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Propping and tunneling: Empirical evidence from Japanese keiretsu

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ABSTRACT

We examine the response of horizontal and vertical keiretsu to the changing economic and regulatory climate in Japan from 1987 to 2001. We find evidence of profit tunneling of more weakly affiliated keiretsu firms during strong economic times. We observe propping of weakly aligned firms during recession. Many horizontal keiretsu firms strengthened their degree of adhesion to the horizontal keiretsu in response to increasingly tightened credit conditions post-1991. The motivation behind strengthened affiliation appears primarily linked to the goal of overcoming financial constraints by accessing the internal capital market of the business group.

1. Introduction

Japanese companies confronted severe recession throughout the 1990s and into the 21st century. Regulatory changes also occurred that aimed to reduce the influence of the keiretsu – a form of business organization where firms ally themselves with either horizontally diversified groups, many of which date back to pre-war family-dominated organizations; or vertically integrated groups which are an artifact of post-World War II reorganization. Not all Japanese firms, however, link themselves with either horizontal or vertical business groups; some remain independent. In this paper, we examine how horizontally and vertically affiliated firms, as well as stand-alones, responded to significant changes in the economic and regulatory climate. In conducting this investigation, we assess propping and tunneling within Japanese business groups and examine the role played by the internal capital market of the business group.

Tunneling occurs when powerful owners or other insiders engage in private benefit consumption to the detriment of other stakeholders in the firm (Djankov et al., 2008). Clearly, this activity destroys value. Private benefit consumption is prevalent, although not universal, in the family-dominated business groups of emerging markets (Khanna and Yafeh, 2007), but also more generally when control rights exceed cashflow rights. Thus, a number of recent studies provide evidence of tunneling: in Korea (Baek et al., 2006); in India (Bertrand et al., 2002); in Thailand (Bertrand et al., 2008); in emerging Asian economies (Claessens et al., 2002; Faccio et al., 2001; Johnson et al., 2000a,b); in Europe (Faccio et al., 2001; Johnson et al., 2000a,b); in Hong Kong (Cheung et al., 2006); in Canada (Attig, 2007); in Germany (Gugler and Yurtoglu, 2003) and in France (Ginglinger and L'her, 2006).

In Japan business groups (keiretsu) are not family-controlled; rather they are manager-dominated inter-corporate groups which Morck and Nakamura (2005) assert have provided a vehicle for management entrenchment. Managers of the most powerful firms within the keiretsu are in a position to transfer wealth from those with weaker ties to the business group. This can be accomplished by managers of the most strongly aligned firms occupying seats on the boards of weaker firms (Lincoln et al., 1996). Moreover, the promise of assistance if the firm should experience financial distress as well as the threat of withholding such aid could also prompt more weakly aligned firms to permit tunneling. The corporate elite of the keiretsu have strong government connections and wield considerable influence over policy (Morck and Nakamura, 2005), suggesting tolerance of profit tunneling.

One of the advantages of business groups is the attribute of "mutual insurance", the expectation that distressed firms will be propped up by partners that are more powerful. Early evidence (Hoshi et al., 1990) indicates that propping of distressed firms by keiretsu partners was efficient although newer work disputes this

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at a macro-economic level (Hoshi and Kashyap, 2004; Hoshi, 2006; Morck and Nakamura, 2005). In India, Gopalan et al. (2007) find that propping up of distressed firms by group members through intra-group loans also enhances the ability of distressed firms to attract foreign capital. In Korea, however, Rousseau and Kim (2008) report that in the aftermath of the Asian crisis firms that were associated with chaebol suffered greater financial constraints than unaffiliated firms did. They ascribe this to the heightened market model orientation of the Korean economy in the post-crisis era.

Thus, whether propping is beneficial or not is something of a puzzle. Bertrand and Mullainathan (2003) suggest that propping up of a distressed firm is a means of securing future tunneling. Others argue that propping perverts the distribution of resources of the internal capital market. In the Japanese context, propping could well be a repayment for the unsanctioned tunneling during stronger economic times. Riyanto and Toolsema (2008) argue that propping and tunneling must co-exist in pyramidal structures in order for firms to attract outside investors. Our evidence indicates that tunneling occurred during stronger economic times but when the Japanese economy slid into recession, strongly aligned firms propped up members of their business group. Indeed, some firms increased their adhesion to the horizontal keiretsu in the face of mounting financial constraints. For these firms, strengthened keiretsu affiliation permitted more rapid growth in assets. Since weak keiretsu affiliation is not synonymous with financial distress, the reversal of tunneling may be more compatible with the perspective that "negative tunneling" can secure future tunneling opportunities.

Despite a substantive literature which addresses issues of business group affiliation in Japan (for a review see McGuire et al., 2009), Morck and Nakamura (2005) note that propping and tunneling within modern Japanese business groups have not been systematically investigated. Our study attempts to fill this gap.

We proceed as follows: Section 2 contains an over-view of the economic and regulatory environment in Japan and includes a brief description of the two types of business groups present in Japan: horizontal and vertical keiretsu. Section 3 outlines data sources. In Section 4, we examine propping and tunneling in response to changing economic and regulatory conditions in Japan. Section 5 explores the role of the internal capital market in resolving tight credit market conditions. Conclusions follow in Section 6.

2. The Japanese context

2.1. Horizontal keiretsu

During most of the time frame considered in this study (1987–2001) there were six commonly recognized horizontal keiretsu: Mitsubishi, Mitsui, Sumitomo, Fuyo, Sanwa, and Dai Ichi Kango. Three groups, Mitsui, Mitsubishi, and Sumitomo; originated from the family-dominated pre-World War II zaibatsu, while the others developed during the post-war period. Recent mergers reduced the number of horizontal keiretsu to four.[1]

Horizontal business groups are widely diversified. At the heart of the horizontal keiretsu is the main bank that finances member firms through both debt and equity. In turn, member firms hold shares in the main bank and invest in other group firms. Nevertheless, no single owner holds a significant position. Traditionally these reciprocally held shares were rarely traded (Miyajima and Kuroki, 2007). However, economic and regulatory upheaval weakened or dissolved some debt/equity ties. Foreign investors made inroads and capital market deregulation facilitated bond market access in place of bank financing.

Miyajima and Kuroki (2007) find that these changes did not uniformly affect Japanese firms. Those wanting access to the external debt market had to maintain bond ratings of at least BBB that forced them to be more transparent and focused upon ROE. However, firms highly dependent on bank financing maintained these positions. They contend these firms feared retaliation from their main bank should the shares be sold. They also analyze divestitures by banks, reporting that banks sold off shares in firms where they did not have long-standing relationships and especially after 1999, in firms whose shares were relatively liquid with higher expected rates of return. They held onto shares of poorly performing firms even if those firms were unwinding their own bank holdings. Consequently, the portfolios of main banks at the close of the decade consisted of relatively poor performers with whom they had historically embedded relationships. Hoshi and Kashyap (2004) suggest this contributed to the economic downturn in Japan. The main banks' efforts to rescue distressed member firms produced "zombie" firms which had no chance for enduring long-term (Hoshi, 2006). The unwinding of non-financial cross-holdings similarly proceeded unevenly. Profitable firms with high foreign investment prior to the banking crisis, tended to unwind cross-shareholdings far more than low-profit firms with low foreign ownership (Miyajima and Kuroki, 2007).

2.2. Vertical keiretsu

Vertical keiretsu firms have more recent origins (Morck and Nakamura, 2005). Whereas the "main bank" plays a central role in the horizontal keiretsu, the 'core' of the vertical keiretsu is a manufacturing firm, surrounded by 'ancillary' firms; primarily its suppliers and customers (Banerji and Sambharya, 1996). Consequently, equity cross-holding is less important than product market relationships. In comparison to horizontal keiretsu, vertical groups exhibit greater pyramidal ownership (Morck and Nakamura, 2005).

Since members of vertical firms benefit most from transactional rather than financial ties, it is not surprising that liberalization of trade led to diminished traditional buyer-supplier ties throughout the 1990s. Ready access to reliable, quality suppliers diluted the advantages of vertical linkages. In addition, the increasing importance of technological skill may have encouraged firms to internalize important functions (Ahmadjian and Lincoln, 2001).

2.3. Economic and regulatory change

We examine the response of Japanese firms to changing economic and regulatory conditions (and the propensity of keiretsu-affiliated firms to engage in propping and tunneling). We consider three timeframes: (i) 1987–1991 representing strong economic growth; (ii) 1992–1996 demarcating the first five years of economic decline; and (iii) 1997–2001 capturing both significant regulatory change as well as intensified economic decline.

Japan's descent into recession began in the early 1990s with the collapse of stock and land values. The asset bubble burst as the Bank for International Settlements (BIS) began enforcing stricter maintenance of capital adequacy ratios for banks. Data from the OECD show that the preceding five-year period, 1987–1991, was one of strong growth along most indicators. Hoshi and Kashyap (2004) pinpoint 1992 as a pivotal year in which the Japanese economy began to under-perform. By 2002, they estimate that the economy was under-performing by 10%. However, GDP actually declined only in the final period (1997–2001).

The second timeframe (1992–1996) captures economic decline and the onset of a credit crunch arising from falling asset values

[1] In 2000, Sumitomo and Mitsui merged to become the Sumitomo Mitsui Banking Corporation while Sanwa became part of the Bank of Tokyo Mitsubishi group in 2001.