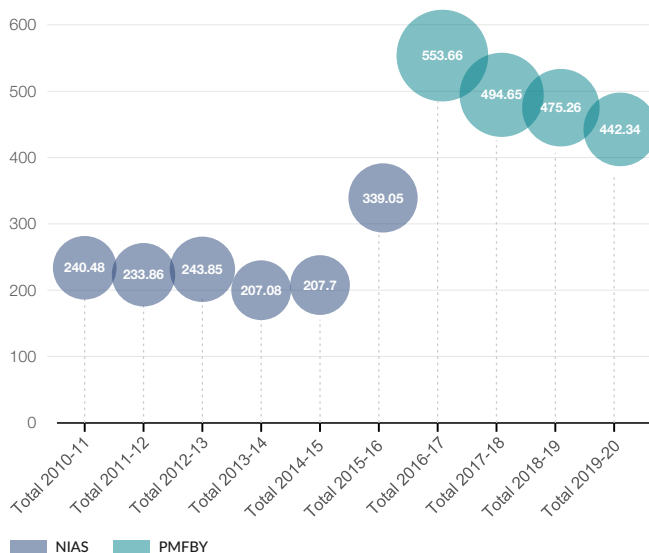
Source: Authors' calculations based on National Statistical Office (2014) and National Statistical Office (2021)

Crop Insurance Schemes

The provision of insurance coverage in agriculture is to absorb economic shocks caused by crop losses, usually indicated by net loss in yield of a crop. The share of Gross Cropped Area [GCA] covered under insurance is the key indicator in gauging the extent or penetration of crop insurance in India. Here, we compare the annual share of GCA covered under insurance with the trends in budgetary allocation towards insurance schemes by the government of India. The National Agriculture Insurance Scheme [NAIS] was the flagship crop insurance provision during the years 2010-11 to 2015-16. After 2016, the NAIS was reworked and rebranded as the Pradhan Mantri Fasal Bima Yojana [PMFBY].

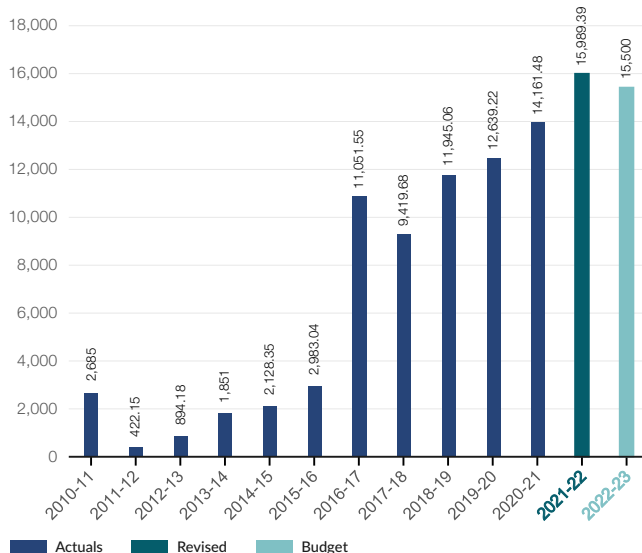
Area Insured

(in Lakh Ha)



Budget allocation for Crop Insurance

NAIS+MNAIS (2010-2016); PMFBY (2016-2023) in crores of rupees



Source: Directorate of Economics and Statistics (2019); Lok Sabha Secretariat (2021); India Budget (2012); India Budget (2022) and Budget documents

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