

# Marginal q and Firms' Investments: Evidence from Time Series Data of Japanese Manufacturing Industries

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## <Abstract>

In this paper, we verify the predictability of marginal q on firms' capital investments. We compare Granger's causality of four manufacturing industries with the LA-VAR model and Vector Error Correction Model (VECM). We obtain the empirical results that the null hypothesis of no Granger's causality from marginal q to investments is accepted for the chemical industry and iron-steel industry, and it is rejected for the transportation equipment industry. For the product machinery industry, null hypothesis is rejected with the LA-VAR model, but accepted with VECM; it is not robust result. These results indicate that the chemical and iron-steel, with higher uncertainty and irreversibility, could not adjust their capital investments in response to the fluctuation of Tobin's q, while the transportation equipment industry could do so. Following the analytical implications by earlier theoretical studies, it is considered that uncertainty and irreversibility restrain their capital investments, or firms with uncertainty and disposal cost do not invest in equipment because of lower Tobin's q than the threshold value. Thus, the role of uncertainty and irreversibility is important for predicting capital investments by Tobin's q.