

论文

## A DYNAMIC APPROACH TO CALCULATE SHADOW PRICES OF WATER RESOURCES FOR NINE MAJOR RIVERS IN CHINA

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收稿日期 修回日期 网络版发布日期 接受日期

**摘要** China is experiencing from serious water issues. There are many differences

among the Nine Major Rivers basins of China in the construction of dikes, reservoirs,

floodgates, flood discharge projects, flood diversion projects, water ecological

construction, water conservancy management, etc. The shadow prices of water resources

for Nine Major Rivers can provide suggestions to the Chinese government. This article

develops a dynamic shadow prices approach based on a multiperiod input-output

optimizing model. Unlike previous approaches, the new model is based on the dynamic

computable general equilibrium (DCGE) model to solve the problem of marginal

long-term prices of water resources. First, definitions and algorithms of DCGE are

elaborated. Second, the results of shadow prices of water resources for Nine Major

Rivers in 1949--2050 in China using the National Water Conservancy

input--holding--output table for Nine Major Rivers in 1999 are listed. A conclusion

of this article is that the shadow prices of water resources for Nine Major Rivers

are largely based on the extent of scarcity. Selling prices of water resources should

be revised via the usage of parameters representing shadow prices.

**关键词** [Computable general equilibrium, dynamic,](#)

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**Abstract** China is experiencing from serious water issues. There are many differences among the Nine Major Rivers basins

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**Key words** [Computable general equilibrium](#) [dynamic](#) [input--output analysis](#) [nine major rivers](#) [shadow prices](#) [w](#)

DOI:

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