# DELIVERY LAGS, ADJUSTMENT COSTS, AND ECONOMETRIC INVESTMENT MODELS


## Abstract

This paper explores the impact of a delivery lag technology on the specification of econometric investment equations within an explicit optimizing framework. The formal model contains a general delivery lag distributed over many periods and adjustment costs for both new orders and delivered capital. The impact of these technological constraints on the Euler Equation and Q specifications are examined in a general model. We then consider the special case when the delivery lag follows a geometric pattern, and show that the econometric specifications depend critically on the interaction between delivery lags and the ordering costs. In the absence of ordering costs, the Euler and Q models with geometric delivery lags are observationally equivalent to models without delivery lags. With ordering costs, none of the specifications are similar to those derived on an ad hoc basis in the literature. Empirical estimates are presented with the new Euler and Q specifications based on geometric and non-geometric delivery lags, and indicate some gains from incorporating delivery lags into the Euler Equation model.



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