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Changes in insider ownership and changes in the market value of the firm ☆

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Abstract

The empirically-observed cross-sectional relation between the *level* of insider share ownership and the *level* of firm value has often been interpreted to mean that a change in share ownership can lead to a change in firm value. Such an interpretation has been criticized for ignoring potential endogeneity. In this paper, we perform two sets of tests to circumvent this alleged endogeneity. First, we measure *changes* in value over the 6-day interval around announcements of insider share purchases and find that the cross-sectional variability in changes in value is described by a curvilinear relation between firm value and insider ownership where the value of the firm first increases, then decreases, as insider share ownership increases. Second, we conduct tests to determine (1) whether the insider purchases are a response to changes in firm characteristics that require a new optimal equilibrium ownership level or (2) whether insiders are purchasing shares to signal that the firm is undervalued. We find no evidence to support these interpretations. Overall, our results are consistent with a causal interpretation of the empirical relation between insider ownership and firm value.

JEL classifications: G32; G34
Keywords: Insider ownership; Firm value; Equity ownership structure; Governance

1. Introduction

Morck, Shleifer, and Vishny (MSV) (1988), McConnell and Servaes (1990, 1995), Hermalin and Weisbach (1991), Holderness et al. (1999), Anderson and Reeb (2003), Adams and Santos (2006) and others document a statistically

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significant cross-sectional correlation between the level of share ownership by corporate insiders (usually defined as managers and members of the board) and corporate performance, where performance is measured either as Tobin's Q or return on assets.[1] This observed empirical relationship has often been interpreted to mean that ownership "matters" and that a change in share ownership by insiders can be used to change corporate value. Such interpretations have been criticized for ignoring the potential endogeneity that may arise when external pressures push firms toward optimal ownership structures that jointly optimize over ownership and value.

Such criticisms follow the Demsetz (1983) argument that the observed level of share ownership by insiders and firm performance is the outcome of market forces such that each firm's ownership structure is optimal for that firm. If so, changes in ownership cannot be used to enhance corporate value. He further argues that any observed cross-sectional empirical relation between the level of insider share ownership and firm performance must be spurious. Studies by Demsetz and Lehn (1985), Agrawal and Knoeber (1996), Loderer and Martin (1997), Cho (1998), Demsetz and Villalonga (2001), Himmelberg, Hubbard, and Palia (HHP) (1999), and Coles et al. (2003) support Demsetz' criticism empirically.

In particular, in an effort to control for the alleged endogeneity in regressions using levels of insider ownership and firm value, HHP estimate a firm fixed effects regression in which the dependent variable is a proxy for firm value and the key independent variable is insider share ownership. With this procedure, they find no relation and, thereby, conclude that the significant relations reported in earlier studies are spurious. However, Zhou (2001) points out that a fixed effects estimation has shortcomings of its own when used with annual panel data of the type employed by HHP. He argues that in annual panel data with firm fixed effects it would be difficult to detect a meaningful relation between ownership and performance, even if one exists, because such tests have little power.

Specifically, Zhou observes that insider ownership typically changes slowly from year to year and in most years, for an individual firm, no change occurs at all; whereas, for the same firm, value can change dramatically over the course of a year for a host of reasons unrelated to insider ownership. That is not to say that a fixed effects analysis has no merit. In particular, a fixed effects model does control for unobserved firm-specific heterogeneity. The fixed effects model accomplishes this by, in essence, considering changes in ownership and changes in value rather than levels. When changes are considered, any firm fixed effect cancels and, therefore, any relation that remains cannot be due to endogeneity that arises from such an effect.

In this study, we employ a methodology that preserves the virtues of a firm fixed effects analysis while overcoming the concerns raised by Zhou. Specifically, we estimate the relation between changes in insider share ownership and changes in stock prices over the 6-day interval commencing with the announcement of share purchases by corporate insiders. By conducting the analysis using changes in share ownership and changes in value, we control for any unobserved firm-specific fixed effect. Furthermore, by design, each of the firms in our sample experiences a change in insider ownership over the interval of analysis, thereby addressing the problem caused by many zero change observations encountered with annual panel data. Finally, because the stock price change is observed over a short time interval, the firm value observations embed less "noise," thereby increasing the ability of the tests to detect a relation if one exists. To put this last point a bit differently, over the 6-day interval of analysis, other factors that are likely to affect corporate value are unlikely to be changing in a systematic way across firms.

As the starting point of our analysis, we employ the curvilinear relation reported by McConnell and Servaes (1990):

$$\begin{aligned}\text{Tobin's}\,Q = b_0 + b_1(\text{INOWN}) + b_2(\text{INOWN})^2 + c_1(\text{BLKOWN}) + c_2(\text{INSTOWN}) \\ + c_3(\text{Control variables})\end{aligned} \tag{1}$$

where Tobin's Q is the market value of the firm divided by the replacement value of assets, INOWN is the fraction of shares controlled by officers and directors, BLKOWN is ownership by large blockholders and INSTOWN is ownership by institutional investors. McConnell and Servaes report that b_1 is positive and significant and that b_2 is negative and significant in cross-sectional regressions.

[1] These studies are based on U.S. firms. Studies with cross country data are conducted by La Porta et al. (2002), Claessens et al. (2002), and Lins (2003).