

# Stability of Economic Equilibrium

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The most basic issue in economic equilibrium, concerning the exchange of goods by agents through a market, can be modeled as a variational inequality problem with the initial supplies of goods as parameters. The question arises then as to how the equilibrium prices and goods respond to shifts in those parameters. Results of variational analysis can be applied to get answers that, to many economists, are surprising.

It has long been understood that parametric instability can occur and undermine the price adjustment process by which economists might hope for an equilibrium to be achieved. However, it turns out that, under mild conditions on preferences, everything is really fine as long as the initial goods and proposed starting prices aren't too distant from an equilibrium combination.