

III.A.2. Ecologically and Socially Embedded Exchange: A Closer Look at Groundwater Market in India

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This paper presents empirical results that challenge the currently popular explanation for the functioning of groundwater markets in India based on monopoly power, and proposes an alternative explanation that is sensitive to ecological and social realities in systems of groundwater exchange. Groundwater accounts for a large, and growing, share of irrigation in India. The growth of groundwater irrigation has been fuelled in recent years by the dramatic increase in private ownership of tubewells and the concomitant rise in markets for groundwater. The dominant framework within which these groundwater markets are currently understood focuses on an analysis of water price as explained by variations in monopoly power enjoyed by water sellers across and within regions. The resultant policy prescription is to stimulate competitive conditions by manipulating electricity price.

Based on a detailed case study of the functioning of water markets in two villages in North Gujarat, this paper challenges the dominant interpretation of groundwater markets in India and the policy prescriptions that follow. Using a combination of maps, contractual data and interviews, the paper shows that where exchange is well established and physical and social conditions exist for competition, competitive processes do not necessarily follow. Conversely, in very thin market situations, competition can be quite vibrant. In short, density of exchange is not synonymous with competition. Instead, exchange processes are shaped by: hydro-geological factors which influence the risk of accessing water and the fixed costs of drilling wells; agro-ecological factors such as crop choice and cultivation patterns; path dependence in the construction of irrigation infrastructure (wells and pipelines); and historical precedent and social norms which determine the institutional rules under which water is sold. These influences often mask or otherwise influence how water supply and demand pressures are resolved, with the result that the emergent institutional form of water exchange often is not the price-clearing market. The paper sketches an alternative theoretical framework for understanding groundwater markets along these lines based on an understanding of hydro-geological and agro-ecological constraints, and drawing insights from information economics, political economy and economic sociology.