Land Speculation, Booms, and Busts with Endogenous Phase Transitions: A Model of Economic Fluctuations with Rational Exuberance*

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Abstract: We develop a model of macroeconomic fluctuations with rational exuberance to explain real estate booms, endogenous crashes, and bounded non-convergent fluctuations—a "wobbly economy". Through the interactions between land prices and capital accumulation, the macroeconomy undergoes endogenous phase transitions across three distinct phases governed by momentary equilibria: a price-accelerating boom region, an intermediate region with multiple equilibria allowing beliefs to drive fluctuations, and a tipping point triggering an inevitable crash. Symmetrically, market troughs generate endogenous booms. Under some conditions, the emergence of such wobbly dynamics is inevitable. Moreover, we uncover that the pursuit of full rationality leads to rationally myopic behaviour, where agents need only formulate expectations one period ahead rather than infinitely far into the future. Furthermore, an extension with land collateral and labor reallocation generates wobbly credit cycles: a real estate boom can initially raise production, subsequently reduce it, and reach an inevitable price reversal, followed by a prolonged slump and an endogenous recovery.

Key words: Land speculation, Endogenous phase transitions, Endogenous crashes, Real estate booms and busts, business cycles

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