Gravity-flow surface irrigation systems, while delivering lifeblood to tens of millions of farmers across the globe, are subject to a Tragedy of the Commons: Canal water can be appropriated by upstream users at the expense of those downstream. Due to the challenges of establishing water markets, or similar institutions, in large-scale irrigation networks, governments have historically operated centralized systems to apportion the precious flow. Under state management, however, the allocation of water is determined in a political marketplace, with potential implications for both equity and efficiency.

Jacoby and Mansuri (2018) view water allocations in Pakistan’s vast Indus Basin Watershed through the lens of a political lobbying framework, where coalitions of irrigators seek to influence the state authority to act more favorably to their section of canal.
To understand these implications, Jacoby and Mansuri (2018) view water allocations in Pakistan’s vast Indus Basin Watershed through the lens of a political lobbying framework, where coalitions of irrigators seek to influence the state authority to act more favorably to their section of canal. They show theoretically that, as the lobbying power at the head (tail) of a channel increases, irrigators at the head (tail) will receive more water and enjoy greater land productivity and, ultimately, greater wealth.

These implications are tested using data on the land ownership of every water-user in each of nearly four thousand watercourses along 448 channels throughout Punjab province. In rural Pakistan, the preeminent source of political power is land ownership, the distribution of which is largely a by-product of settlement patterns during the colonial era and just after Partition. The main finding is that the head to tail decline in water availability and in land productivity are both accentuated along channels having greater lobbying power at the head (proxied by the landownership distribution) and are both attenuated along channels having greater lobbying power at the tail. The estimates imply that, while variation in lobbying power can increase or decrease wealth inequality along any given channel, such variation, nonetheless, has a negligible impact on the overall concentration of land wealth in the rural economy.