

# ***Simultaneous Hedging of Upgrading Costs and Optimal Public Policies with Many Orphan Diseases***

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## **Abstract**

In a General Equilibrium framework, we consider a large number of countries and international agencies simultaneously fighting an arbitrary number of orphan diseases. Those bodies seek to insure against the upgrading costs associated with the introduction of innovative treatments. We exhibit a large class of economies where markets for insurance against those upgrading costs are incomplete, and where the introduction of an insurance against one particular disease makes a large number of countries strictly worse off because of substitution effects. We show that there exists a sequence of assets with more complex payoff patterns whose sequential introduction makes every country better off after every introduction. Finally, we argue and recommend that the simultaneous introduction of every original insurance for every disease under treatment avoids this pitfall, and leads to Pareto optimal outcomes.

Keywords: Orphan diseases, Optimal public policies, Public good, Hedging needs.