

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 national 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. First implemented in 1999, the policy imposes a constraint on rural-to-urban land conversion, the stringency of which depends on exogenous local geographical features. These constraints on urban land development are estimated to have sizable effects on local economic development. They reduce urban land development, lower GDP, and decrease the local population. To understand the aggregate impacts of the policy, I develop a quantitative spatial equilibrium model that features an endogenous land use decision. Through the lens of the model, the policy causes an over-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.