

Evolutionary Analysis of Green Credit Regulation on Greenwashing Behavior in Dual-Layer Network

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Abstract : It has become a common measure among governments to support green development of enterprises through Green Credit policies. In China, the Central Bank of China and other authorities even put forward corresponding assessment requirements for proportion of green credit in commercial banks. Policy changes might raise concerns about commercial banks turning a blind eye to greenwashing behavior by enterprises. The lack of effective regulation may lead to a diffusion of such behavior, and eventually result in the phenomenon of “bad money driving out good money”, which could dampen the incentive effect of Green Credit policies. This paper employs a complex network model based on an evolutionary game analysis framework involving enterprises, banks, and regulatory authorities to investigate inhibitory effect of the Green Credit regulation on enterprises’ greenwashing behavior, banks’ opportunistic and collusive behaviors. The findings are as follows: (1) Banking opportunism rises with Green Credit evaluation criteria and requirements for the proportion of credit balance. Restrictive regulation against violating banks is necessary as there is an increasing trend of banks adopting opportunistic strategy. (2) Raising penalties and probability of regulatory inspections can effectively suppress banks’ opportunistic behavior, however, it cannot entirely eradicate the opportunistic behavior on the bank side. (3) Although maintaining a certain inspection probability can inhibit enterprises from adopting greenwashing behavior, enterprises choose a catering production strategy instead. (4) One-time rewards from local government have limited effects on the equilibrium state and diffusion trend of bank regulatory decision-making.

Keywords : green credit, greenwashing behavior, regulation, diffusion effect

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