

Land Use Regulation and Economic Development: Evidence from the Farmland Red Line Policy in China

Abstract: Land use is tightly regulated worldwide, yet there is limited empirical evidence on the consequences of land-use regulation on economic development. This paper studies a major policy restricting land use in China - the Farmland Red Line Policy - to provide causal evidence on the reduced form local effect of urban land-use regulation on GDP and population growth. The policy imposes a barrier on rural-to-urban land conversion, the strength of which depends on exogenous local geographical features. I show that a stronger barrier significantly reduces urban land supply, lowers GDP, and decreases population in a local region. To understand the aggregate impact of the policy, I develop a quantitative spatial equilibrium model that features endogenous land-use decisions. Through the lens of the model, the policy causes an excess supply of farmland and an under-supply of urban land; the degree of land misallocation varies across locations due to the local geographical features. Land misallocation leads to labor misallocation due to labor mobility both between agriculture and manufacturing and across space. I estimate that the welfare of workers would have been 5.8% higher in 2010 if the policy had not been implemented.