

Policy Analysis on Different Water Management Systems in China: Utilizing a CGE Model on Drought Simulation

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Abstract: This paper simulates a severe droughts under two water management systems, i) a water parallel pricing system and ii) a water pricing system, which would be further separated into a system under current reform and another system under further reform. The purpose is to identify a superior for agricultural production and rural households. The main conclusion is that the water pricing system under further reform is better than the other two systems for rural households. However, the decrease in domestic supply of farming commodities will be more severe in the water pricing system, especially in the system under further reform. The reasons for these findings include that households will benefit from higher income and less decline in consumption including food and water consumption in the water pricing system under further reform, but more irrigation water will be reallocated from farming sectors to industrial and service sectors as well as to households in this system; the decrease in the farming water demand is less in the water parallel system than in the water pricing system, so the losses of farming outputs will be more severe. In addition, water users in the water pricing system under further reform will benefit from the lowest increase in the water price.

Key words: CGE model, water management system, agricultural production, rural households, water supply