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How corporate governance affect firm value? Evidence on a self-dealing channel from a natural experiment in Korea ☆

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ABSTRACT

Prior work in emerging markets provides evidence that better corporate governance predicts higher market value, but very little evidence on the specific channels through which governance can increase value. We provide evidence, from a natural experiment in Korea, that reduced tunneling is an important channel. Korean legal reform in 1999 changed the board structure of "large" firms (assets > 2 trillion won) relative to smaller firms. In event studies of the reform events, we show that large firms whose controllers have incentive to tunnel earn strong positive returns, relative to mid-sized firms. In panel regressions over 1998–2004, we also show that better governance moderates the negative effect of related-party transactions on value and increases the sensitivity of firm profitability to industry profitability (consistent with less tunneling).

1. Introduction

There is evidence that firm level corporate governance affects firm market values in emerging markets, but very limited evidence on why. Through what "channels" does governance affect firm behavior, and thus market value? We study here one important channel: control of self-dealing by the controllers of business groups. Self-dealing is an important way that controllers can "tunnel" value out of firms, and one which governance can plausibly affect. We provide evidence that firm-level governance reduces "cash flow" tunneling by Korean firms through "ordinary" related-party transactions (RPTs) – purchases and sales of goods and services from affiliated firms. That is, we provide evidence for the causal channel (better governance → lower cash flow tunneling → higher market value). The effect of governance on cash flow tunneling involves fairer pricing of RPTs, rather than a lower volume of RPTs.

A number of studies, in Korea and elsewhere, show that share prices are adversely affected by major RPTs such as mergers and equity issuances to insiders, but do not study whether governance can reduce harm to minority shareholders.[1] We focus here on routine RPTs – purchases and sales of goods and services from affiliated firms. These transactions are common within business groups in many countries. They may be efficient compared to transactions

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[1] See Bae et al. (2002) (mergers in Korea); Baek et al. (2006) (equity issuance in Korea); Cheung et al. (2006) (large, publicly announced RPTs in Hong Kong); Jiang et al. (2010) (intercorporate loans in China).

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with unrelated firms, but can also be used to engage in "cash-flow tunneling" which extracts value from some firms in a business group, while benefiting other firms and the group controllers.[2]

We find evidence in Korea of an adverse effect of routine RPTs on firm market value in poorly governed firms. This evidence is consistent with a widespread view in Korea that intra-group transactions are an important problem. We also find evidence that investors expect governance to moderate the harm to minority shareholders from RPTs, and that governance in fact does so.

We study Korea because Korea allows identification of a causal link between governance and firm market value, based on a shock to the governance of large firms: a 1999 law requires firms with assets over 2 trillion won (about U.S. $2 billion) to have at least 50% outside directors, an audit committee with an outside director as chair and at least two-thirds outside members; and an outside director nominating committee. We exploit this legal shock to board structure at 2 trillion won by generally limiting our sample to large and mid-sized firms with assets from 0.5 to 4 trillion won, close to the threshold. In our event study, we use an explicit regression discontinuity (RD) research design, in which we investigate the impact of the reform on large firms, close to but above the 2 trillion won threshold, relative to mid-sized firms that are close to but below the threshold. In prior work, we find strong evidence that the reforms predict higher market value for large firms (Black and Kim, 2012). In this study, we ask the "channels" question: can reduced risk of RPTs help to explain this rise in market value, and for which firms?

We do not directly observe tunneling. Instead, we look for indirect evidence consistent with tunneling. To do so, we develop a measure of the incentives and propensity of a firm's controlling family to tunnel value out of the firm, which we term an "Expropriation Risk Index (*ERI*)." *ERI* is positive for a given firm-year if the controlling family holds, on average, lower cash-flow rights in the firm than its RPT counterparties. If so, the controller has an incentive to use the pricing of RPTs as a low-visibility way to transfer value to these counterparties. We have the data to measure *ERI* only for *chaebol* (Korean family-controlled business group) firms, but *chaebol* groups are a likely place to look for tunneling.

We first conduct an event study of the key reform events in 1999, and investigate whether investors expect these reforms to limit tunneling. We use a combined event study/RD design, in which we study event period returns to "large-plus" firms, just above the then-expected size threshold for the reforms of 1 trillion won, relative to mid-sized firms just below this threshold.[3] If investors expect the reforms to limit tunneling, then large-plus, positive-*ERI* firms should realize positive abnormal returns when the reforms are adopted. These firms in fact realize roughly 30% cumulative market adjusted returns (CMARs) during our event period. Large-plus, negative-*ERI* firms earn positive but smaller CMARs of 5–10%. Thus, investors appear to view the governance reforms as strongly beneficial for positive-*ERI* firms, and only mildly so for other large firms.

We next investigate the effect of the governance reforms on cash-flow tunneling. We find no evidence that governance affects the *volume* of RPTs. However, we do find an effect of tunneling on firm value, which is mediated by governance. More specifically, for positive-*ERI* firms, we find a positive interaction between a broad Korea Corporate Governance Index (KCGI) and RPT volume. This is consistent with governance leading to improved RPT pricing for these firms. This interaction term is insignificant for negative-*ERI* firms.

We also assess whether RPTs are adverse to profitability and whether governance mediates that relationship. For *chaebol* firms, we find moderate evidence that RPTs predict lower profitability for poorly governed firms (with below-median *KCGI*), but no significant relationship between RPTs and profitability for better-governed firms (with above-median KCGI). The mediating impact of governance on the relationship between RPTs and profitability is stronger for positive-*ERI* firms than for negative-*ERI* firms. We also apply the Bertrand et al. (2002) approach to search for indirect evidence of tunneling. They assess the responsiveness of firm profitability to industry profitability. Lower responsiveness provides evidence of cash-flow tunneling. We find evidence consistent with cash-flow tunneling by positive-*ERI* firms, and evidence that better governance reduces cash-flow tunneling.

This paper is organized as follows. Section 2 provides a literature review, describes how we construct our governance index and Expropriation Risk Index (*ERI*), and discusses our data sources and some methodology issues. Section 3 presents our event study results, Section 4 our RPT-to-value regression results, and Section 5 our profitability results. Section 6 concludes.

2. Background

2.1. Literature review

In this paper, we begin with a reasonably identified link between governance and firm market value (proxied by Tobin's *q*), based on our prior work. We then assess the evidence on a particular channel through which governance might affect value: Does governance affect tunneling? Thus, we need to situate this paper within the literature on the relationship between corporate governance and firm value ("governance to value studies"), the literature on tunneling, and the smaller literature that links governance to tunneling. Our review focuses on emerging markets.

With regard to corporate governance, we write within the literature on firm-level governance; there is a separate large literature on the impact of country-level governance. Prior research provides evidence that corporate governance is associated with firm market value (usually proxied by Tobin's *q*), but only a few studies have a basis for identification and thus causal inference.[4] A smaller set of papers addresses whether governance predicts firm outcomes other than market value (Tobin's *q*), but do not link governance to market value.[5] Two studies link governance to both market value and other firm outcomes.[6] However, these papers are purely cross-sectional and lack identification. Our results are less directly relevant for developed markets, but there too, studies with credible identification for the effect of governance on firm behavior are scarce (Dahya and McConnell, 2007, is a notable exception).

[2] We use here the tunneling terminology suggested by Atanasov et al. (2011).

[3] At the time of the initial legislative events, captured in the event study, the threshold for the reforms was 1 trillion won; it was raised to 2 trillion won later in the legislative process. We refer to firms with assets > 1 trillion won as "large-plus" and firms with assets > 2 trillion won as "large."

[4] Claessens and Yurtoglu (2013) provide a recent survey. The principal multi-country studies are Klapper and Love (2004), Durnev and Han Kim (2005), and Black et al. (2014). La Porta et al. (2002) and others study the association between firm market value and the "wedge" between insiders' voting and economic ownership.

[5] In Korea, Joh (2003) finds that Korean *chaebol* firms with high control-ownership disparity have lower profitability during the pre-crisis period. Hwang et al. (2004) find that better-governed *chaebol* firms pay higher dividends. Mitton (2004) finds that the Credit Lyonnais Securities Asia (CLSA) governance index predicts higher profitability and higher dividends. In China, Liu and Lu (2007) find that better governance predicts less earnings management, and (less clearly) lower tunneling.

[6] Klapper and Love (2004) report that the CLSA index predicts both firm market value and profitability. However, the *CLSA* index depends significantly on analysts' subjective views and mixes measures of management quality with measures of governance. Dahya et al. (2008) find that proportion of independent directors predicts higher Tobin's *q* and fewer RPTs. Black et al. (2014) discuss the fragility of the estimates in these studies.