

*Over-investment of China's Thermal Power Generation Enterprises under Price
Regulation—Analysis Based On Cost Stochastic Frontier Model*

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Abstract:

Under on-grid price regulation, the income of thermal power generation enterprises is related to fixed capital investment. So enterprises tend to increase the fixed capital investment in order to acquire more profits, which leads to over-investment of capital factor relative to labor force or energy factors, as well as inefficient allocation of factors. Based on the maximum likelihood parameter estimation result of cost stochastic frontier model, this paper builds an over-investment index of China's thermal power generation enterprises and analyzes the influences of factor allocation inefficiency and price changes on the degree of over-investment. The results show that, during 2007-2012, about 60% of China's thermal power generation enterprises had the problem of over-investment, which was aggravated by the phenomenon of replacement of capital for energy brought by inefficient factor allocation and energy price increase. Meanwhile, the reduction of unit utilization rates had significant influence on the increase of over-investment degree. Therefore, the key to the problem of over-investment of thermal power generation enterprises is to promote the formation of price bidding mechanism and improve unit utilization rates.