

Referee Report

Manuscript Title

Mechanism of Government Subsidy-Driven Corporate Green Innovation from the Perspective of Multi-Actor Co-governance

This manuscript examines the impact of government subsidies on corporate green innovation using a tripartite evolutionary game model involving governments, enterprises, and the public. The topic is relevant and timely. However, the manuscript contains significant issues in mathematical formulation, model consistency, and presentation quality, affecting the validity of the results and conclusions. Substantial revision is required before the paper can be considered for publication.

Main Comments

1. Mathematical Errors in Replicator Dynamics The replicator dynamic equation is incorrectly specified as

$$F(x) = x(x - 1)(E_{g1} - E_{g2})$$

instead of

$$F(x) = x(1 - x)(E_{g1} - E_{g2}).$$

This reverses the direction of the dynamics and affects stability results.

Recommendation: Correct all replicator equations.

2. Incorrect Functional Dependence Functions such as $G(y)$, $H(z)$, and $K(x)$ are improperly defined. The correct forms are

$$G(y, z), \quad H(x, z), \quad K(x, y).$$

3. Payoff Function Inconsistency The expression

$$P_1z + P_2z$$

should be

$$P_1z - P_2z.$$

4. Language Issues Errors such as “In fant” should be corrected.

Final Recommendation

The manuscript requires substantial revision before reconsideration.

Decision: Minor Revision