Energy-Saving Technological Change
and The Great Moderation [*]

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January 20, 2012

Abstract

The mitigated volatility of output and other aggregate variables, so called the "Great Moderation" is observed in the mid 1980s in the United States. In this paper, the role of energy-saving technological progress is examined on accounting for the great moderation. To do so, the time path of energy-saving technology is estimated followed by Hassler, Krusell, and Olovsson (2011) and fed into a standard real business cycle model with energy as a third production input. The simulation results show that the impulse response of value added to 10% positive energy price shock is mitigated from -0.54% to -0.34% due to energy-saving technological change. This finding suggests that the energy-saving technological change can be a good candidate to explaining the great moderation.

Keywords: energy-saving technological change, energy price shocks, the great moderation