# Cyber Democracy Versus Controlling Shareholders: The Implications of E-Voting System for Corporate Governance

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**Abstract**

Based on the ideology of cyber democracy, Taiwan government has just begun to require the publicly-listed companies to implement the practice of e-voting system in stockholder meetings since 2012. One of the objectives of this mandate is to promote stockholder's activism to rectify the phenomenon of excess control associated with controlling shareholders, who dominate the boards of directors but own disproportionate ownership, to comply with the principle of one-share-one-vote. Though with good intention, the effectiveness of the e-voting system remains a question, given that it has been implemented only for a short period of time. In addition, the function of some auxiliary practices to supplement e-voting system such as director nomination also needs to be tested. This study proposes three hypotheses regarding the relationships among e-voting, board nomination, excess control, and firm performance. Using the data of 829 Taiwanese publicly-listed companies across the time period between 2012 and 2014, this study finds that the separate adoption of e-voting and board nomination increases the level of excess control and is, thus, detrimental to firm performance. On the other hand, the simultaneous adoption of the two practices can significantly decrease the level of excess control of controlling shareholders, which, in turn, contributes to firm performance. The findings bring important implications to corporate governance and policy formulation of the administration.

*Keywords:* e-voting system; director nomination; excess control;

## 1. Introduction

### 1.1. Background

Based primarily on evidence in developed economies, and a focus on efficient enforcement of control and contracts, ownership and control are viewed as separate entities in which one party (the principal) delegates work to another (the agent) (Eisenhardt [7]), However, this premise has been challenged by empirical evidence showing that concentrated ownership is increasingly prevalent in many economies (La Porta et al. [10]), making control and ownership highly inseparable. What often underneath this phenomenon is the progression between control and ownership, which may create interest conflicts between controllings shareholders and diffused, minority shareholders.

A basic feature of governance in Asia countries is the pyramidal structure. The pyramid is a form of governance in which an apex shareholder controls a single company. This company then holds control blocks in other companies (Morck [11]). At its foundation, pyramids are structured to preserve equity financing while locking in control by insiders. With such concentrated ownership, there is often an ultimate controller who directly or indirectly controls every member company that is affiliated with such pyramids (La Porta et al. [10]). The ultimate controller is generally a family or individual, the State, a widely held financial institute, or a coalition that constitutes the largest holding block of ownership, for instances of Hyundai and Samsung groups in Korea or Japan's Sumitomo and Mitsubishi keiretsus. Ultimate controllers maintain their control primarily through cross-shareholdings and a pyramidal structure (Kim [2]; La Porta et al. [10]), leading to the acquisition of power. Consequently, governance researchers have primarily focused on the conflict and performance problems generated between major shareholders and minor shareholders resulting from this acquisition. Often missed in this debate is broad recognition that controlling shareholders typically have control far in excess of their ownership, justified as a means of ensuring the firm becomes and remains competitive. The way that controlling shareholders assume control has prompted studies

which indicate that the resultant excess control leads to poor outcomes for a firm. With its emergence, and its noted practical relevance and practice implications, more attention needs to be paid to this type of control if corporate governance research is to keep pace with practice.

According to the Company Act of Taiwan, the business operations of a company must be executed pursuant to the resolutions of the board of directors. This law dictates that boards of directors are the ultimate decision makers. Consequently, the role of board control significantly outweighs that of ownership control in Taiwanese governance practice (Yeh et al. [12]). Aiming to protect the diffused, minority shareholders from the expropriation of major controlling shareholders, Taiwan government has just begun to require the publicly-listed companies to implement the practice of e-voting system in stockholder meetings since 2012. This mandate was developed based on the ideology of cyber democracy. One of the objectives of this mandate is to promote stockholder's activism to rectify the phenomenon of excess control associated with controlling shareholders, who dominate the boards of directors but only own relatively few stakes, to comply with the principle of one-share-one-vote. Though with good intention, the effectiveness of the e-voting system remains a question, given that it has been implemented only for a short period of time. In addition, there is also an urgent need to verify the roles and functions of some auxiliary practices that complement. e-voting system, such as director nomination.

## 1.1.    Research Questions

Given the background addressed above, this study asks three allied questions: First, is e-voting system effective in decreasing the gap between control and ownership of the controlling shareholders? Second, how does the practice of board nomination affect the effectiveness of e-voting system in reducing the level of excess control of controlling shareholders? Third, what is the relationship between excess control and firm performance?

## 2.    Literature and Hypotheses

Stockholders annual meetings have a major issue that bothers investors and administration due to factors such as time and distance constraints. Early in 1989 the Delaware corporate law approved the legitimacy of stockholders' voting through telecommunication, which further included the voting device through the internet in 2000. Till now, most of the states in the United States has approved the voting practice using the internet. In Asia, Japan approved the e-voting practice in 2002, followed by the Taiwanese administration's approval in 2012.

There are four major advantages of applying e-voting in stockholders' annual meetings (Chang [3]): (1) it becomes easier for the diffused, minority shareholders to exert their voting rights without being constrained by time and location; (2) it enhances the information disclosure and transparency in stockholders' annual meeting; (3) foreign institutional investors can independently cast their votes without being constrained by the "unanimous rule"; (4) companies that adopt e-voting practices will earn better international appraisals of corporate governance.

One of the influences of e-voting that impact corporate governance would be the election of board directors. As addressed earlier, the phenomenon of excess control is prevalent in Asian economies. Controlling shareholders with disproportionate ownership can control companies by holding majority seats in boards. When introducing e-voting practice in directorselection, the occurrences of proxy votes are expected to be largely reduced, making difficult for the controlling shareholders to collect proxies. Second, e-voting facilitates the voting for the diffused, minority shareholders who are not available to participate the annual meetings in person. E-voting also stimulates stockholders 'activism that disturbs controlling shareholders' scheme in board seats. Finally, foreign institutional investors play a critical role in the ownership of publicly-listed companies in emerging markets; however, their voting rights were highly restricted by some mandates such as the "unanimous rule" that requires foreign institutional investors to cast their votes unanimously for a particular proposal through their custodian agencies. With the introduction of e-voting, foreign institutional investors are now much more flexible to cast their rights separately and, thus, more independently, which makes even more difficult for the controlling shareholders to calculate the votes in advance. Based on the reasons above, this study proposes its first hypothesis that:

Hypothesis 1: The adoption of the e-voting practice creates the level of excess control of controlling shareholders.

There may be some blind spots for an e-voting system. In particular, when the information of important proposals in the meetings are not fully disclosed, stockholders may be misled to cast wrong votes that are against their original

intentions. In such a circumstance, e-voting does not warrant that the outcomes of the proposals that accept the majority votes will serve stockholders best interests. Board election exemplifies such a case. When the articles of the corporate do not require a nomination process in the election of board directors, the information regarding the candidates of board directors are very likely to be asymmetrical between controlling shareholders and minority shareholders, such that the diffused, minority shareholders cannot concentrate them votes in particular candidates who can best represent their interests. In other words, the effectiveness of adopting an e-voting practice will be largely discounted without the complementation of a nomination practice. Past studies suggest that a nomination practice for board election is beneficial to the quality of elected directors (Vafeas, [9]). Therefore, this study proposes the second hypothesis that:

Hypothesis 2: The practice of board nomination strengthens the negative relationship between the adoption of e-voting system and the level of excess control.

This expropriation of control as a form of governance has been shown to harm firm values (Attig [4]; Lemmon and Lins [8]), weaken market reactions to the decisions of corporate ventures (Wong et al. [13]), leads to inefficient strategy formulation (Filatotchev et al. [5]), and exacerbates income management and the incomplete disclosure of earnings (Fan and Wong [6]). Therefore, this study proposes the third hypothesis that:

Hypothesis 3: The level of excess control is negative correlated with firm performance.

## 3. Methodology
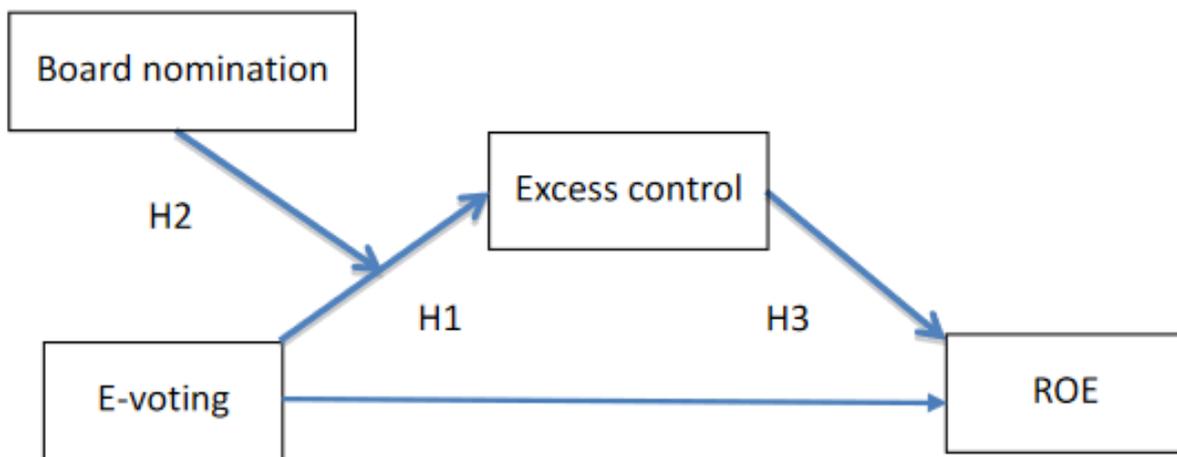
### 3.1. The Conceptual Framework



**Figure. 1.** The conceptual framework

### 3.2. Statistical Methods and Data

This study used the moderated mediation regression model suggested by Hayes [1] to examine the three hypotheses. Because the data are longitudinal in nature, this study used two year-dummy variables to control for the time effect.

This study uses Taiwanese publicly listed companies as the studied object and collected data from Taiwan Economic Journal (TEJ) database which maintains the most comprehensive data of Taiwanese listed companies. There were 878 listed companies in total, of which 49 were omitted due to the lack of complete data for analyzes. The remaining 829 companies were observed during a three-year period between 2012 and 2014, producing a balanced panel dataset that contains 2,487 observations in total.

## 3.3. Measurement

Table 1 shows all the measures of the studied variables.

**Table. 1.** The measures of studied variables.

| Variable | Operationalization |
|---|---|
| *Dependent variable* | |
| Firm performance | net income/number of stock shares (ROE) |
| *Independent variables* | |
| e-voting | dummy variable (adopt:1; otherwise:0) |
| Board nomination | dummy variable (adopt:1; otherwise:0) |
| Excess control | board seat%/ownership of controlling shareholders |
| *Control variables* | |
| Company age | 2012 minus the inception year |
| Company size | natural logarithm of total assets |
| Financial sector | dummy variable (financial sector:1; otherwise: 0) |
| Debt ratio | debt/total asset |
| Independent board | number of independent directors/number of directors |
| Family control | dummy variable (family control:1; otherwise: 0) |
| Prior performance | ROA of prior year |
| Cross-shareholding | dummy variable (cross-shareholding:1; otherwise: 0) |
| Board size | number of directors |
| Pyramidal structure | dummy variable (pyramid:1; otherwise:0) |
| Outside director | number of outside director/number of directors |
| Ownership concentration | ownership% of the largest ten shareholders |
| Year 2012 | dummy variable (2012:1; otherwise: 0) |
| Year 2013 | dummy variable (2013:1; otherwise: 0) |

## 4. Results

Table 2 reports the means, standard deviations, and correlation coefficients of all variables. Most correlation coefficients are small to moderately high, indicating no particular concern on multicollinearity problems.

Table 3 shows the results regarding the relationship between e-voting and excess control, together with the moderating effect of board nomination. The variable of e-voting in Model 2 is marginally significant ($\beta$ = .045, p <.1) yet with a negative sign, which contradicts the prediction of H1. Therefore, H1 is not supported. In Model 3, board nomination shows a significantly positive relationship with excess control ($\beta$ = .046, p <.05). The interaction between e-voting and board nomination also demonstrates a significantly negative relationship with excess control ($\beta$ = -. 085, p <.05), suggesting that the simultaneous adoption of e-voting and board nomination decreases the level of excess control of controlling shareholders . Therefore, H2 is supported.

Table 4 reports the results of the relationship between excess control and firm performance. The level of excess control shows a significantly negative relationship with ROE ($\beta$ = -. 048, p <.05) in Model 4, given that e-voting shows a direct, negative effect on ROE ($\beta$ = -. 137, p <. 01) . Therefore, H3 is supported.

**Table. 2.** The means, standard deviations, and correlation coefficients

| | Mean | S.D. | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. | 17. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. E-voting | .14 | .351 | | | | | | | | | | | | | | | | | |
| 2. Board nomination | .13 | .334 | .541** | | | | | | | | | | | | | | | | |
| 3. ROE | .04 | .086 | -.037 | .036 | | | | | | | | | | | | | | | |
| 4. Company age | 30.81 | 14.913 | .109** | .035 | -.021 | | | | | | | | | | | | | | |
| 5. Company size | 16.18 | 1.626 | .661** | .408** | .064** | .084** | | | | | | | | | | | | | |
| 6. Financial sector | .04 | .201 | .341** | .165** | -.060** | -.013 | .473** | | | | | | | | | | | | |
| 7. Board size | 9.66 | 2.611 | .291** | .157** | .011 | .103** | .358** | .253** | | | | | | | | | | | |
| 8. Independent director | .14 | .147 | .134** | .221** | .045* | -.448** | .133** | .122** | -.016 | | | | | | | | | | |
| 9. Family control | .66 | .473 | .009 | -.040* | -.020 | .233** | -.016 | .010 | -.110** | -.188** | | | | | | | | | |
| 10. Pyramidal structure | .29 | .452 | .313** | .191** | -.044* | .034 | .306** | .119** | .200** | .057** | -.015 | | | | | | | | |
| 11. Cross-shareholding | .30 | .458 | .200** | .109** | -.057** | .249** | .210*＊ | -.011 | .124** | -.182** | .055** | .391** | | | | | | | |
| 12. Debt ratio | .44 | .199 | .294** | .166** | -.268** | .048* | .521** | .431** | .127** | .027 | .073** | .074** | .040* | | | | | | |
| 13. Prior performance | .04 | .121 | -.031 | -.004 | .319** | -.018 | .043* | -.049* | .016 | .049* | -.019 | -.036 | -.042* | -.172** | | | | | |
| 14. Year 2012 | .33 | .471 | -.105** | -.271** | -.130** | -.047* | -.028 | .000 | .017 | -.055** | -.009 | .002 | .032 | .016 | .029 | | | | |
| 15. Year 2013 | .33 | .472 | -.028 | .048* | .085** | .000 | .001 | .000 | .004 | .001 | .004 | .002 | .017 | -.011 | -.059** | -.500** | | | |
| 16. Outside director% | .46 | .208 | -.160** | -.054** | .019 | -.396** | -.182** | .000 | -.002 | .477** | -.157** | -.196** | -.285** | -.056** | .021 | -.030 | -.003 | | |
| 17. Board seat/ownership | 2.97 | 4.815 | .116** | .109** | -.029 | -.044* | .153** | .046* | .022 | .094** | -.180** | -.074** | .013 | .021 | -.009 | -.013 | -.002 | -.018 | |
| 18. Ownership concentration | .22 | .124 | -.032 | -.015 | .051* | .050* | -.071** | .011 | -.171** | .008 | .156** | -.092** | -.038 | .032 | .063** | -.004 | .003 | -.005 | -.133** |

*\*\*p<0.01；\*p<0.05; n=2,486*

**Table. 3.** The results of the moderated mediation models (Part I)

| | Dependent variable：Board seat% / Ownership% | | | |
|---|---|---|---|---|
| | Model1 | Model2 | Model3 | Model4 |
| **Control variable** | | | | |
| Company age | -.008 (-.340) | -.010 (-.449) | -.010 (-.441) | -.010 (-.432) |
| Company size | .233** (8.390) | .206** (6.398) | .217** (7.495) | .200** (6.200) |
| Financial sector | -.002 (-.093) | -.004 (-.197) | -.001 (-.032) | -.005 (-.238) |
| Board size | -.052* (-2.438) | -.055* (-2.555) | -.054* (-2.513) | -.054* (-2.489) |
| independent directors% | .088** (3.602) | .083** (3.389) | .078** (3.127) | .077** (3.089) |
| Family control | -.159** (-7.900) | -.160** (-7.942) | -.158** (-7.866) | -.160** (-7.939) |
| Pyramidal structure | -.178** (-8.063) | -.181** (-8.198) | -.179** (-8.147) | -.182** (-8.248) |
| Cross-share holding | .041+ (1.836) | .040- (1.795) | .039- (1.770) | .039- (1.784) |
| Debt ratio | -.079** (-3.269) | -.075** (-3.106) | -.077** (-3.213) | -.075** (-3.090) |
| Prior performance | -.064** (-3.190) | -.059** (-2.938) | -.061** (-3.070) | -.059** (-2.944) |
| Year dummy_2012 | -.009 (-.391) | -.003 (-.127) | .005 (.223) | .007 (.288) |
| Year dummy_2013 | -.011 (-.499) | -.006 (-.291) | -.006 (-.270) | -.001 (-.022) |
| Outside directors% | -.072** (-2.991) | -.069** (-2.881) | -.069** (-2.857) | -.067** (-2.778) |
| Ownership concentration | -.111** (-5.629) | -.112** (-5.690) | -.112** (-5.682) | -.112** (-5.706) |
| **Explanatory variable** | | | | |
| e-voting | | .045+ (1.667) | | .068* (2.036) |
| Nomination | | | .046* (2.022) | .083** (2.624) |
| e-voting*Nomination | | | | -.085* (-2.250) |
| Adjusted-R$^2$ | .096 | .096 | .097 | .098 |
| F | 19.794** | 18.672** | 18.783** | 16.948** |
| ΔF | 19.794** | 2.778- | 4.089* | 3.399* |

*\*\*p<0.01；\*p<0.05；+p<0.1 (two-tail); t-values are in parentheses, n=2,486.*

**Table. 4.** The results of the moderated mediation models (Part II)

| | Dependent variable : ROE | | | |
|---|---|---|---|---|
| | Model1 | Model2 | Model3 | Model4 |
| **Control variable** | | | | |
| Company age | -.003 (-.147) | .005 (.215) | -.004 (-.166) | .004 (.192) |
| Company size | .287** (10.835) | .371** (12.189) | .299** (11.148) | .381** (12.422) |
| Financial sector | .013 (.606) | .021 (.952) | .013 (.600) | .020 (.943) |
| Board size | -.004 (-.218) | .004 (.185) | -.007 (-.349) | .001 (.056) |
| independent directors% | -.029 (-1.229) | -.014 (-.598) | -.024 (-1.033) | -.010 (-.426) |
| Family control | .018 (.920) | .020 (1.062) | .010 (.490) | .013 (.655) |
| Pyramidal structure | -.066** (-3.166) | -.054* (-2.577) | -.075** (-3.557) | -.063** (-2.954) |
| Cross-share holding | -.041* (-1.968) | -.039+ (-1.841) | -.039+ (-1.875) | -.037+ (-1.751) |
| Debt ratio | -.229** (-9.990) | -.240** (-10.504) | -.233** (-10.158) | -.244** (-10.652) |
| Prior performance | .273** (14.344) | .259** (13.557) | .270** (14.164) | .256** (13.400) |
| Year dummy_2012 | -.083** (-3.937) | -.102** (-4.769) | -.084** (-3.963) | -.102** (-4.780) |
| Year dummy_2013 | .057** (2.706) | .043* (2.025) | .057** (2.686) | .042* (2.013) |
| Outside directors% | .026 (1.155) | .018 (.811) | .023 (.993) | .015 (.666) |
| Ownership concentration | .036+ (1.901) | .040* (2.121) | .030 (1.591) | .034+ (1.825) |
| **Explanatory variable** | | | | |
| e-voting | | -.140** (-5.511) | | -.137** (-5.429) |
| Excess control | | | -.051** (-2.674) | -.048* (-2.505) |
| Direct effect | | | | -.137** (-5.429) |
| Indirect effect (Nomination=0) | | | | -.002+ (-1.385) |
| Indirect effect (Nomination=1) | | | | .001 (.379) |
| Moderated mediation | | | | .003 (1.115) |
| Adjusted-$R^2$ | .179 | .189 | .181 | .190 |
| F | 39.685** | 39.504** | 37.631** | 37.506** |
| $\Delta F$ | 39.685** | 30.367** | 7.149** | 18.354** |

**p<0.01 ; *p<0.05 ; +p<0.1 (two-tail); t-values are in parentheses, n=2,486.

## 5. Conclusion

In light of the literature gaps, this study proposes three hypotheses that addressed the effectiveness of e-voting and nomination practices in board election to reduce the level of excess control held by controlling shareholders, and their effects on firm performance. Although the first hypothesis that e-voting helps to refrain excess control is not supported, a very interesting finding is that when accompanied by the practice of a nomination practice to reduce information asymmetry, e-voting takes a significant effect to reduce the level of excess control. This finding supports the second hypothesis and brings important implications to corporate governance and the formulation of administration policy that while implementing both practices together improves the health of corporate governance, introducing them separately can do harm to corporates. firm performance is also supported, validating the mediating role of excess control between e-voting and firm performance.

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