## Challenging Spirit and the Rise and Fall of Innovative Lineages

Peichang Zhang

## **Abstract**

I present a parsimonious quality ladder growth model in which agents derive utility from undertaking risky innovation. I refer to the agents' propensity to engage in high-risk and potentially high-reward activities as the challenging spirit and explore its implications for inequality and economic growth. The model highlights that inequality and growth can be joint outcomes of the challenging spirit and radical innovation productivity. In the model, wealthy individuals tend to undertake more radical innovation, which creates a link between inequality and growth. Whether the effect of inequality on growth is beneficial or detrimental depends on the radical innovation productivity. Furthermore, challenging spirit is an important factor that associates inequality with social mobility. The lineages' rise and fall are intimately linked to the long-run co-evolution of inequality and growth.

**Keywords:** Challenging Spirit, Radical Innovation, Lineage, Rise and Fall, Inequality, Economic Growth