

Estimation of the Hotelling Rule under Stochastic Investment Opportunities

This paper uses mining companies stocks returns to proxy in-ground asset returns while investigating the role of in-ground natural assets in the the risk diversification through the Hotelling rule estimation. This empirical study is based on the theoretical economic model of Gaudet and Khadr (1991) which demonstrates a convenient marriage between natural resource economics and finance.

The econometric approach used is relied on the Gaussian estimation method of Nowman (1997) for continuous time diffusion process. Moreover, for each in-ground asset analyzed in this paper, we compute a confidence interval for the measure of the Long-run consumption coefficient beta, which is rely on Monte Carlo simulation and method by Khalaf and al. (2007).

In a few words, the estimated Long-run coefficients betas driven by the Hotelling rule suggest that investing in the in-ground copper asset is a good hedge against risk in the long run over the sample period considered. But investing in the in-ground oil&gas asset, or in the in-ground gold asset, or in the in-ground coal asset is not a perfect hedge against risk in the long run over the sample period considered