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# Business Cycle Modeling: Ornstein-Uhlenbeck Stochastic Process versus Kaldor Deterministic Chaotic Model

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## Abstract

Business cycles denote oscillations in economy because of downturns and expansions. The macroeconomic variables under our investigation are income, capital, consumption and investment and their dynamics. There is long-standing debate about chaos and non-linear dynamics in economy and even the usefulness of those concepts have been questioned. Stochastic modelling has proven to be able to well represent reality. However a stochastic behaviour implies that reality is about exogenous randomness, while a chaotic behaviour means that reality is deterministic and non-linearities are endogenous. In this paper we compare a Ornstein-Uhlenbeck stochastic process versus a Kaldor-Kalecki deterministic chaotic model to understand what fits better intrinsic structure of real data.

**Keywords:** Determinism, Chaos, Economic dynamics, Business cycles

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