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Dynamic capital structure and political patronage: The case of Malaysia



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ABSTRACT

This paper investigates the effect of political patronage on firms' capital structure. The evidence is from Malaysia, a country characterised by relationship-capitalism, and covers 1988 to 2009. Using a system GMM estimator we find firms set leverage targets and adjust towards them following deviations at the rate of 28% per annum. Next, we construct a natural experiment and use a difference-in-differences model to investigate if the strategic financing decisions of politically patronised firms differ from non-connected firms after an exogenous shock caused by the 1997 Asian crisis. Our results unambiguously demonstrate a significant difference in the capital structure of patronised firms relative to non-connected firms following the exogenous shock but only for the crisis period 1998–2001. After 2002 the capital structures of patronised and non-connected firms are statistically equivalent.

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1. Introduction

Prior research demonstrates that many firms set capital structure targets. Targeting implies firms make strategic choices on leverage and respond to temporary deviations by rebalancing the mix of debt and equity financing (see DeAngelo et al., 2011; Flannery & Rangan, 2006; Graham & Harvey, 2001; Hovakimian et al., 2001; Jalilvand & Harris, 1984; Kayhan & Titman;, 2007; Leary & Roberts, 2005). These decisions affect firms' investment choices, capital costs and expected returns, and could trigger conflicts of interest between firms' stakeholders. Whilst targeting requires firms to balance the merits of overand under-leverage relative to adjustment costs, full adjustment is unattainable because of market frictions, which infers firms face perpetual financing choices since sub-optimal financing decisions could realise lower firm value or increase the probability of bankruptcy.

The objective of this paper is to evaluate firms' capital structure choices under political patronage. Whereas the value of political connections to firms is well documented (see Faccio, 2006, 2010; Fisman, 2001; Khwaja & Mian, 2005; Leuz & Oberholzer-Gee, 2006; Shleifer & Vishny, 1994; Wu et al., 2012), the impact of patronage on firms'

strategic decision-making is not. Our evidence comes from Malaysia which is representative of economies characterised by relationshipcapitalism.² We define political patronage to include informal connections between politicians and firms according to personal histories (see also Faccio, 2006; Faccio, Masulis and McConnell, 2006; Johnson & Mitton, 2003; Johnson, Kochhar, Mitton & Tamirisa, 2006; Mitchell & Joseph, 2010). The source of this information is Gomez and Jomo (1997). A second more formal type of patronage arises when Malaysia's sovereign wealth fund (Khazanah Nasional Berhad, KNB) and government sponsored entities (like Permodalan Nasional Berhad, PNB) acquire equity holdings in firms. Fraser et al. (2006) claim investments by KNB reflect political patronage associated with government's industrialisation policies, whilst patronage through PNB complies with development policies to increase native Malays' equity holdings (see Section 2.3). We identify investments by the KNB and PNB from their websites. Historically, Malaysia's governments influenced corporate activities through listing restrictions, direct equity stakes, control of banks, and government-sponsored investor vehicles (Gomez & Jomo, 1997). Consequently, politically connected firms carry more debt (Bliss & Gul, 2012; Fraser et al., 2006; Johnson & Mitton, 2003).

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 $^{^{\}rm 1}\,$ Graham and Harvey (2001) report that 81% of firms use a target debt ratio or range in financing decisions.

² Transparency International's Corruption Perceptions Index (CPI) measures public sector transparency and accountability. The 2012 CPI score for Malaysia is 49 (maximum of 100) ranking Malaysia as 54 of 176 countries. Since its inception in 1995, the annual CPI for Malaysia shows public sector corruption neither improves nor worsens, and remains an anomaly.

The paper has two main aims. First, to determine the optimal capital structure of Malaysian firms on the basis of a set of "core factors"; namely, size, profitability, tangibility, investment opportunities, an industry benchmark for target leverage, and business risk (see Frank & Goyal, 2009, p. 9). "A We analyse relationships to establish if the determinants of capital structure are explained by either the trade-off or pecking order theories, or by an amalgamation as indicated by dynamic trade-off theory. Using the partial adjustment technique, used commonly to empirically validate the trade-off theory, we estimate the speed of adjustment for Malaysian firms to provide evidence from an emerging market under relationship-capitalism.

A second aim is to precisely gauge the effect of political patronage on firms' financing decisions. Invoking a natural experiment setting, we classify firms as politically connected (patronised) or non-connected and contend the 1997 Asian crisis constitutes an exogenous shock to Malaysian firms. A difference-in-differences framework empirically validates the following propositions: firms' respond to an exogenous shock by revising capital structure decisions; second, patronage enables politically connected firms to behave differently to non-connected firms. We examine if firms' financing decisions differ between an in-crisis period and subsequent recovery period, and whether patronage confers any effects in each period. To evaluate these propositions, the preferred econometric specification for the model specifies two post-shock periods and realises separate effects for patronised firms. The model is augmented with the core factors to identify predictive power and the impact of patronage, and also to reveal cross-time changes in financing strategies.

It is intuitive that firms' net operating incomes and equity prices would fall during an economic downturn and realise a jump in leverage causing anxiety to investors because of a perception that a firm is on the brink of bankruptcy. Consequently, firms either: (i) raise equity capital to reduce financial risk; or (ii) reduce debt. Raising capital in form of equity is not feasible due to the uncertainty over the duration of a crisis. Firms are compelled to cut debt by forgoing growth options or sell assets at fire sale prices thereby delaying economic recovery. However, patronised firms hold a critical advantage in the form of an implicit government guarantee they will be financially supported and not be allowed to fail. During periods of uncertainty, a close relationship between borrowing firms and lenders becomes a more important determinant of leverage than market-based explanations (Deesomsak et al., 2004). Thus, patronised firms find borrowing easier. Nevertheless, implicit government support could fade under the intensity of a crisis if the crisis raises systemic risk and causes disquiet in the ruling political party (as in Malaysia under the United Malays National Organization— UMNO) and jeopardises the government's future (see Johnson & Mitton, 2003; Mitchell & Joseph, 2010; and Prasso et al., 2009).

We source financial statements data on 751 Malaysian firms from 1988 to 2009, yielding 7042 firm-year observations. Each firm is classified as either politically patronised or non-connected. We use the system GMM estimator (Arellano & Bover, 1995; Blundell & Bond, 1998) to estimate the dynamic capital structure of Malaysian firms, and regression analysis to estimate the difference-in-differences model. Various checks assess the robustness of the results.

In preview, the results show Malaysian firms do target leverage and adjust towards the optimal level at an estimated speed of 28% per annum, which is comparable with speeds reported for other countries. The analysis of the determinants of capital structure support a theoretical study (Ebrahim & Mathur, 2013) and show the trade-off theory and pecking order theory are complementary. The determinants are mostly stable across time though the economic importance of some factors

changes. A second set of results shows Malaysian firms amend capital structure during the crisis with patronised firms reducing debt quicker than non-connected firms. It suggests politically connected firms suffer more when an exogenous shock limits government's ability to patronise (Johnson & Mitton, 2003). The observed differences for patronised firms dissipate in the recovery period.

The remainder of the paper is organised as follows. Section 2 surveys literature and offers further motivation. It contains sub-sections on capital structure; the role of political patronage; and political patronage in Malaysia. Section 3 shows the methodological framework. Section 4 presents the core factors and theoretical expectations. Section 5 discusses data. Section 6 presents the results from the dynamic capital structure and difference-in-differences models. Lastly, Section 7 concludes.

2. Literature and motivation

2.1. Capital structure

The capital structure debate originates with the irrelevance theorem of Modigliani and Miller (1958) proving independence of capital structure and firm value. The result is conditional upon assumptions bearing scant resemblance to the real-world: perfect capital markets; an absence of taxes, bankruptcy risk and liquidation costs.

Subsequent developments incorporate market frictions such as corporate taxes (Modigliani & Miller, 1963) yielding an optimal capital structure of 100% debt maximising firm value. This model too omits several relevant factors. Miller (1977) extends the above model by introducing personal income tax. The solution derives when the marginal benefit from increasing leverage (shielding profit from tax) is equal to the marginal cost of enticing equity holders into debt (attractive interest rates offsetting the favourable tax treatment individuals receive on equity). This solution yields a constant average capital costs resembling Millers' earlier work with Modigliani.

One factor missing is bankruptcy risk. This suggests a trade-off approach (see Myers, 1984). That is, an optimal capital structure occurs at level of leverage where the marginal cost (higher probability of financial distress) and marginal benefit (tax shield advantage) of increasing debt equate. Agency costs are yet another factor. In selecting a capital structure, firms should consider agency costs stemming from conflicts of interest between their different stakeholders (Jensen, 1986; Jensen & Meckling, 1976; Myers, 1977). At highly levered firms, equity holders benefit from upside risk. Debt holders could protect their interests through monitoring firm managers (and enhanced disclosure requirements), but this action raises costs. Apart from stock holder-debt holder conflicts, the literature highlights one further agency issue, which is the agency issue arising between various classes of equity owners of patronised firms (see Sections 2.2 and 2.3).

Whilst trade-off theory provides useful insights on capital structure, it does not explain the negative stock price reactions to corporate financing events which are more severe for equity offerings than debt (Denis, 2012). Myers and Majluf (1984) contend that firm managers know outside investors discount firms' stock prices, leading firms to either avoid issuing equity or issue when mangers perceive equity is overvalued. On this basis, Myers (1984) proposes the pecking-order theory which posits that firms exhibit a preferred hierarchy in financing decisions. Firms minimise adverse selection problems by issuing the least information-sensitive securities (debt) first, before they issue more information-sensitive securities, and lastly equity. Therefore, as firm profitability improves, leverage falls because retained earnings

³ Shleifer and Vishny (1992) posit that liquidation values of assets in place also impacts on the level of debt (Benmelech et al, 2005, and Brown et al, 2006 offer empirical evidence).

⁴ Lemmon et al (2008) find these factors explain as much as 80% of variation in leverage ratios

⁵ 5 Myers (2001, p. 96) suggests bankruptcy costs are part of agency costs: "conflicts (meaning agency issues) between debt and equity investors arise when there is a risk of default. If debt is totally free of default risk, debt holders have no interest in the income, value or risk of the firm. But if there is a chance of default, then shareholders gain at the expense of debt investors".

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