

### 3.5 Policy Interventions in Food Supply Chains:

#### Role of Farmer Producer Organisations and Digital Platforms on Bargaining Power and Equity

*Climate stability, social and political interactions are key factors that can influence food production and distribution, with instability in these creating uncertainties at points throughout the entire agricultural supply chain market. Evidence for this occurred in 2021, when newly implemented Farm Bills in India provoked disputes between India's farmers and the federal government.*

#### Competing and Coexisting Policies: The Context

Competing and Coexisting Policies (CACP) are increasingly common in international supply chains as well as Indian federal structures that operate across multiple states. In recent years, coinciding federal policies and state interventions, designed to increase supply chain dynamics in India's food systems have raised concerns on the different impacts on small farmers, specifically in terms of equity and bargaining power, and their ability to have fair access to markets, potentially accentuating social inequalities. Previous research has typically focused on the impact of a single policy intervention.

#### Alternative Supply Netting and Pooling Configurations in Indian Agriculture

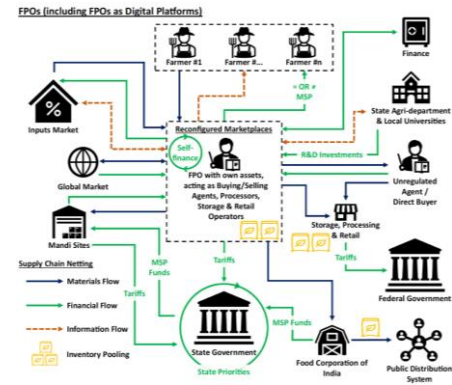
To understand how multiple policies applied to the food system interact at the market level, TIGR²ESS researchers based at the University of Cambridge, Punjab Agricultural University, and the University of Boston, applied novel supply chain netting analyses to map material, financial and information flows, along with inventory pooling, to determine imbalance indicators across different market scenarios, and identify where federal and state policies conflict in these systems.

#### TIGR²ESS Research Leads to State Policies for FPO Development

Stakeholder-led discussions which included representatives from Farmer Producer Organisations (FPO), state agriculture administrators, and finance bodies provided insights on how actors in the supply chain are affected by new and interacting policy implementations. Digital Platforms were explored as a means of enabling FPOs to be self-regulating, through reconfiguring market places and providing a means for self-financing, buying, selling, processing, storage, and retail. The approach harnesses the benefits of scale, leveraging the network effects of digital platforms, and facilitating engagement with international markets.

The interdisciplinary research demonstrated how policy interventions aimed at modernising food production and distribution, can lead to significant supply chain reconfigurations and consequent changes to bargaining power and equity between state/nation and federal/supranational entities, as well as between farmers, intermediaries, and retailers. The supply netting analysis and integrated modelling approach in this CACP context shows the shifts in bargaining power and their implications for welfare economics and food security.

TIGR²ESS investigations contributed to a Punjab Policy Notification (2021) with future modelling work aimed at identifying the ideal size for FPOs, across different market scenarios in India.



*"We're seeing actionable outcomes that will really make a difference in changing people's lives and saving lives"*

**Lord Karan Bilimoria, Chair TIGR²ESS IAB**

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