Title: Improving Welfare in Agricultural Supply Chains in Developing Countries

Abstract:

In this talk, I will present recent works on improving farmer welfare in agricultural supply chains and markets in developing countries. Agricultural supply chains in developing countries are characterized by a large number of smallholder farmers in the production stage, who have limited access to market information and distribution channels. As a result, they are at a disadvantaged position when facing powerful downstream traders, and they only gain a small fraction of the market value of the products they produce. In a series of projects, we collaborate with public and private entities in India and China to examine different approaches and business models with the objective of empowering farmers' decisions and ultimately improving their welfare. After a brief overview of the various efforts, I will dive into one specific project in which we empirically examine the impacts of a state-wide market reform in Karnataka, India on farmers’ revenue and the potential drivers of the quantified impacts. In 2014, the state government of Karnataka launched the Unified Market Platform (UMP) that connected all regulated agricultural wholesale markets in the state, with the goal of increasing market competition, establishing transparency of price discovery, and improving farmer revenue. Leveraging both government-published market data and private transaction data from UMP, we empirically quantify the impact of UMP on the modal prices of six different commodities (cotton, green gram, groundnut, maize, paddy, and tur). We observe that the implementation of UMP yields a positive and statistically significant impact on the modal prices of maize, groundnut, and paddy; however, it has no impact on the prices of cotton, green gram, and tur. We provide evidence that logistical challenges, market concentration, and bidding efficiency are important factors that affect the benefit of UMP. These findings offer practical recommendations to the government on how to further improve the platform and have resulted in an ongoing field trial in two major markets of lentils in the state. This paper is joint work with Retsef Levi and Somya Singhvi at MIT, and Manoj Rajan, MD & CEO of ReMS, Karnataka, India.