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Are All Regulatory Compliant Independent Director Appointments the Same? An Analysis of Taiwanese Board Appointments

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Abstract

Globally many regulators adopted a rules-based approach to independent director appointments stipulating '*independence*' criteria. This paper investigates whether partitioning a regulatory compliant sample of independent director appointments by prior affiliation to the board influences the relationship between ownership and control rights, and performance. We report a significant positive relationship between board independence and controlling shareholders' cash-flow rights for firms where the appointee had prior affiliation to the board, but no performance improvement. Firms where the regulatory compliant independent directors had no prior-affiliation to the board experienced significant improvement in firms' next period Return-on-Assets. Appointing affiliated directors is indicative diminished board quality, which is consistent with the empirical evidence that controlling shareholders determine board quality to accommodate tunneling to extract the private benefits of control to compensate for significant additional costs associated with concentrated ownership (Yeh and Woidtke, 2005; Luo *et al*, 2012; Liu *et al*, 2015). The positive association between performance and unaffiliated independent directors suggests a desire to introduce expertise to receive benefits via improved firm performance which is consistent with the literature, mostly from studies of emerging markets, reporting a causal link from independent directors to firm performance (Choi et al, 2007; Dahya *et al*. 2008; Liu *et al*, 2015).

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1.   Introduction

Inadequate corporate governance systems were believed to have contributed to, and exacerbated, the 1997-98 Asian financial crisis which provided impetus for reform in the region (Rajan and Zingales, 1998; Prowse, 1998; OECD, 1999; Johnson, La Porta, Lopez-de-Silanes and Shleifer, 2000a). A central tenet of Taiwan's reform package included enhancing board independence. Policy makers succumb to the conventional wisdom and recommended the introduction of the independent director system. From February 2002 listed firms were advised to appoint at least two independent directors and one independent supervisor to their board, whereas for new listings it was compulsory. Consequently, Taiwanese boards experienced a significant increase in the reported number of independent board member appointments over a concentrated period of time following the introduction of the voluntary governance code in 2002 (Liu and Yang, 2008; Young, Tsai and Hsieh, 2008).

Taiwan is an environment where controlling shareholders have overwhelming power to influence board composition with the 2002 governance reforms providing an institutional setting akin to a natural experiment (Filatotchev, Lien and Piesse, 2005; Strange, Lien, Piesse and Filatotchev, 2005, Yeh and Woidtke, 2005; Chou, Chung and Yin, 2013). Consistent with agency theory and empirical evidence, we proceed on the working assumption that controlling shareholders are self-interested and will only enhance board independence if they believe it is in their interest to do so (Classens, Djankov, Fan and Lang, 2002; Classens, Fan and Lang, 2006; Yeh and Woidtke, 2005; Dahya, Dimitrov and McConnell, 2008; Masulis, Wang and Xie, 2009; Liu, Miletkov, Wei and Yang, 2015). This paper evaluates the relationship between independent director appointments and the extent to which controlling shareholder's cash-flow

rights influence appointments, and if the definition of '*independence*' influences this relationship and subsequent firm performance.

Initially, we evaluate the full sample of firms comprising regulatory compliant independent director appointments. Consistent with the literature for emerging markets characterized by concentrated ownership we find that cash-flow rights (ownership) is significantly positively correlated with board independence whereas excess control rights (deviation of cash-flow from control-rights) is significantly negatively correlated with board independence. Typically, these findings would be attributed to the incentive-alignment and entrenchment hypotheses. Next, we examine the impact of prior-affiliation to the board. Empirical evidence highlights the importance of social ties when determining independence beyond conventional regulatory definitions. Hwang and Kim (2009) report that US boards went from being 87% independent under the conventional definition of independence to 62% when informal ties between directors and CEOs were accounted for. Likewise, in Taiwan, Liu and Yang (2008) report that the majority (58.4%) of board member appointments announced in 2002 as '*new*' independent directors sat on the board of the same company in 2001. When we partition our sample by affiliated and unaffiliated independent appointments we find that cash-flow-rights are only significantly positively correlated with the appointment of affiliated independent directors, but had no influence on the appointment of unaffiliated independent directors. The positive association between controlling shareholders cash-flow-rights and the appointment of affiliated directors in Taiwan can be interpreted as reflecting the desire of controlling shareholders to diminish board quality (Yeh and Woidtke, 2005). Luo *et al.* (2012) provide a more sophisticated analysis for this result than is typically cited in the literature. They argue that controlling shareholders are subject to significant

additional costs as block shareholders including additional risk from a lack of diversification, additional costs for information collection, processing and monitoring management, and are exposed to liquidity restrictions which results in a high discount on block shares' price in comparison to otherwise identical stock. Over low-to-medium levels of ownership incentive-alignment effects dominate which act as a substitute for independent directors and therefore predicts a negative relationship and a reduction in tunneling. While from medium-to-high levels of ownership costs increase exponentially and as a consequence controlling shareholders has an incentive to extract the private benefits of control via tunneling. This model argues that a positive association over medium-to-high levels of ownership reflects an entrenchment effect. In the context of our analysis the decrease in board quality from appointing affiliated independent directors is consistent with a desire to accommodate tunneling which may also explain the lack of any relationship between affiliated independent director appointments and performance given that "*tunneling*" in practice involves controlling shareholders' extracting the private benefits of control which involving the transfer of assets and profits out of firms via transfer pricing, subsidized personal loans, related party transactions, outright theft, higher CEO compensation and value-destroying acquisitions (LaPorta, Lopez-de-Silanes and Shleifer, 2002; Masulis et al., 2009; Su, Xu and Phan, 2008).

Stronger more independent boards have been credited with performance improvements for firms characterized by concentrated ownership (Bae, Kang and Kim, 2002; Dahya and McConnell, 2007; Dahya et al., 2008; Young et al., 2008; Black and Kim, 2012; Liu et al., 2015). We find a significant positive relationship between unaffiliated independent director appointments and subsequent firm performance reflected in a significant increase in next period Return-on-Assets.

Whereas it was statistically insignificant for affiliated independent director appointments. A consistent robust finding throughout our analysis is a concave-quadratic relationship between board size and the demand for independent directors. This specification entered our analysis primarily as a control variable. The consistency of this relationship throughout our analysis provides a pointer for further research.

Our findings provide important insights for Taiwan and the general literature on board independence. Our initial results showing statistically significant relationships for measures of incentive-alignment and entrenchment are consistent with the extant literature. When prior-affiliation to the board is introduced to the analysis only affiliated appointments are statistically significantly correlated with controlling shareholders cash-flow-rights. However, in terms of performance, improvements are driven by unaffiliated independent directors. It's important to remember our analysis is predicated on the assumption that controlling shareholders have the power to appoint who they choose: affiliated or unaffiliated. It appears from our analysis that when they desire performance improvement they appoint unaffiliated expertise, whereas when they wish to accommodate tunneling to provide a substitute channel to compensate for the costs of block ownership they reduce board quality by appointing affiliated independent directors.

Generally, it is important to note that in a voluntary enhancement institutional environment controlling shareholders chose a mix of independent directors whom they knew previously and who were new to the board, who then appear to have made different contributions. We posed the question: are regulatory compliant independent director appoints all the same? Our analysis clearly demonstrates that their contributions differ. From a regulator's perspective a natural question, or thought

experiment, to conduct is to ask if these appointments were in the best interests of all stakeholders including minority shareholders and can these insights provide a policy recommendation to improve the rules-based appointment criteria? If performance benefits can be attributed to the appointment of unaffiliated independent directors, the question arises whether it is in everyone's best interest for regulators to stipulate unaffiliated independent appointments to boards of firms where controlling shareholders have significant cash-flow-rights and, as has been documented empirically, are unlikely to enhance independence. This should improve board quality and possibly ameliorate the principal-principal agency problem. There is significant scope for extending research in this area to quantify if firms characterized by highly concentrated ownership who appointed affiliated independent directors subsequently engaged in tunneling.

Our analysis took place during Taiwan's 2002-2004 nascent stage of governance reform which helps complete the governance jigsaw for Taiwan and developing economies. It may help inform the ongoing independent director debate in Taiwan. New rules from 2015[1] allow for the re-election of independent directors which comprises affiliated and unaffiliated independent directors. And that all listed firms should have independent directors on the board between 2015 and 2017 consistent with 3-year election cycles which leads to all firms having independent directors by 2017. However, this is for appointments under the regulatory criteria of independence. At the very least, our analysis should convince regulators to consider the definition of independence and consider the possibility that the degree of independence can have differential effects. Self-interested controlling shareholders will appoint individuals whom they believe protect their interests in a voluntary

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[1] Security Exchange Act, Article 14-2. The detail of rules please refer to section 2.1.

environment. The contemporary challenge for Taiwanese regulators is to develop appointments rules which protect the interests of all stakeholders. Our analysis suggests that prior-affiliation to controlling shareholders and to the board is a dimension they should consider. A simple rule derived from our analysis could be that independent directors must not have sat on the board previously. Overall, our findings contribute to the literature supporting a causal link from independent directors to performance for developing economies, and the relatively limited results examining social ties.

The remainder of the paper is organized as follows. Section 2 sets the context of the paper by providing an overview of Taiwan's corporate governance reforms and provides a review of the theoretical and empirical literature. Section 3 develops our hypotheses. Section 4 describes the sample and methodology, while section 5 presents the empirical results and discusses opportunities for further research. Section 6 concludes the paper.

2. Literature Review

2.1. *Corporate Governance in Taiwan*

Taiwan, like many other East-Asian economies, followed the global trend of governance reform with the 1997-98 Asian financial Crisis providing impetus for change in the region. Liu and Yang (2008) account the details of the reform and associated academic and legal references. Taiwan adhered to the conventional wisdom and adopted the independent director system as one mechanism for protecting the interests of minority shareholders (OECD, 1999; Clarke, 2006; Liu and Yang, 2008). From February 2002 Taiwan Stock Exchange Corporation (TWSE) and GreTai Securities Market (GTSM, an OTC market) listing rules were amended requiring new

listing's boards to include at least two independent directors and one independent supervisor. Ostensibly, supervisors have extensive powers with the remit to monitor and discipline management, and to act as conduits for dispute resolution between management and shareholders. If they have the support of the shareholders they can, in theory, remove senior management. It would therefore appear that supervisors provide a robust independent monitoring mechanism similar to that advocated for non-executive directors in the US and UK. In practice anecdotal and empirical evidence does not support this conjecture.[2]

To necessitate successful introduction of an independent director system the Company Act 2001 was amended to eliminate shareholder requirements to allow for non-shareholding professionals to become eligible for appointment as directors and supervisors[3]. Beforehand, shareholding requirements tended to increase the extent of board affiliation to controlling families as family members more often than not had the necessary level of ownership to be considered for appointment to the board (Filatotchev et al., 2005). Taiwan's 'Corporate Governance Best-Practice Principles for TWSE/GTSM Listed Companies' (hereinafter the Code), published in 2002, was modeled on OECD corporate governance principles. The Code allowed the separation of independent directors' and supervisors' compensations plans from those of other directors. While the Code was endorsed both by the TWSE and GTSM, it was implemented on a voluntary basis.[4] Even though Taiwan's corporate governance code

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[2] Strange et al. (2005), Filatotchev et al. (2005), Yeh and Woidtke (2005) and Liu and Yang (2008) collectively provide a synopsis of Taiwan's institutional background and detail the precise roles and responsibilities of supervisors. The tenet of the argument we are primarily interested in here is to establish the degree of supervisor independence and significant idiosyncratic features. We direct interested readers to these citations for a detailed account and also for a comparison of Taiwan with other similar governance systems.

[3] Company Act, Article 192 (for TWSE firms) and 216 (for GTSM firms).

[4] From January 2007 onward it was compulsory for financial institutions and listed non-financial companies to have paid-in-capital of more than NT\$ 50 billion (Security and Exchange Act, article 14-2). They were required to have at least two independent directors or at least one-fifth of directors on a company board had to be independent. The Taiwanese government further enhances corporate

was introduced on a voluntary basis it led to a significant change in board composition over a relatively concentrated period. Young et al. (2008) point out that 'surprisingly' the proportion of unaffected firms that voluntarily appointed at least one independent director increased significantly from 5.99% in 2001 to 36.42% in 2002. Liu and Yang (2008) report that 58.4% of independent directors announced to be new board appointments sat on the board of the same company in 2001. Their status on the board was changed simply by adding '*independent*' to their original title.

2.2. *Theoretical and Empirical Literature*

Considerable empirical investigation has sought to assess how various monitoring and control mechanisms ameliorate management behaviour with various degrees of separation of ownership from control, with the resultant moral hazard problem, asymmetric information and atomistic, or highly dispersed, ownership. Governance characteristics typically found in the US and UK. In contrast, ownership around the globe tends to be concentrated (e.g. Khanna and Palepu, 2000; Bebchuk, Kraakman and Triantis, 2000; Classens, Djankov and Lang, 2000; Classens, Fan and Lang, 2006). Ownership in East-Asian economies is also typically concentrated which is achieved through the issuance of dual-class shares, cross-holdings and the creation of pyramidal holdings which allows for this divergence between control and cash-flow rights.

Concentrated ownership structure shifts the focus away from management expropriating from minority shareholders to majority shareholders who have the opportunity to expropriate wealth from minority shareholders (e.g., Grossman and Hart, 1988; Shleifer and Vishny, 1997). Bebchuk et al. (2000) provide an analytical

governance by mandating all listed companies to include independent directors on their boards between 2015 and 2017.

framework to help identify the incentive structure of an entrenched minority shareholder when the threat of takeover is absent. The key prediction from their model is that, in the absence of constraints, agency-costs associated with concentrated ownership firms increase rapidly as the fraction of equity cash-flow rights held by the controller declines. Legal systems have the potential to impose significant constraints on controllers' propensity to expropriate. In the context of East-Asian economies, empirical evidence suggests that it is unlikely given the civil law origin of many of the country's legal systems with a substitution effect between external and internal governance mechanisms, such as board structure, being relatively more important (LaPorta, Lopez-de-Silnes, Shleifer and Vishny, 1998; Klapper and Love, 2004; Ferreira and Matos, 2008;). It is more likely that these countries legal systems enhance controllers' expropriation opportunities. Johnson *et al*. (2000a) introduce the concept of 'tunneling', which they define as '…*the transfer of assets and profits out of firms for the benefit of their controlling shareholders'*. Their essential contribution is to highlight how courts in countries which have emerged from the civil law tradition accommodate tunneling. Johnson, Boone, Breach and Friedman (2000b) also provide a model in which a sudden loss of investor confidence, in conjunction with weak enforcement of minority investor's right, leads outside investors to reassess managers' propensity to expropriate. Consequently, they adjust their capital commitment resulting in a fall in asset values and an exchange rate collapse. Their subsequent empirical analysis of the 1997-98 Asian financial crisis provides empirical support for this contention. Bae *et al*. (2002) investigation of Korean business groups' acquisitions activity provides evidence supporting the tunneling hypothesis. Overall, it seems reasonable to conclude that legal systems rooted in the civil law tradition,

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which provide weak investor protection, don't appear to impose a significant constraint on controlling shareholders in economies like Taiwan.

Controlling shareholders' propensity to expropriate from minority shareholders may be curtailed by the introduction of independent directors.[5] They are purported to contribute strategically to corporate policy and/or represent a credible cost-effective monitoring and control mechanism (Fama, 1980; Fama and Jensen, 1983a, 1983b). Globally, corporate governance reformers in concentrated ownership economies alike have been convinced by the perceived benefits of outside director representation on boards. A raft of countries recommended, or made mandatory, minimum levels of independent director representation on corporate boards: specifying either the number, fraction, or a combination of both, and stipulating '*independence*' criteria for independent director appointees (Dahya and McConnell, 2007).

General governance factors, including ownership structure and board characteristics, have been linked to strategic decision making and contemporaneous, short- and long-term corporate performance (e.g. Hermalin and Weisbach, 1988; Cho, 1998; Anderson and Reeb, 2003; Filatotchev et al. 2005; Yeh and Woidtke, 2005). Specifically, in the case of independent directors, they have been shown to have been a significant factor in US take-over bids and defenses, were more likely to join firms who had performed poorly, and that their appointment to large firms led to a significant positive market response (e.g. Brickley, Coles and Terry, 1994; Cotter, Shivdasani and Zellner, 1997; Hermalin and Weisbach, 1988; Mace, 1986). UK

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[5] Adams, Hermalin and Weisbach (2010) survey the literature on the role of boards. We direct readers new to the literature to this paper. In this paper we focus on the how outside director classification as independent and their impact on performance primarily for concentrated ownership studies. The evidence from studies for dispersed ownership, mostly US, identifies three reason why the empirical evidence failed to establish a causal link between outside directors and performance: endogeneity (Demsetz and Lehn, 1985; Lehn, Petro and Zhao, 2009), the impact of poor past performance (Hermalin and Weisbach, 2003), and listing requirements and research design problems (Dahya and McConnell, 2007).

evidence supports the contention that the appointment of independent directors led to a significant positive market response, which exhibited a temporal pattern, was conditional upon interaction between the magnitude of the agency costs and the monitoring incentives of the appointee, and that firms who complied with the Cadbury Report recommendation of three outside directors experienced a significant improvement in operating performance with the appointment of non-executive directors viewed positively by the market (Lin, Pope and Young, 2003; Peasnell, Pope and Young, 2003; Hamill, McGregor and Rasaratham, 2006; Dahya and McConnell, 2005, 2007; Mura, 2007).

In countries with weak legal protection for investors, which also tend to have concentrated ownership structure, firms are subject to a market value discount reflecting the propensity of controlling shareholders to expropriate resources (Classens, Djankov, Fan and Lang, 2002; La Porta, Lopez-de-Silanes and Shelifer, 2002). Dahya et al. (2008) report that, for a sample of firms spanning twenty-two countries, that dominant shareholders with an incentive to off-set the market value discount can do so, to some extent, by appointing an independent board. However, their sample does not include Taiwanese firms. Luo *et al* (2012) develop a theoretical model, and test its predictions for a sample of Chinese companies from 2003 to 2006. They predict a non-linear, convex-quadratic (U-shaped), relationship between controlling shareholder's cash-flow rights and the extent to which they extract private benefits of control. Their model rests on the well-documented substitution effect of concentrated ownership for ineffective legal systems in emerging economies and the additional costs borne by controlling shareholders and the net cost-benefit which leads to the predicted U-shaped relationship which emerges over low to high levels of ownership concentration. Over low levels of ownership incentive-alignment effects

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dominate with a negative relationship between controlling shareholders cash-flow rights and extraction of private benefits of control (PBC), which becomes positive over medium to high levels as controlling shareholders seek to extract PBC to compensate for the exponential increase in cost associated with concentrated ownership. They empirically assess the PBC using the price premium for block share transactions. The report that the average size of the PBC is 10.66% and firms with more independent directors on the board and firms with multiple large shareholders had significantly lower PBC for controlling shareholders. Consistent with their theoretical model, they also report a significant non-linear relationship between controlling shareholder's PBC and their cash-flow rights. More recently, Liu *et al.* (2015) investigate the board independence-performance relationship for a comprehensive sample of firms, from 1999 to 2012, listed on China's Shanghai and Shenzhen stock exchanges. They report a significant improvement in firms' operating performance which was found to be more pronounced for government-controlled firms and in firms where the costs of acquiring firm specific information was lower for independent directors. They also report that firms which voluntarily appointed independent directors prior to China's deadline on 30th June 2003 experienced higher performance than those that did not, and that firms that appointed more independent directors than the required minimum following the deadline also experienced significantly better performance than those who chose not to exceed the minimum threshold of one-third independent directors. Overall, they conclude board independence reduces tunneling.

In general, there has been limited analysis of corporate governance issues in Taiwan. The extant literature focuses on the influence between ownership structure and corporate events such as proxy contests, financial distress, firm performance, and

foreign direct investment decisions (e.g. Huang and Yen, 1996; Ko, Ding, Liu and Yeh, 1999; Yeh, Lee and Woidtke, 2001; Filatotchev et al. 2005; Strange et al., 2005). Yeh and Woidtke (2005) investigate the determinants of board composition and firm valuation effects for a sample of non-financial listed companies in 1998. They report that controlling shareholders influence the board selection process, and the extent of director affiliation to controlling families is a suitable proxy for governance quality: a board with a majority of affiliated directors being indicative of poor quality governance, and vice versa. Ensuring board dominance came at a cost with firms with controlling families subject to a market value discount. Young et al. (2008) investigate the factors that motivated Taiwanese firms to voluntarily increase board independence by appointing independent directors in response to governance reforms introduced from 2002 and the subsequent impact on firm performance. They report a positive performance impact and that firms with weaker alternative governance mechanisms and greater agency costs were more likely to voluntarily improve their board independence, whereas firms with family CEOs and family-dominated boards were less likely to voluntarily improve board independence; a result supporting the managerial power view.

3.   Hypothesis development

Incentive-alignment and entrenchment effects have been proxied by ownership and control variables which attempt to capture various facets of controlling shareholders' incentives. Ownership is calculated from cash-flow rights whereas control is based on voting rights (Classens et al. 2000, 2006; Yeh and Woidtke, 2005). Ownership tests the incentive-alignment hypothesis whereas divergence of ownership from control tests the entrenchment hypothesis. Controlling shareholders face a utility maximizing

objective function which trades off the benefits from signaling to the market potential value enhancing decisions, such as the appointment of independent directors and supervisors, against the benefits from expropriation. As cash-flow rights increase, or divergence between control and cash-flow lights is minimal, controlling shareholders benefit from increasing shareholder wealth relative to the benefit from forgoing the opportunity to expropriate. In this situation, controlling shareholders prefer to appoint independent directors or supervisors to signal that they intend enhancing the quality of the board by enhancing board independence. This leads to our first testable hypothesis:

Hypothesis 1 (H_1): Ceteris paribus, ownership (Cash-flow rights) is positively correlated with the appointment of independent directors and supervisors.

Ownership and control patterns reported in the empirical literature confirm that for many economies controlling shareholders' control rights significantly exceeds their cash-flow rights (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Classens et al., 2000; Faccio and Lang, 2002). Consistent with the rationale underpinning the development of hypothesis 1, as the divergence between control and cash-flow rights increases, the benefit to controlling shareholders from the opportunity to expropriate potentially exceed relative gains in shareholder wealth. Consequently, it would be expected that if controlling shareholders wished to extract the private benefits from control, or '*tunnel*', resources at the expense of minority investors they are less likely to appoint possibly interfering independent directors and supervisors. This leads to our second testable hypothesis, the entrenchment-hypothesis:

Hypothesis 2 (H₂): Ceteris paribus, divergence in ownership from control is negatively correlated with the appointment of independent directors and supervisors.

A common theme in the independent director literature is support for agency theory, both principal-agent and principal-principal varieties, which simple highlights those with power and control have a tendency to engage in self-serving behavior: professional managers with dispersed ownership and controlling shareholders when ownership is concentrated (e.g. Classens *et. al*. 2002; Classens *et. al*. 2006; La Porta *et. al*., 2002; Yeh and Woidtke, 2005; Dahya et. al. 2008). Typically, studies evaluating self-serving behaviour of executives who have an incentive to expropriate due to an ability to drive a wedge between ownership and control for European, Asian, and East-Asian firms. Masulis *et al*. (2009) provide an important contrast for a sample of US firms with dual-class shares. They support the agency hypothesis and identify channels through which executives expropriate resources and destroy firm value. Previously we argued that the opportunity to drive a wedge between control (voting rights) and cash-flow rights aggravates the agency problem. As insiders control disproportionately more voting rights than cash-flow rights and as a consequence bear a smaller proportion of the financial consequences of their decisions (Masulis *et al*., 2009). In the context of concentrated ownership firms, minority shareholders only benefit from a positive externality if it is in the controlling shareholders interest to increase firm value. The empirical evidence reporting an off-set of the market value discount accompanying the appointment of stronger more independent boards by Dahya *et al*. (2008) comes about simply because controlling shareholders have an incentive to signal to the market they intend refraining from diverting resources away

from the firm for their personal benefit. An important aspect of the independent director debate is the definition of '*independence*'. Typically, governance codes specify an '*independence criteria*' defining independence from the CEO, and/or its director(s) is subjective. Hwang and Kim (2009) evaluate the degree of director independence for two criteria: a traditional metric based on whether a director has financial or familial ties to the CEO, and a second criteria encompassing informal ties including mutual alma mater, military service, regional origin, academic discipline and industry. They report that 87% of boards in the US are conventionally independent whereas 62% are conventionally and socially independent.

Cash-flow rights and deviation of cash-flow from control rights are standard proxy variables in the concentrated ownership literature to capture controlling shareholder incentive-alignment and entrenchment. Where our paper differs is in the definition of director independence. Similar to Liu and Yang (2008) and Hwang and Kim (2009), we employ two criteria: that promulgated by the regulatory authorities and a simple '*affiliated*' versus '*unaffiliated*' criteria. If a new independent director sat on the same board the previous year they were categorized as affiliated and vice versa for unaffiliated. Empirically, we test H_1 and H_2 under both criteria. Independence from, and affiliation to, controlling shareholders/CEOs/board is at the heart of the independent director literature. *Ex-ante*, we believe this approach has the potential to contribute to the literature and contribute to the ongoing policy debate in Taiwan. Introducing a simple affiliation criterion builds upon the logic of Liu and Yang (2008) and Hwang and Kim (2009), who investigate the impact of conventional independence stipulated by the governance code, to account for the potential influence of prior affiliation.

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While UK and the US firms share similar ownership and control structures, outside director representation is an area of notable difference. The boards of US firms have historically had significant outside director representation. In contrast, prior to the 1990s, UK boards were dominated by executive inside directors (Peasnell, Pope and Young, 2003). It wasn't until firms began complying with the recommended three non-executive directors of the Cadbury Report (1992) that the makeup of the boardroom changed significantly. An event study analysis from 1993 to 1996 by Lin *et al*. (2003) reported that the average impact was indistinguishable from zero, but when board ownership was low and appointees had strong monitoring incentive the market reaction was higher. In contrast for a sample of non-financial firms from 1989 to 1996 Dahya and McConnell (2007) report a significant increase in shareholder wealth of 0.44% when the announcement of an outside director appointment brought the number of outside directors to the recommended Cadbury level of at least 3. They also document a significant improvement in operating performance whereas Mura (2007) reports a significant positive relationship between the proportion of outside directors on the board and firms' performance (Tobin's q). Dahya et al. (2008) report that for a sample of 22 developed and developing countries in 2002, excluding Taiwan, that firm value (market-to-book value ratios) is positively correlated with the fraction of the board composed of independent directors. Choi, Park and Yoo (2007) investigate if enforced introduction of the outside director system affected performance (Tobin's q). The Korean Government's mandated a minimum 25% outside director representation for the boards of listed firms in 1997. Previously, outside representation was uncommon. Choi *et al*. find that the proportion of independent outside directors was positively correlated with performance as well as foreign institutional ownership. And that idiosyncratic domestic factors such as family

or chaebol affiliation reduced performance. Black and Kim (2012) also provide evidence supporting the board independence-performance relationship in Korea which was conditional upon firm size, with Liu et al. (2015) also reporting operating performance benefits to enhancing board independence for Chinese firms. Collectively, there is a growing literature supporting a causal link from board independence to performance for emerging markets. One aim of this paper is provide additional country-specific evidence for Taiwan. Consequently, for our third testable hypothesis we have:

> *Hypothesis 3 (H₃): Ceteris paribus, the appointment of independent directors is positively correlated with firm's subsequent operating performance.*

4. RESEARCH DESIGN

4.1. *Data*

The initial sample for this study consists of all non-financial firms listed on the TWSE and GTSM from 2002 to 2004. According to the TWSE and GTSM listing rule only IPO companies which listed after February 2002 must have at least two independent directors and one independent supervisor. Consequently, new listings were excluded. Board composition data was collected from annual reports, company prospectus, MOPS and 'Business Groups in Taiwan', which is published by China Credit Information Services Ltd.[6] Accounting data and ownership data such as control rights and cash-flow rights were collected from the Taiwan Economics Journal (TEJ)

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[6] Market Observation Post System (MOPS) is set by TWSE and GTSM (http://newmops.com.tw/). China Credit Information Service LTD is a databank company that has been in business for more than three decades. 'Business Groups in Taiwan' provides the group-affiliation information and family ties to assist us to these ultimate ownership, pyramid structure and cross-shareholding in group-affiliated companies.

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database. Financial firms and firms where the ownership and accounting data could not be found were eliminated. Taiwanese listed companies re-elect directors and supervisors at the annual general meeting every three years, and also usually select independent directors and independent supervisors during the re-election. This study collected sample for firms which had a re-election at the annual general meeting from 2002 to 2004. Table 1 reports the selection criteria of this study. The initial sample of firms listed on the TWSE and GTSM in 2002 are 544 and 334 companies, respectively. After eliminated IPO companies which listed after February 2002 (67 firms in TWSE and 48 firms in GTSM) and financial companies (27 firms in TWSE and 13 firms in GTSM), the sample consists of 450 firms on the TWSE and 273 firms on the GTSM. Also, based on the re-election process, there are 168, 145 and 137 firms for 2002, 2003 and 2004 for TWSE, and 85, 91 and 97 firms from 2002 to 2004, respectively. Consequently, after eliminating firms where the ownership or accounting data was missing, a total of 416 companies listed on the TWSE and 169 companies listed on the GTSM were in the final sample.

Companies were classified into two groups: if a company appointed an independent director or independent supervisor, it was classified as a compliant firm.[7] Under this classification, there are 45, 26, 29 (27, 19, 9) firms in TWSE (GTSM) were classified into the compliant group from 2002 to 2004, respectively. Initially, we adopt the independence criteria stipulated in Article 9 of the TSE Listing rules, Article 17 of the Supplementary Provisions, and Articles 10 and 10-1 of the GTSM Listing rules. Young et al. (2008) adopt the same criteria. An independent director fulfils the following criteria: has a minimum of 5 years of relevant experience in business, law, finance or firm operations; is not an employee of the firm nor a director, supervisor,

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[7] Only a few companies complied fully - at least two independent directors and at least one independent supervisor - on the board.

or employee of one of its affiliated enterprises; does not directly or indirectly own more than 1% of the firm's outstanding shares, nor is (s)he one of the top ten institutional shareholders; is not a member of the core family (e.g., spouse, child, parent, grandchild, grandparent, or sibling) of any person specified in the preceding two conditions; is not a director, supervisor, or employee of a legal entity which directly or indirectly owns more than 5% of the firm's issued shares, nor a director, supervisor, or employee of the top five legal entities that hold the shares; is not a director, supervisor, or manager of a firm or institution which has business relationships with the firm, nor a shareholder who owns more than 5% of such a firm; is not an owner, partner, director supervisor, manager, or spouse of any sole proprietor business, partnership firm, or institution that provided the firm or its affiliates with financial, business, consulting, or legal services in the previous year; is not a juridical person or its representative pursuant to Article 27 of Taiwanese Company Law. Firms are required to disclose in their annual report how their board of directors conforms with this independence criteria, and are required to disclose in accordance with 'Criteria Governing Information to be Published in Annual Reports of Public Firms'. We further classified the compliance group into affiliated independent appointment and unaffiliated independent appointment. There are 30, 11, 7 (17, 9, 2) firms in TWSE (GTSM) classified as affiliated independent appointments who was already sat on the board before the election year from 2002 to 2004.

Insert table 1 about here

4.2.   Model

The objective of this study is to investigate the influence of ownership structure and board characteristics on firms' decision to appoint independent directors and supervisors to corporate boards in Taiwan. We examine this issue using the following modeling framework:

$$\text{Compliant}_{it} = \alpha + \sum_{n=1}^{N} \beta_n \text{Own}_{nit} + \sum_{k=1}^{K} \gamma_k \text{Board}_{kit} + \sum_{r=1}^{R} \lambda_r \text{Control}_{rit} + \varepsilon_{it} \tag{1}$$

Where *Compliant* is independent director or supervisor appointments to firm *i* in year *t*, *Own* is a vector of *N* ownership-level variables, *Board* is a vector of *K* board-level variables, and *Control* is a vector of *R* firm-level control variables. Equation 2 empirically implements equation 1.

$$y = \alpha_{i,t} + \beta_1 Ownership_{i,t-1} + \beta_2 Excess_{i,t-1} + \gamma_1 Dira_{i,t-1} + \gamma_2 Supa_{i,t-1} + \gamma_3 Duality_{i,t-1}$$
$$+ \gamma_4 Bsize_{i,t-1} + \gamma_5 Bsize_{i,t-1}^2 + \lambda_1 Q_{i,t} + \lambda_2 ROA_{i,t} + \lambda_3 Q_{i,t-1} + \lambda_4 ROA_{i,t-1} + \lambda_5 Leverage_{i,t}$$
$$+ \lambda_6 R\&D_{i,t} + \lambda_7 \ln(Size)_{i,t} + \lambda_8 Institute_{i,t} + \lambda_9 Market_{i,t} + \varepsilon_{i,t}$$

$$\tag{2}$$

Initially we treat independent director and supervisor appointments the same and model them as the proportion of outside directors over total board members (e.g. Hermalin and Weisbach, 1991; Pearce and Zahra, 1992; Agrawal and Knoeber, 1996). Specifically, we have the logistic transformation of the proportion of independent directors and supervisors on the board which is defined as follow:

$$y = \log\left[\frac{IND + \mu}{1 - (IND + \mu)}\right] \tag{3}$$

where,

$\rightarrow y$ is the log transformation of proportion of independent board members

$\rightarrow IND$ is the proportion of independent board members over total board members

$\rightarrow \mu$ is 10^{-8}

The log transformation method is applied to ensure that the predicted value of *IND* derived from the fitted model fall between 0 and 1 (Kennedy, 1996; Pesanell et al., 2003). Alternatively, the appointment of independent directors or supervisors can be coded as '1' and '0' otherwise. The first specification implies that OLS is an appropriate estimator whereas the dichotomous specification implies a Logit/Probit estimator. Finally, we partition the sample into sub-samples depending on whether the appointment was deemed as being an affiliated independent appointment, or an unaffiliated independent appointment. We identify affiliated using the same process as Liu and Yang's (2008). We first identify new independent directors and supervisors appointments to the boards during the re-election year. We then check if these directors and supervisors were new compared to the directors and supervisors before the re-election year. If a firm has at least one affiliated independent director or supervisor on the board in the re-election year, we identify it as an affiliated independent appointment.

Insert table 2 about here

Table 2 provides a concise summary of each independent variable along with the predicted sign for each coefficient in equation 2. To construct the appropriate variables to test the ownership structure hypotheses it is necessary to quantify the extent of controlling shareholders cash-flow rights and excess rights (divergence between control and cash-flow rights). Ownership$_{t-1}$ is based on cash-flow rights and control is based on voting rights. Cash-flow rights and voting rights were identified

from pyramid and cross-holdings schemes. La Porta et al. (1999) identify 20% cut-off to trace the controlling shareholder in the company. We use the same 20% cutoff point to identify ultimate owners. Consistent with La Porta et al. (1999), direct voting rights were identified as the fraction of shares held by ultimate owners, and indirect voting rights are based on the latest link in the chain of shares held by entities or nominal companies that are in turn controlled by the ultimate owners. Thus, the controlling (ultimate) shareholder is defined as a shareholder or family group who has the largest control rights by combining direct and indirect voting rights. Ultimate owners of Taiwanese publicly held companies usually use nominal investment companies or other entities (such as non-profit entities, e.g. hospital, school etc.) to increase their control rights. $Excess_{t-1}$ is the divergence between cash-flow rights and voting rights for largest controlling shareholder. We use ultimate's shareholder's control rights minus cash-flow rights times one minus director pledged ratio to measure excess control. The director pledge ratio is measured as the percentage of directors' shareholdings that are pledged for loans and credits one year before the fiscal year.[8] In model 2, the point estimates $\boldsymbol{\beta_1}$ for the $Ownership_{t-1}$ variable tests the incentive-alignment hypothesis $\mathbf{H_1}$. The point estimates $\boldsymbol{\beta_2}$ for $Excess_{t-1}$ test the entrenchment-hypothesis $\mathbf{H_2.}$

The point estimate γ_1 and γ_2 are the proportion of directors or supervisors affiliated with the largest controlling shareholder to total number of directors or supervisors at the beginning of the year, respectively. The point estimate γ_3 on $Duality_{t-1}$ is a dummy variable defined as one if CEO also serve as Chairman and zero otherwise. Our final board characteristics variable explores the relationship between the size of Taiwanese corporate boards and their propensity to appoint independent

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[8] We also test the regressions by separating excess control and director pledged ratio. Both variables are statistically negatively significant related to the likelihood of independent director appointment.

directors and supervisors. $Bsize_{t-1}$ is simply defined as the sum of board of directors and supervisors, while $Bsize_{t-1}{}^2$ is board sized squared to capture possible nonlinearities. Given that Taiwanese firms typically elect board members at annual general meetings every three years, the board composition from 2002 to 2004 and the decision to appoint independent directors and supervisors would have been taken by the board in power prior to the shareholders' general meeting. While we don't have strong prior theoretical justification to predict either a concave or convex non-linear relationship in the specific context of this study, Coles, Naveen and Lalitha (2008) report a convex quadratic relationship between board size and Tobin's Q for a sample of US firms suggesting that either very large, or very small, boards are optimal. Including a quadratic specification allows us to explore possible non-linearity. A lagged specification is appropriate for the variables outlined.

The extant empirical evidence suggests it prudent to include in the remaining vector of control variables estimates of contemporaneous and lagged performance (Hossain, Cahan and Adams, 2000; Hutchinson and Gul, 2002; Choi et al, 2007; Dahya and McConnell, 2007). Contemporaneous performance variables include Tobin's Q ($Q_{i,t}$) and Return on Assets ($ROA_{i,t}$). Tobin's Q is measured using La Porta et al.'s (2002) method as the sum of market value of equity and the book value of debt divided by the book value of assets instead of using replacement cost of assets, because the replacement cost of assets is not available for Taiwanese firms. $ROA_{i,t}$ is after-tax earnings before interest divided by total assets. One year lagged performance variables are $Q_{i,t-1}$ and $ROA_{i,t-1}$. Our remaining control variables include leverage (total debt divided by book value of total assets), Research and Development (R&D: R&D divided by Sales) as a measure of investment opportunity. Institute is the sum of domestic and foreign institutional shareholdings at the end of the year. Size is

the logarithm of book value of assets (million NT$). Market is a dummy variable that equals one if the company is listed on the TWSE and zero if the company is listed on the GTSM. Also, we include two-digit industry and year dummies as control variables. (e.g., Yeh and Woidtke, 2005; Young et al., 2008).

Another objective of this study is to evaluate whether independent board members affect the firm performance. We examine this issue using the following regression framework:

$$ROA_{i,t+1} = \alpha_{i,t} + \eta_1 y + \beta_1 Ownership_{i,t} + \beta_2 Excess_{i,t} + \gamma_1 Dir_{i,t} + \gamma_2 Sup_{i,t}$$
$$+ \gamma_3 Duality_{i,t} + \gamma_4 Bsize_{i,t} + \gamma_5 Bsize_{i,t}^2 + \lambda_1 Leverage_{i,t+1} + \lambda_2 R\&D_{i,t+1}$$
$$+ \lambda_3 \ln(Size)_{i,t+1} + \lambda_4 \ln(Age)_{i,t+1} + \lambda_5 Institute_{i,t+1} + \lambda_6 Market_{i,t+1} + \varepsilon_{i,t}$$

(4)

y denotes board independence variables. We use two types of variables to verify the independence of the board: the log transformation of proportion of independent board members which is verified from model 3 and the dummy variable equals one if the company appoints at least one independent director or supervisor on the board and equals zero otherwise. We further separate the independent director as an affiliated independent or an unaffiliated independent. This leads to the dummy variable equals one if board contain at least one affiliated independent director or supervisor and the dummy variable equals one if firm only appoints unaffiliated director(s) or supervisor(s) on the board and zero, otherwise. The point estimates η_1 for the fraction of independent board members variable tests hypothesis **H₃**. We add the same ownership, board and control variables from model 2. In this regression model we further add firm age to control its effect on ROA. Age is logarithm of firm age. All board and ownership explanatory variables are one year lagged. All other variables are contemporaneous. The definition of variables is defined by Table 2.

5.   Results

5.1.   *Descriptive Statistics and Correlations*

Table 3 reports descriptive statistics for the sample of firms. Panel A and B for TWSE and GTSM firms respectively classified by ownership, board characteristics and firm characteristics. In Panel A, average control is 29.84% and average ownership is 25.05%, resulting in excess control of 4.79%. Compared with the median of the three ownership variables, median excess control is 1.01%, which is slightly smaller than average excess control. Also, the maximum control and ownership levels are 95.39% and 95.34%, but the third-quartile control and ownership levels are 42.46% and 36.13%, respectively. This implies that a few companies have very high ownership and control levels which explains the divergence in the mean and median levels of excess control.

For board characteristics, the average number of directors (supervisors) is 7.33(2.60). The average (median) proportion of controlled-affiliated directors and controlled-affiliated supervisors is 57.27% (57%) and 47.92% (50%), respectively. In approximately 29% of companies the largest shareholder held both the CEO and Chairman position before the annual meeting and the average size of the board was 9.93. The average (median) directors' pledged ratio is 16.89% (3.01%). The median directors' pledged ratio is slightly smaller than its average and the maximum value of directors' pledged ratio is 98.75%. Highlighting that a few company's directors have pledged nearly all of their shares on loan and 75% of listed companies' directors pledged less than 29.12% of their shares on loan. Moreover, average (median) firm size in TWSE sample is NT\$ 20.7 (NT\$6.09) billion. Average (median) R&D expense over sale is 1.85% (0.59%). Tobin's Q ratio is 1.09, ROA is 3.90% and

leverage is 40.59% on average. Average lagged Q ratio is 1.07 and lagged ROA is 3.42% with average (median) institutional ownership of 3.62% (0.89%).

Insert table 3 and 4 about here

Comparing the descriptive statistics for GTSM companies, Panel B, we find: 38% of GTSM companies have the same CEO and Chairman while it is 29% for TWSE companies. Directors' pledged ratio in GTSM firms is 6.23%, which is somewhat less than in TWSE firms. Average firm size in GTSM listed firms is NT$3.44 billion, while average firm size of TWSE listed firms is NT$20.7 billion. Overall, the reported descriptive statistics, and the differences between TWSE and GTSM companies, are as expected. GTSM firms are smaller, younger, have smaller boards, lower level of director's pledging their shares, a higher percentages of dual roles, and lower levels of director and supervisor affiliation to controlling shareholders.

Correlations reported in Table 4 provide initial insights into the factors influencing the appointment of independent directors and supervisors. Ownership and Excess are statistically significant and with the expected sign which provides preliminary empirical evidence to support H_1 and H_2. The fraction of directors and supervisors affiliated to the controlling shareholders is significantly negatively correlated with the fraction of independents. ROA and Q, and lagROA and lagQ are a significantly positively correlated with board independence. Leverage and Firm size is significantly negatively correlated with board independence, and positively correlated with each other. This is consisted with the empirical finding that firms with a lower leverage ratio and larger firms institutional ownership is positively correlated with board independence. Overall, the descriptive statistics and correlations with the

fraction of independent directors and supervisors and between the independent variable provides preliminary evidence to support a number of our hypotheses and suggests that the variables have been constructed in a reasonable way.

5.2. *Compliance, ownership and board characteristics*

Table 5 reports the results for the OLS estimates of the model introduced in equation 2 to formally test our hypotheses.[9] We estimate equation 2 individually for each ownership variable and with board size entering our equation linearly to begin with and then as a quadratic. For brevity we only report the results for the quadratic specification given their significance. The *F*-statistic is significant across all models with an adjusted R-squared ranging from a minimum of 16.8% for model 4 to a maximum of 17.6% for model 1 providing evidence that our model has explanatory power. Again, for parsimony, we omit regression results with performance variables based on Q from table 5. Including ROA based performance metrics had higher explanatory power. Ownership is, as predicted, positively correlated with the fraction of independent board members at the 1% level. This supports the incentive-alignment hypothesis H_1 which highlights the importance of controlling shareholders cash-flow rights. Excess is significantly negatively correlated with the fraction of independent board members at least at the 5% level for three of the four models and just above the 5% level for model 3 with a *t*-statistic of 1.92 (-0.023/0.012) in support of the entrenchment hypothesis H_2.

Insert table 5 about here

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[9] We also test the hypotheses by examining the Logit and Probit regression. The dependent variable is a dummy that equals one if the company appoints an independent director or supervisor on the board and equals zero, otherwise for Logit and Probit model. The results are similar to the OLS.

For the board characteristics, the fraction of directors affiliated with the largest controlling shareholder across all models is statistically significant negatively correlated with the fraction of independent board members at the 5% level. The fraction of supervisor affiliated with the largest controlling shareholder is negatively but not significantly related to the fraction of independent board members. Dual leadership structure boards do not appear to have an impact to the appointment of independent board member as this variable is insignificant across the board**.** Board size (Bsize) is insignificant across all models when it entered equation 2 linearly. When it is included as a quadratic specification Bsize is positive and significant at the 1% level while board size squared ($Bsize^2$) is negative at also significant at the 1% level. The positive sign on the Bsize coefficient combined with the negative sign on the coefficient for $Bsize^2$ implies a concave-quadratic relationship which implies that boards which are relatively small and those which are relatively large have the lowest percentage of independents.

For the control variables, both ROA and lagROA are positively correlated with the fraction of independent board members at the 1% level implying that higher past firm performance encourage firms to incorporate independent directors or supervisors on their boards. The remaining control variables were insignificant.

Insert table 6 about here

Up to this point directors and supervisors appointed to the board were independent under the regulatory definition. To explore the potential effect of prior-affiliation the sample is partitioned into affiliated and unaffiliated independent director appointments. Table 6 reports the results from re-specifying the dependent

variable which then employs a Multi-Nomial Logit estimator. Again we follow the same process for deriving the results reported in tables 5. For affiliated independent appointments we can support H_1, but not support H_2. Affiliated supervisors (Supa) is statistically negatively correlated with affiliated independent director appointment at the 5% level. We also observe a consistent statistically significant non-linear, concave-quadratic, relationship between board size and the appointment of affiliated and unaffiliated independent directors.

We argued that Taiwan's nascent stage of governance reform was akin to an experimental setting. In a comply-or-explain adoption environment where controlling shareholders have significant influence over all aspects of corporate decision making, it appears that while the motivation behind affiliated independent and unaffiliated independent appointments share some similarities they are also influenced by idiosyncratic factors. It therefore appears that the independent director system was adopted, conditional upon the degree of independence, to meet perceived governance needs: to fulfill either just a monitoring role or contribute to strategic decision making.

We believe that the possibility of endogeneity is unlikely to bias our results given the institutional environment for independent director and supervisor appointments in Taiwan. Liu and Yang (2008) point out that controlling shareholders treat the shareholders' meeting as their personal game and that without support from controlling shareholders or block shareholders no independent director or supervisor would have the necessary votes to be elected. This not only mitigates the possibility of endogeneity, but also strengthens our research design. Given the overwhelming power of controlling shareholders the decision to adopt the independent director system, or not, in a comply-or-explain environment clearly reflects their preferences.

As a robustness check for the possibility of endogeneity we employ the strict

exogeneity test (Wooldridge, 2002). This test estimates a fixed effect regression where the appointment of independent director or supervisor is regressed against ownership, board and control variables, and leading values of these variables. If any of the leading variables are significant, it suggests that this variable responds to past independent board appointments and is endogenous. The results indicate that endogeneity between independent board appointment and the key independent variables doesn't appear to be a significant issue. [10]

5.3. *Board Composition and Firm Value*

Table 7 reports the regression results for firm performance and board independence using OLS regression with heteroscedasticity-consistent standard errors where the dependent variable is return on assets (ROA).[11] Board independence and the board independence dummy variable are significantly positive correlated to firm performance at the 5% level, which support our third hypothesis **H₃**. When we separate independent directors by affiliated and unaffiliated appointments, only unaffiliated appointment are statistically significant at the 1% level which isolates the source of performance improvement. In practical terms this result shows that firms who appoint unaffiliated independent directors, experience a significant increase in their operating firm performance in the following year. This also implies that a more independent board enhances firm performance. This finding is consistent with positive performance improvements reported for developing economies, and adds to the literature by identifying the importance of prior-affiliation in explaining the tangible benefits attributed to enhancing board independence (Dayha and McConnell,

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[10] Result available upon request.
[11] We also use Tobin's Q as the dependent variable, we further control stock variance (it is the variance of stock monthly returns over two years prior to the re-election) in the model. The results do not support H3.

2007; Choi et al., 2007; Young et al. 2008; Black and Kim, 2012; Liu et al., 2015).

For ownership and board characteristics, a number of variables are statistically significantly related to operating performance. Ownership is positively associated with ROA at the 1% level across the four models, whereas Excess is positive but insignificant. This result is consistent with Choi *et al*. (2007) who support the incentive-alignment effect for dominant shareholders. There is evidence that affiliated supervisors are influential with coefficients significant at the 5% level across models 2, 4 and 6, whereas affiliated directors would only be significant at the 10% level in models 1 and 3. These findings are consistent with Yeh and Woidtke (2005) that affiliated supervisors on the board has a detrimental impact on firm performance. In contrast, institutional ownership is significantly positively correlated with firm performance at the 1% level. CEO duality, board size and board size squared are not statistically significant. Combining the lack of a non-linear relationship between board size and performance with our previous finding of a significant concave-quadratic relationship for board size and independence provides a pointer for further research. There is significant scope for exploring this relationship further to investigate whether the tangible impact of affiliation on a range of market and non-market performance metrics. Control variable leverage, R&D expenditure and firm age are negatively correlated to firm performance at least at the 1% level. Firm size is positively related to firm value at the 1% level. Overall these findings are consistent with expectation and the extant empirical evidence.

Insert table 7 about here

As a robustness check we also consider the potential impact of endogeneity

between board independence and performance. Similar to the argument made by Dahya et al. (2007) and Choi et al. (2007), government regulation is an exogenous shock that influences the decision to implement the independent director system. Table 8 reports results for two-stage least squares regression. Initially, lagged ownership and board variables are employed to control for potential endogeneity. Two-stage least squares (2SLS) regression incorporates the proportion of independent directors and supervisors in the first stage and the estimated values of the first stage for measuring firm performance in the second stage. Board size and its square are employed as the instrumental variables. We add lagged ownership and board variables with contemporaneous control variables used in table 7 and also include year and industry dummies in the model. The results for the 2SLS regression are reported in Table 8 which show that board independence is significantly positively correlated with firm performance at the 5% level after accounting for potential endogeneity.

Insert table 8 about here

6.   Conclusion

Empirical evidence documents a market value discount for firms with concentrated ownership structure to reflect the tendency of controlling shareholder to expropriate resources at the expense of minority investors, but points to performance benefits from enhancing board independence. Taiwan, in common with other East-Asian economies, participated in the independent director reform wave with the 1997-98 Asian financial crisis providing impetus for governance reform in the region. From February 2002 regulators advised new stock market listings to appoint at least two independent directors and one independent supervisor. Implementation was on a '*comply-or-explain*' basis and was accompanied by criteria specifying '*independence*'.

Consistent with the empirical evidence and agency theory, we adopt the working assumption that controlling shareholders in Taiwan have overwhelming power and will appoint independent directors only if they believe it is in their interest to do so. We find a significant positive relationship between board independence and controlling shareholders' cash-flow rights for firms where the appointee was affiliated to the board. In contrast, we document a significant improvement in firms' next period Return-on-Assets only for firms where independent director appointments were unaffiliated to the board. We argue that the positive association for affiliated directors and controlling shareholders cash-flow rights reflects their desire to diminish board quality to accommodate the extraction of private benefits of control to compensate for the costs associated with being a block shareholder. In contrast, when controlling shareholders require performance improvement they appoint unaffiliated independent directors for their expertise which, in the context of this study, led to performance improvement which is consistent with the body of empirical evidence for developing economies reporting a causal link from director independence to performance (Choi et al, 2007; Dahya *et al*. 2008; Liu *et al*, 2015).

The findings reported in this paper contribute to the sparse literature on social ties and provide insights which are relevant to the current policy debate in Taiwan. Definitions of independent directors' '*independence*' and their effectiveness is at the heart of the independent director debate. Our analysis suggests that there is a significant difference between appointees depending upon their prior affiliation to the board. By 2017 all Taiwanese boards must have independent directors who conform to the regulatory criteria for independence. Our analysis prompts a thought experiment: if unaffiliated independent appointees enhance firm performance, then, *ceteris parabis*, it would be in their interest of all stakeholders if regulators could

amend the regulatory definition of independence to capture the performance benefits of unaffiliated independent appointments. A simple rule derived from our analysis could be that independent director appointments must not have sat on the board they've been appointed to previously. Alternatively, the Asia Corporate Governance Association in their biennial report (2015) proposes allowing minority shareholders to vote separately on the appointment of independent directors similar to the UK. Evidently, the power of controlling shareholders and the appointment of independent directors is an unresolved issue in the region.

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Table 1

Selection Criteria

Criteria	TWSE			GTSM		
	2002	2003	2004	2002	2003	2004
Panel A.						
Total companies in Market		544			334	
Less						
IPO Companies (Since Feb 2002)		67			48	
Financial Companies		27			13	
Panel B.						
Re-election	168	145	137	85	91	97
Less						
Missing ownership or accounting data	17	7	4	27	36	39
Final Sample	146	137	133	58	53	58
Compliant type:						
Compliant	45	26	29	27	19	9
Affiliated Ind.	30	11	7	17	9	2
Unaffiliated Ind.	15	15	22	10	10	7
Non-Compliant	101	111	104	31	34	49

Notes: This table verifies the selection criteria of this study. The initial sample for this study consists of all non-financial firms listed on the TWSE and GTSM. It contains for firms which had a re-election at the annual general meeting from 2002 to 2004, respectively. The final sample eliminated IPO companies which listed after February 2002 and the firms with missing ownership and accounting data. Compliant types were classified as compliant if company appointed on independent director or independent supervisor. The affiliated independent appointment is defined as firm appointed at least one independent director who was already sat on the board before the election year.

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Table 2

Summary of Variable Definitions

	Independent variables	Variable description	Coefficient
Ownership variables	Ownership	The proportion of cash-flow rights held by the largest controlling shareholder group at the beginning of year	$\beta_1 > 0$
	Excess	Control rights – Cash-flow rights×(1-Director Pledged Ratio) at the beginning of year	$\beta_2 < 0$
Board variables	Affiliate director (Dira)	The ratio of directors affiliated with the largest controlling shareholder to total number of directors at the beginning of year	$\gamma_1 < 0$
	Affiliated supervisor (Supa)	The ratio of supervisors affiliated with the largest controlling shareholder to total number of supervisors at the beginning of year	$\gamma_2 < 0$
	Duality	A dummy variable that equals one if CEO also serve as Chairman of the board and equals zero, otherwise	$\gamma_3 \neq 0$
	Bsize	Total number of board of directors and supervisors	$\gamma_4 \neq 0$
	Bsize^2	Quadratic specification: Board size squared	$\gamma_5 \neq 0$
Control variables	Tobin's Q	The sum of market value of equity and the book value of debt divided by the book value of assets.	
	ROA	After-tax earnings before interest dividend by total assets	
	LagQ	One year Tobin's Q prior the fiscal year	
	LagROA	One year ROA prior the fiscal year	
	Leverage	Ratio of book value of debt to book value of asset	
	R&D	Research and development expenses over sale	
	Size	Logarithm of book value of asset	
	Institute	Sum of domestic and foreign institutional shareholdings at the end of year	
	Market	A dummy variable that equals one if the company is listed on the TWSE and zero if the company is listed on the GTSM.	
	Age	Logarithm of firm age	

Notes: This table provides the definition of independent variables with the expected sign of coefficients. The data on board structure and board characteristics are collected from annual reports, company prospectus and ''Business groups in Taiwan'', ownership and accounting variables are collected from Taiwan economic journal (TEJ).

Table 3

Descriptive Statistics

Variable	Mean	Standard deviation	Min	25%	Median	75%	Max	Mean	Standard deviation	Min	25%	Median	75%	Max
Panel A: TWSE sample (N: 416)								**Panel B: GTSM sample (N: 169)**						
Ownership structure														
Control (%)	29.84	16.62	0.19	17.34	27.82	42.46	95.39	28.84	16.24	2.28	16.34	25.50	39.47	68.96
Ownership (%)	25.05	17.09	0.13	11.32	22.40	36.13	95.34	24.79	16.85	0.25	12.80	20.68	33.76	66.22
Excess (%) (Control – Ownership)	4.79	8.29	0	0.02	1.01	5.22	45.94	4.06	7.67	0	0	1.05	4.10	37.11
Board structure														
Number of directors	7.33	3.09	3	5	7	9	21	6.29	2.32	2	5	6	7	27
Number of supervisors	2.60	0.74	1	2	3	3	7	2.55	0.61	1	2	3	3	5
Number of independent directors	0.32	0.73	0	0	0	0	4	0.41	0.74	0	0	0	1	2
Number of independent supervisors	0.21	0.47	0	0	0	0	2	0.31	0.53	0	0	0	1	3
Affiliate director (Dira) (%)	57.27	30.23	0	33	57	82.34	100	45.46	25.09	0	25	40	60	100
Affiliate supervisor (Supa) (%)	47.92	39.34	0	0	50	100	100	23.53	27.98	0	0	0	50	100
Duality	0.29	0.45	0	0	0	1	1	0.38	0.49	0	0	0	1	1
Board size	9.93	3.46	1	8	9	12	26	8.84	2.60	3	7	8	10	32
Pledged (%)	16.89	23.54	0	0	3.01	29.12	98.75	6.23	14.63	0	0	0	4.15	81.92
Firm characteristics														
Total assets (NT$ million)	20700	52100	541	3119	6089	12400	467000	3442	9676	284	949	1562	2516	78600
R&D over sales (%)	1.85	3.73	0	0	0.59	2.35	44.67	3.47	7.70	0	0	1.16	3.62	66.21
Tobin's Q	1.09	0.49	0.45	0.82	0.98	1.22	5.69	1.32	1.17	0.55	0.80	0.99	1.30	8.79
ROA (%)	3.90	8.07	-52	1	4	8	39	0.78	11.02	-56	-2	2.98	6.28	29
Leverage (%)	40.59	16.09	5	29	40.36	49	96	43.02	17.76	4	32	43	54	92.51
LagQ	1.07	0.61	0.47	0.75	0.92	1.18	8.67	1.47	1.89	0.48	0.81	1.01	1.30	15.82
LagROA (%)	3.42	7.52	-49	0.39	3.12	7	40	1.52	10.09	-60	-1	2.64	6	23
Institute (%)	3.62	5.97	0	0	0.89	4.87	38.94	2.17	5.68	0	0	0	1.34	37.40

*Note*s: This table summarizes the descriptive statistics for the year 2002 to 2004. The sample of 585 Taiwanese non-financial companies is split into separate markets: TWSE in Panel A and GTSM in Panel B.

Table 4

Correlation Matrix

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. %NED	0.10[b]	-0.13[c]	-0.18[c]	-0.18[c]	0.10[b]	0.002	0.08[a]	0.17[c]	0.07[a]	0.18[c]	-0.10[b]	0.05	-0.10[b]	0.09[b]	-0.09[b]
2. Ownership		-0.04	0.21[c]	0.17[c]	0.04	-0.10[b]	-0.05	0.12[c]	-0.06	0.17[c]	0.01	-0.14[c]	-0.14[c]	-0.10[b]	0.007
3. Excess			0.16[c]	0.21[c]	-0.10[b]	0.08[a]	-0.04	0.05	-0.08[b]	0.007	0.13[c]	-0.06	0.22[c]	0.03	0.17[c]
4. Dira				0.65[c]	-0.04	-0.08[a]	-0.05	-0.01	0.006	-0.04	0.03	-0.16[c]	0.21[c]	-0.15[c]	0.18[c]
5. Supa					-0.03	-0.02	-0.08[a]	0.006	-0.06	-0.07	0.02	-0.12[c]	0.32[c]	-0.10[b]	0.29[c]
6. Duality						-0.21[c]	0.07[a]	-0.02	0.07[a]	-0.04	-0.01	0.05	-0.20[c]	-0.05	-0.09[b]
7. Bsize							-0.06	0.14[c]	-0.08[a]	0.11[c]	-0.06	-0.05	0.34[c]	0.07	0.15[c]
8. Tobin's Q								0.04	0.83[c]	0.19[c]	-0.03	0.15[c]	-0.02	0.16[c]	-0.13[c]
9. ROA									-0.09[b]	0.65[c]	-0.34[c]	-0.11[c]	0.20[c]	0.20[c]	0.15[c]
10. LagQ										0.09[b]	-0.003	0.15[c]	-0.02	0.11[c]	-0.16[c]
11. LagROA											-0.31[c]	-0.03	0.15[c]	0.26[c]	0.10[b]
12. Leverage												-0.22[c]	0.03	-0.03	-0.06
13. R&D													-0.06	0.08[a]	-0.14[c]
14. Size														0.27[c]	0.49[c]
15. Institute															0.11[c]
16. Market															1

Notes: This table analyses the Pearson correlation for dependent and independent variables. The total sample includes 585 Taiwanese non-financial companies. %NED is defined as the logistic transformation of proportion of independent directors and supervisors on the board. Other variable definitions are given in table 2. [a], [b] and [c] denote significance at the 0.1, 0.05 and 0.01 levels, respectively.

Table 5

Board Independence and Ownership Structure

Independent Variables	Dependent Variables			
	Model 1	Model 2	Model 3	Model 4
Ownership	0.025	0.024	0.024	0.022
	(0.008)***	(0.008)***	(0.009)***	(0.008)***
Excess	-0.025	-0.026	-0.023	-0.024
	(0.012)**	(0.012)**	(0.012)*	(0.012)**
Dira	-0.011		-0.011	
	(0.005)**		(0.005)**	
Supa		-0.006		-0.005
		(0.004)		(0.004)
Duality	0.408	0.427	0.455	0.471
	(0.299)	(0.301)	(0.301)	(0.303)
Bsize	0.432	0.436	0.448	0.455
	(0.134)***	(0.137)***	(0.133)***	(0.135)***
$Bsize^2$	-0.014	-0.014	-0.015	-0.015
	(0.005)***	(0.005)***	(0.005)***	(0.005)***
ROA	0.057	0.057		
	(0.017)***	(0.017)***		
LagROA			0.050	0.050
			(0.016)***	(0.016)***
Leverage	0.002	0.003	-0.001	-0.001
	(0.008)	(0.008)	(0.008)	(0.008)
R&D	-0.015	-0.011	-0.026	-0.023
	(0.021)	(0.022)	(0.021)	(0.021)
Size	-0.213	-0.210	-0.200	-0.202
	(0.143)	(0.144)	(0.144)	(0.146)
Institute	0.022	0.021	0.019	0.019
	(0.024)	(0.024)	(0.024)	(0.024)
Market	-0.067	-0.052	-0.044	-0.036
	(0.369)	(0.374)	(0.372)	(0.377)
Constant	-7.018	-7.762	-7.248	-7.937
	(2.298)***	(2.323)***	(2.312)***	(2.339)***
Industry Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Adjusted R^2	0.176	0.174	0.171	0.168
F-test	6.72***	6.94***	5.83***	6.23***
N	585	585	585	585

Notes: This table presents the relationship between board independence and ownership variables. The total sample includes 585 Taiwanese non-financial companies. The results of OLS regression analysis where the dependent variable is the logistic transformation of proportion of independent directors and supervisors on the board. The independent variables include measures of ownership, board structure and other firm's characteristics. All independent variable definitions are given in table 2. Heteroscedasticity-consistent standard errors are in parenthesis. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Table 6

Unaffiliated and Affiliated Independent Board Member Appointments

Independent variables	Model 1		Model 2		Model 3		Model 4	
	Affiliated Independent	Unaffiliated Independent	Affiliated Independent	Unaffiliated Independent	Affiliated Independent	Unaffiliated Independent	Affiliated Independent	Unaffiliated Independent
Ownership	0.027	0.013	0.028	0.010	0.026	0.013	0.028	0.009
	(0.009)***	(0.009)	(0.009)***	(0.008)	(0.009)***	(0.009)	(0.009)***	(0.009)
Excess	-0.032	-0.018	-0.031	-0.021	-0.030	-0.015	-0.029	-0.017
	(0.009)*	(0.015)	(0.019)	(0.015)	(0.019)	(0.016)	(0.019)	(0.016)
Dira	-0.009	-0.010			-0.008	-0.010		
	(0.007)	(0.007)			(0.007)	(0.007)		
Supa			-0.009	-0.002			-0.009	-0.002
			(0.005)**	(0.005)			(0.005)**	(0.005)
Duality	0.297	0.309	0.316	0.341	0.335	0.362	0.352	0.395
	(0.306)	(0.299)	(0.306)	(0.298)	(0.304)	(0.299)	(0.305)	(0.299)
Bsize	0.906	0.768	0.879	0.796	0.908	0.777	0.885	0.809
	(0.289)***	(0.309)***	(0.305)***	(0.306)***	(0.295)***	(0.307)**	(0.308)***	(0.302)***
Bsize^2	-0.038	-0.027	-0.037	-0.028	-0.039	-0.028	-0.037	-0.028
	(0.013)***	(0.013)**	(0.013)***	(0.013)**	(0.013)***	(0.013)**	(0.013)***	(0.013)**
ROA	0.048	0.041	0.048	0.043				
	(0.019)**	(0.021)**	(0.019)**	(0.020)**				
LagROA					0.036	0.034	0.035	0.037
					(0.020)*	(0.018)*	(0.021)*	(0.018)**
Leverage	0.008	-0.010	0.008	-0.009	0.005	-0.012	0.005	-0.012
	(0.009)	(0.010)	(0.009)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)
R&D	0.002	0.023	0.005	-0.018	-0.007	-0.031	-0.005	-0.027
	(0.019)	(0.024)	(0.020)	(0.022)	(0.018)	(0.024)	(0.019)	(0.022)
Size	-0.191	-0.091	-0.148	-0.118	-0.184	-0.080	-0.144	-0.111
	(0.153)	(0.134)	(0.156)	(0.138)	(0.155)	(0.134)	(0.156)	(0.139)
Institute	-0.002	0.019	-0.004	0.020	0.001	0.020	-0.001	0.022
	(0.027)	(0.023)	(0.029)	(0.022)	(0.027)	(0.022)	(0.028)	(0.021)
Market	0.046	-0.131	0.060	-0.143	0.057	-0.118	0.070	-0.129
	(0.349)	(0.351)	(0.351)	(0.350)	(0.351)	(0.351)	(0.353)	(0.351)
Constant	-5.208	-4.378	-6.068	-4.781	-5.189	-4.509	-5.972	-4.921
	(2.713)*	(2.37)*	(2.796)**	(2.348)**	(2.731)*	(-2.401)*	(2.805)**	(2.367)**
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-357.21		-356.89		-359.02		-358.90	
Persudo R^2	0.198		0.199		0.194		0.195	
N	585		585		585		585	

Notes: This table reports the results of multinomial logistic regression examining the determinants of independent board member appointment. The results are reported separately for affiliated independent board member appointment and unaffiliated independent board member appointment. The independent variables include measures of ownership, board structure and other firm's characteristics. All independent variable definitions are given in table 2. Heteroscedasticity-consistent Standard errors are in parenthesis. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Table 7
Firm Performance and Board Independence

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Board independence	0.202 (0.102)**	0.239 (0.106)**				
Board independence dummy			1.525 (0.758)**	1.791 (0.790)**		
Affiliated independent					0.548 (0.978)	0.725 (0.963)
Unaffiliated independent					2.455 (0.922)***	2.770 (0.997)***
Ownership	9,957 (0.019)***	0.060 (0.019)***	0.058 (0.019)***	0.061 (0.020)***	0.059 (0.019)***	0.063 (0.020)***
Excess	0.047 (0.033)	0.054 (0.033)	0.047 (0.033)	0.054 (0.033)	0.045 (0.033)	0.052 (0.032)
Dira	-0.052 (0.031)*		-0.052 (0.031)*		-0.050 (0.021)	
Supa		-0.029 (0.013)**		-0.029 (0.013)**		-0.029 (0.013)**
Duality	0.824 (0.905)	0.951 (0.937)	0.825 (0.905)	0.952 (0.937)	0.803 (0.903)	0.925 (0.934)
Bsize	0.344 (0.303)	0.355 (0.329)	0.341 (0.303)	0.352 (0.329)	0.331 (0.303)	0.338 (0.328)
$Bsize^2$	-0.015 (0.010)	-0.014 (0.011)	-0.015 (0.010)	-0.014 (0.011)	-0.015 (0.010)	-0.014 (0.011)
Institute	0.197 (0.061)***	0.194 (0.061)***	0.196 (0.061)***	0.194 (0.061)***	0.200 (0.063)***	0.198 (0.063)***
Leverage	-0.192 (0.024)***	-0.190 (0.024)***	-0.192 (0.024)***	-0.190 (0.024)***	-0.191 (0.024)***	-0.189 (0.024)***
R&D	-0.487 (0.157)***	-0.482 (0.155)***	-0.486 (0.156)***	-0.482 (0.155)***	-0.448 (0.157)***	-0.484 (0.155)***
Firm Size	1.862 (0.353)***	1.887 (0.379)***	1.861 (0.353)***	1.886 (0.388)***	1.826 (0.356)***	1.855 (0.391)***
Firm Age	-3.153 (1.149)***	-3.014 (1.179)***	-3.154 (1.149)***	-3.014 (1.179)**	-3.206 (1.153)***	-3.067 (1.185)***
Market	0.292 (1.316)	0.303 (1.321)	0.293 (1.316)	0.304 (1.321)	0.322 (1.315)	0.334 (1.321)
Constant	-7.540 (6.719)	-11.182 (6.769)	-9.149 (6.723)	-13.081 (6.679)†	-8.837 (6.739)	-12.667 (6.699)†
Industry Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.245	0.245	0.245	0.245	0.247	0.247
F-test	6.56***	6.58***	6.55***	6.57***	6.29***	6.31***
N	583	583	583	583	583	583

Notes: This table presents the relationship between firm performance and board independence. The results of OLS regression analysis where the dependent variable is return on assets (ROA). The independent variables include the logistic transformation of proportion of independent directors and supervisors on the board, the dummy variable equals one if the firm appointed at least one independent director or supervisor on the board and zero otherwise, the dummy variable equals one if board contain at least one affiliated independent director and the dummy variable equals one if firm only appoints unaffiliated independent director(s) on the board and zero otherwise. Other independent variables include measures of ownership, board structure and other firm's characteristics. All independent variable definitions are given in table 2. All board and ownership explanatory variables are one year lagged. All other variables are contemporaneous. Heteroscedasticity-consistent standard errors are in parenthesis. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Table 8

Two-Stage Least Square Regression

	Model 1		Model 2	
	Board Independence	ROA	Board Independence	ROA
Board Independence		2.298		2.205
		(0.916)**		(0.859)***
Ownership	0.030	0.010	0.028	0.017
	(0.008)***	(0.036)	(0.008)***	(0.032)
Excess	-0.024	0.097	-0.025	0.098
	(0.013)*	(0.044)**	(0.013)*	(0.042)**
Dira	-0.011	0.022		
	(0.005)**	(0.026)		
Supa			-0.006	0.008
			(0.004)	(0.015)
Duality	0.452	-0.170	0.469	-0.138
	(0.303)	(0.995)	(0.304)	(0.962)
Bsize	0.494		0.496	
	(0.136)***		(0.139)***	
$Bsize^2$	-0.016		-0.016	
	(0.005)***		(0.005)***	
Institute	0.033	0.141	0.031	0.144
	(0.024)	(0.096)	(0.024)	(0.091)
Leverage	-0.009	-0.189	-0.009	-0.191
	(0.007)	(0.032)***	(0.008)	(0.030)***
R&D	-0.038	-0.288	-0.035	-0.297
	(0.020)*	(0.114)**	(0.020)*	(0.110)***
Firm Size	-0.159	1.313	-0.154	1.312
	(0.141)	(0.439)**	(0.143)	(0.420)**
Firm Age	-0.345	-2.008	-0.388	-1.932
	(0.361)	(1.214)*	(0.359)	(1.173)
Market	0.036	0.951	0.063	0.940
	(0.376)	(1.186)	(0.381)	(1.141)
Constant	-6.331	15.678	-6.910	10.300
	(2.475)**	(8.702)*	(2.515)***	(7.413)
Industry Dummy	Yes	Yes	Yes	Yes
Year Dummy	Yes	Yes	Yes	Yes
Adjusted R^2	0.1602	0.3287	0.1587	0.3290
F-test	5.42***	159.79***	5.81***	165.59***
N	585	585	585	585

Note: This table reports the two-stage least square regression. The instruments include lagged ownership and board variables and all contemporaneous control variables used in Table 7. In addition, the board size and its square are added in the first stage. The year and industry dummies are also included in the model. The dependent variable is the proportion of independent director and supervisor in the first stage and firm performance in the second stage. All independent variable definitions are given in table 2. Heteroscedasticity-consistent standard errors are in parenthesis. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Acknowledgement

Highlights
- Higher cash-flow rights for controllers prefer to appoint affiliated independent
- Increase in subsequent operating performance for unaffiliated independent appointment
- Independence criteria are important to the performance improvement of firms
- The regulatory compliant independent director appointments are not the same