

“Agricultural Productivity and State-Building: Evidence from the Iron Revolution in Pre-Imperial China”

Speaker: Prof. Joy CHEN

Abstract

This paper examines the impact of iron technology on state-building. We argue that the adoption of iron agricultural tools increased productivity, thereby raising the returns to centralized extraction. We develop and test this argument in the context of Eastern Zhou China, a period during which regional states in the Central Plain underwent intensive state-building. Using a difference-in-differences design that exploits spatial variation in access to iron resources, we find that regions with greater iron accessibility were significantly more likely to experience state-building after the iron revolution, a major technological breakthrough in methods of iron production. Further analyses show that greater iron accessibility led to increased use of iron agricultural tools, but not of ironwares for daily consumption. These findings highlight a productivity-based channel of state-building that complements existing demand-side theories centered on military conflict.