Revisiting the Stealth Trading Hypothesis - Does Time-Varying Liquidity Explain the Size Effect?

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Abstract:
It is known that large trades have a dis-proportionally smaller price impact than medium-sized trades. So far, the literature has attributed this effect to informational effects. In this paper, we provide an alternative theory, which shows that this effect can arise in the absence of information asymmetry. We demonstrate that the observed price effect does not need to arise from stealth trading, but can result from liquidity variations and a strategic timing of order setting. Consequently, liquidity attracts large orders which in turn reduces the price impact per share of large orders compared to medium sized orders. We derive testable predictions on the monotonicity of the trade impact per share and the liquidity elasticity, measuring the responsiveness of liquidity demand with respect to changes in liquidity supply. The model predictions are structurally tested using nonparametric and parametric regressions based on high-frequency limit order book data from NASDAQ trading. We find a strong confirmation of our theory and show that the endogeneity between market liquidity and trading volume is particularly pronounced in blue chip assets with a high percentage of strategically trading investors.