# Investment Avalanches, Heterogeneity and Business Cycles

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*Abstract* :
This paper attributes the origin of aggregate business fluctuations to the synchronization of firms' investments in an environment where the economy is exempt from exogenous aggregate shocks. In a monopolistic competition model with idiosyncratic productivity shocks, firms' decisions on lumpy investments exhibit complementarity in equilibrium due to aggregate demand externality. A firm's lumpy investment can cause other firms' lumpy investments, which we call an investment avalanche. The size of an avalanche varies depending on the distribution of productivity and capital across firms. We show that the variance of aggregate investment in the model can amount to the magnitude observed in the data even without incorporating exogenous aggregate shocks. The underlying condition is that firms expect constant marginal unit costs of production. Moreover, the investment avalanche can cause autocorrelation of aggregate investments when firms' time-to-build presents heterogeneity. We incorporate the investment avalanche in a heterogenous agent business cycles model where a shock in the investment demand can cause comovement with output, consumption, and potentially inflation rates.