

Welfare Implications of Sunspot Fluctuations

Sergey Slobodyan*

CERGE-EI, Charles University
Politických vězňů 7, 111 21 Praha 1,
Czech Republic

Abstract

The usual conclusion in the literature is that sunspots reduce welfare because of the agents' risk aversion. However, if sunspots can lead to escape from an inferior steady state (poverty trap), this conclusion does not necessarily hold. Escaping trajectories can have much higher welfare than those remaining in the poverty trap. The ex-post welfare effect can be positive for initial conditions such that the probability of escape is sufficiently close to one. Numerical simulations of the model support this conjecture.

The distance from the poverty trap boundary to the initial condition point is of critical importance where the escape is concerned. I consider a model in which government has an influence on the exact location of the boundary. Implementing a policy that moves the boundary to the initial condition point greatly increases both the probability of escape and the expected welfare gain.

Abstrakt

Ekonomické koncepty popsané v literatuře obvykle tvrdí, že tzv. „sunspoty“ snižují bohatství protože hráči jsou aversní vůči riziku. To však nemusí platit, pokud sunspoty vedou k úniku z inferiorního stacionárního stavu (pasti chudoby). Únikové trajektorie mohou vést k mnohem vyššímu bohatství než trajektorie pasti chudoby. Ex post vliv na bohatství může být značný pro počáteční podmínky, při kterých se pravděpodobnost úniku blíží jedné. Numerické simulace modelu toto tvrzení potvrzují.

Vzdálenost mezi počátečním bodem a hranicí pasti chudoby hraje důležitou roli při úniku z pasti chudoby. V popsáném modelu vláda ovlivňuje hranici pasti chudoby a pokud svou politikou přesune tuto hranici do počátečního bodu, výrazně zvýší jak pravděpodobnost úniku z pasti chudoby, tak vzrůst bohatství.

JEL Classification: E32, O41

Keywords: development trap, indeterminacy, sunspots, welfare

**Sergey.Slobodyan@cerge-ei.cz. (+420 2) 224 005 211. This paper is based on the third essay of my Ph.D. thesis completed at Washington University in St. Louis, USA, and was partially written during a research visit to the Federal Reserve Bank in St. Louis. Financial support from both institutions is gratefully acknowledged. For helpful comments the author thanks William Barnett, Gaetano Antinolfi, James Bullard, John Duffy, Heinz Schaettler, Costas Azariadis, and participants of the CEF'99 Conference, 1st CeNDEF Workshop, 8th Annual SNDE Symposium, and World Congress of the Econometric Society.*