A Family Member or Professional Management?

— The choice of a CEO and its impact on performance

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Abstract

In this study, we explore what kinds of firms are more likely to have a family CEO or professional CEO, and investigate the performance of CEOs from different backgrounds. The results show that firms with low requirements in managerial skills and a high potential for expropriation are more likely to choose a CEO from the largest shareholder's family (nepotism). As for the relationship between CEO background and firm performance, it depends on firm operating characteristics and control environment. When a firm requires high managerial skill, firm performance will be improved if the CEO is a professional manager and the largest shareholder has low cash-flow rights and weaker control. When there is large opportunity for expropriation in a firm, a firm's performance will be better if the CEO is a family member and the largest shareholder has highly persuasive cash-flow rights.

Keywords: Family CEOs; professional CEOs; firm characteristics; the largest shareholder; performance

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Introduction

Family firms have received increasing attention in the last few years. Several recent studies have reported that in continental Europe, Asia, and Latin America, the vast majority of publicly traded firms are family controlled (La Porta et al., 1999; Claessens et al., 2000; European Corporate Governance Network, 2001; Faccio and Lang, 2002), which suggests that family firms play an important role in economic activity worldwide. However, research also documents that family firms have a low survival rate (Birley, 1986; Kets de Vires, 1993; Morris et al., 1997; Chu and MacMurry, 1993) and indicates that the low survival rate is universal and independent of cultural context or economic environment (Lank et al., 1994).

CEO succession is crucial to the success and continuity of a firm (Miller, 1993; Ocasio, 1999), particularly for family firms, where few survive more than two generations (Birley, 1986; Kets de Vires, 1993; Morris et al., 1997; Chu and MacMurry, 1993). The successor is one of the key factors that affects whether the succession will help firm performance. Within the literature dealing with CEO succession there are many studies that explore the considerations that affect the choice between an insider and an outsider (Fredrickson et al., 1988; Cannella and Lubatkin, 1993). However, besides the aspect of choosing from inside or outside a firm, there is the unique dimension of whether the new CEO should be a family or non-family member (professional manager).

The choice between a family and professional CEO is a critical issue for the family shareholder (Burkart et al., 2003; Lee et al., 2003). Significant research efforts have been devoted to the topic of family business succession (Handler, 1994). Much of family business succession studies focuses on CEO succession from one family member to another (Morris et al., 1997; Sharma et al., 2001) while relatively little research explores the possibility of using a professional CEO or considers the issue of choosing between a family and a professional CEO.

Recently, some theoretical research has studied from the viewpoint of the largest shareholder the choice between family management and professional management. Burkart et al. (2003) argue that when the probability of expropriation by managers is high, the largest shareholder is more likely to use a family CEO to control the overall managerial operation. The model presented by Bhattacharya and Ravikumar (2004) suggests that a firms' characteristics, such as size, can affect the discrepancy in performance between CEOs who are family members and those who are trained professionals. When the discrepancy is significantly wide, the largest shareholder hires a professional manager to run the firm.

Both studies imply that, in family firms, there is a relationship between operating characteristics and the choice of management. However, no related empirical evidence is provided. Smith and Amoako-Adu (1999) examine the factors that determine in family firms whether to appoint a CEO who is a member of the family or a CEO who is from outside the family. However, they mainly focus on the impact of the ownership characteristics of the largest shareholder and the prior performance of the firm once this choice is made.

In this study, we explore what kinds of family firms are more likely to have a CEO who is a member of the family and what kinds of family firms are more likely to have a professional CEO. To examine the relationship between a firm's operating characteristics and the CEO's background, we use listed family firms in Taiwan from 1991 through 2000 as our sample. The Taiwanese market, which is characterized by less effective legal protection for shareholders[1], is especially useful for this purpose. The extent of expropriation opportunities is affected by the law and a firm's characteristics. A firm's characteristics will play a more important role in determining the extent of expropriation potential and affect the choice of the CEO's background when legal protection is weak.

We also investigate the link between a CEO’s background and a firm’s performance. Each type of management has both strengths and weaknesses. Spurred on by family loyalty and reputation, for example, a family CEO has strong incentives to ensure a firm's profitability (Davis, Schoorman, and Donaldson, 1997). The ability of family management on average, however, is inferior to that of professional management (Morck, Stangeland, and Yeung, 2000). Furthermore, family management may present some special problems, such as a lack of restrain in its generosity to family members (Schulze et al., 2001; Lubatkin et al., 2003), which may lessen a firm’s value. On the other hand, professional management from a competitive labor market has superior ability. However, agency theory suggests that there is an inherent conflict of interest between shareholders and professional managers who do not have a significant share in a firm's assets. In contrast to previous research that focused on which type of CEO (family member or professional) performs better (e.g. Smith and Amoako-Adu, 1999; Anderson and Reeb, 2003), we try to go one step further to establish whether a CEO's efforts to enhance a firm's performance is affected by its operating features and what role the largest shareholder plays in corporate governance.

Our results indicate that the choice of a CEO's background is related to a firm's operating characteristics. The presence of a family member as a CEO shows a strong relationship to low levels of R&D, small firm size, and high advertising spending. We also find that when a family firm requires high managerial skills, using a professional CEO can help firm performance, especially if the largest shareholder has low cash-flow rights and weak control. However, when there is a great opportunity for expropriation in a family firm, the firm's performance will be better if the CEO is a family member and the largest shareholder has high cash-flow rights.

Our study provides an interpretation of previous inconsistent evidence. While the evidence is mixed, previous studies address whether family management affects firm performance. Anderson and Reeb (2003) and Morck et al. (1988) find that using a family CEO has a positive impact on firm performance, but Barth et al. (2005) and Smith and Amoako-Adu (1999) show opposite findings. Our results suggest that both professional CEOs and family-member CEOs can bring attributes to a firm and enhance a firm's performance as long as they are hired by firms that need their special talents, and “appropriate” governance mechanisms are in place. A bad match, on the other hand, can be harmful. For example, if a firm with a high requirement for managerial ability uses a talented professional manager as a CEO, and the largest shareholder restricts the initiative of the professional CEO with tight controls, the firm's performance may be poor.

The remainder of this paper is organized as follows: The next section presents our arguments on the determinants of a CEO's background and illustrates how a firm's features and the largest shareholder can affect the performance of CEOs from different backgrounds. The empirical methodology is then presented, followed by a discussion on our sample and data descriptions. Empirical results, which illustrate the determinants of a CEO's background and the link between the CEO's background and a firm's performance, follow. We give a conclusion in the last section.

A CEO's background and a firm's performance

Factors relating to the choice of a CEO's background

The largest shareholder will typically choose a CEO who will maximize his welfare, which is equal to the sum of the value of his own shares and the private benefits obtained only if control is kept within the family (Burkart et al., 2003). The largest shareholder will keep management within the family as long as the benefits to having a family CEO exceed the cost. For the largest shareholder, the principal cost of limiting the CEO position to family members is that a family-member CEO, who is recruited from a restricted labor pool, is generally not as talented as a non-family professional. The inferior ability of a family CEO is harmful to the share value. On the other hand, the benefit of a family CEO is that the largest shareholder does not have to pay monitoring costs. In addition, the largest shareholder can enjoy the private benefits of control and have the discretion to expropriate from minority shareholders.

A firm's operating characteristics affect the cost and benefit of having a family-member CEO. The cost increases with the discrepancy in productivity between family members and professional managers (Bhattacharya and Ravikumar, 2004; Burkart et al., 2003). When a firm's operation requires specific or advanced managerial skills, it is easier to obtain qualified and capable candidates for a CEO from the professional labor market than from family members. In other words, when firms require more managerial skills, the difference in ability between qualified professional managers and family members will increase and that will magnify the discrepancy in productivity between them. Hence, the high requirement for managerial skills will lead to a separation of ownership from management and the hiring of a professional CEO (Burkart et al., 2003).

High managerial discretion implies a higher potential for expropriation, and, for the largest shareholder, increases the benefit of using a family CEO. The management can easily divert corporate resources as private benefits through managerial discretion. If a firm requires large discretionary spending in its production technology, the CEO of the firm can inherently exercise a great deal of managerial discretion. Hence, the largest shareholder is more likely to be in favor of using a family member as a CEO.

The previous arguments suggest that the choice of a CEO's background is affected by a firm's operating characteristics. The preceding arguments lead to the following hypotheses:

H1: *The more managerial ability that is required in a firm's operations, the more likely a firm will hire a professional manager as its CEO.*

H2: *When there is more opportunity for expropriation in a firm, it is more likely to have a family CEO.*

A CEO's background and firm performance

Following the arguments in the previous sections, we propose that the impact of a CEO's background on firm performance changes, depending on the characteristics of a firm and those of its largest shareholder. CEOs with different backgrounds (family members or professionals) imply different level of managerial ability and induce different types of agency problems. Both a CEO's ability (Finkelstein and Hambrick, 1996) and agency problems (Jensen and Meckling, 1976; Claessens et al., 2002) can affect a firm's performance. Which of these two factors is more relevant to a firm's performance may be contingent on the characteristics of a firm and the role of its largest shareholder.

The ability of a CEO is especially crucial to a firm's performance when its operations require high managerial ability (Burkart et al., 2003). Therefore, for firms requiring high managerial ability, a professional CEO can contribute more to a firm's performance than a family CEO. Having a professional CEO will induce the classic owner-manager conflict; however, with monitoring by the largest shareholder, the agency problem can be mitigated (Shleifer and Vishny, 1986). Thus, we propose the following hypothesis:

H3.1: *When a firm requires high managerial ability, the firm having a professional CEO will perform better.*

When a firm needing high managerial skills appoints a professional manager as its CEO, the largest shareholder not only reduces managerial expropriation but also limits the discretion of the CEO, which may have a negative effect on the professional's performance. High cash-flow rights and strong control by the largest shareholder will hobble the professional in any efforts to improve a firm's performance (Burkart et al., 1997). To give sufficient managerial discretion to a professional CEO of a firm requiring high managerial skills to improve its performance, we maintain that less control by the largest shareholder is beneficial. The preceding arguments lead to the following hypothesis:

H3.2: *When a firm requires high managerial ability, the firm having a professional CEO will perform better if the largest shareholder has weak control and holds low cash-flow rights.*

Agency problems are especially detrimental to a firm's performance when there is ample opportunity for expropriation (Klapper and Love, 2004). Whether a firm uses a family member or a professional manager as its CEO, the CEO can easily funnel resources for self-gain to the detriment of the firm's performance when there is lots of opportunity for expropriation. However, from a stewardship perspective, using a family member as the CEO may lead to better performances by firms with high potential for expropriation. Davis et al. (1997) argue that CEOs who are family members identify strongly with the firm and consider the firm's performance as an integral extension of their own well-being. In addition, family members often hold higher ownership stakes than professional managers, and this increases the incentive for a family CEO to increase a firm's value (Claessens et al., 2002). Having a family CEO also may present other problems, such as a lack of self-control in restraining generosity towards family members (Schulze et al., 2001; Lubatkin et al., 2003). A large ownership stake of family CEOs may help in curbing this problem. Thus, we suggest the following hypothesis:

H4.1: *When a firm has great potential for expropriation, the firm having a family-member CEO will perform better.*

Using a family member as a CEO can facilitate the control by the largest shareholder over the firm. Strong control by the largest shareholder may induce an entrenchment cost that is related to expropriations from minority shareholders by the majority shareholder (Claessens et al., 2002). Claessens et al. (2002) finds that the entrenchment effect resulting from the superior voting rights of the largest shareholder has a negative effect on a firm’s performance. On the other hand, high cash-flow rights in the hands of the majority shareholder can increase the positive incentive to improve a firm’s performance (Claessens et al., 2002; Yeh, 2005). This leads to the following hypothesis:

H4.2: *When a firm has a great potential for expropriation, the firm having a family-member CEO will perform better if the largest shareholder has weak control and high cash-flow rights.*

Empirical method

The relationship between a CEO's background and a firm's operating characteristics

We employ a logit model to examine the determinants of the CEO's background. The model specification is as follows:

$$\ln[\rho/(1-\rho)] = \beta_0 + \beta_1(\text{Operating Characteristics Variables})_{it} + \beta_2(\text{Control Variable})_{it} + \sum_{t=91}^{99}\gamma_t D_t + e_{it} \tag{1}$$

where ρ= the probability of the presence of a family-member CEO; D_t=1 for year t, which are dummy variables of time.

We employ five variables: R&D intensity, firm size, advertising spending, cash holdings, and fixed assets ratio, to define a firm's operating characteristics. The intensity of R&D activity is related to both the requirement for managerial ability and the potential for expropriation in a firm's operations. For R&D activities to be productive, the CEO should have a specific ability to process information, which is likely to be rare but critical to a firm's performance (Henderson and Fredrickson, 1996). Therefore, a higher R&D intensity decreases the probability of using a family CEO. Nevertheless, a higher R&D intensity can also increase expropriation. CEOs can make manager-specific R&D investments to reduce the probability of being replaced, extract higher salaries and larger prerequisites (Shleifer and Vishny, 1989). Therefore, a higher R&D intensity can also increase the probability of having a family CEO. In sum, the intensity of R&D activity has an ambiguous effect on the choice of a CEO's background. If, in firms with large R&D activities, R&D activities are an essential contribution to production technology, we expect that they will be less likely to have a family CEO. The intensity of R&D activity is measured as the ratio of R&D spending to total assets by percentage.

Firm size, in association with the extent of a CEO's ability and the opportunity for expropriation, may also affect the likelihood of having a family CEO. Large firms involving more complex operations have a need for the advanced managerial abilities of the CEO (Rosen, 1992), thereby decreasing the tendency to use a family CEO. In contrast, a large firm, because of its large resources, is endowed with higher pecuniary and non-pecuniary benefits of control (Barclay and Holderness, 1989), and because of this, the majority shareholder is more likely to use a family member as the CEO. In short, firm size has mixed effects on determining a CEO's background. If superior managerial skills are important in maintaining a large firm's operations, we would expect large firms to be reluctant to use family members as CEOs. Firm size is measured by the natural log of the book value of assets.

We use advertising spending to proxy for the intensity of discretionary spending, which is related to the opportunity for expropriation (Himmelberg, Hubbard, and

Palia, 1999). The appropriation of advertising spending is difficult to evaluate objectively. When firms require high advertising spending, management can easily extract private benefits from discretionary advertising spending. Therefore, the need for higher advertising spending would make the majority shareholder more likely to use a family member as the CEO. Advertising spending is measured by advertising expenditure to total assets by percentage.

Cash holdings and fixed assets are variables related to the composition of a firm's assets. They also affect the extent of a firm's managerial discretion, which is associated with the opportunity for expropriating from minority shareholders by the largest shareholder. High cash holdings will increase managerial discretion because it reduces the need for raising additional funds in the external capital market, which would be accompanied by greater external monitoring (Jensen, 1986). Therefore, it is more likely that there will be a family CEO when cash holdings are high. Cash holdings are measured as the ratio of cash and marketable securities to total assets. Fixed assets are observable and easily monitored (Himmelberg et al., 1999), suggesting low agency costs and a decreased probability of using a family CEO. The fixed assets ratio is measured by the sum of land, plant, and machinery value, and we scale the value by total assets.

Besides these five variables, we also employ an ownership variable to control the effect of the ownership structure on the choice of the CEO’s background. The presence of an outside blockholder who can compete with the largest shareholder will decrease the possibility of using a family member of the largest shareholder as CEO (Smith and Amoako-Adu, 1999). Therefore, we measure the relative power of the largest shareholder by the ratio of the voting rights of the largest shareholder to the sum of the voting rights of the largest and the second largest shareholders.

Because there is an endogeneity consideration in the relationship between a firm's characteristics and the CEO's background, we need to address this issue before investigating how a firm's features affect the choice of a CEO.

The largest shareholder decides whether to use a family-member CEO according to the attributes of the firm. The appointed CEO, however, can influence these characteristics through corporate decision making. For example, a professional CEO may increase R&D spending to increase his importance in the company[2] (Shleifer and Vishny, 1989).

The above discussion suggests the following empirical inquiry. First, we explore whether a firm’s operating characteristics (proxies for the requirement for managerial ability and the potential for expropriation) influence the choice of a CEO’s background in ways that are predicted by our hypotheses. Second, we investigate the endogeneity of these firm-operating characteristics by the procedures suggested by

Wooldridge (2001). In the test procedures for endogeneity, we use instrumental variables for firm operating variables. Because industry features that are exogenous characteristics of firms are unaffected by any single CEO, we use industry data as instrumental variables[2]. For each firm, the industry number is measured against the industry mean, which includes all the firms in the industry to which the firm belongs.

The relationship between a CEO's background and a firm's performance

Our two pair hypotheses H3.1-3.2 and H4.1-4.2 require us to classify firms into two types: High-Skill and High-Expropriation. In firms belonging to the High-Skill type, high managerial skills are so crucial to the day-to-day operations that the largest shareholder will not keep management in the family even though using a family CEO would control the outright private benefits. On the other hand, in firms belonging to the High- Expropriation type, the opportunity for expropriation is so large that the largest shareholder is unwilling to delegate management to a professional manager even though the superior ability of a professional manager would be good for the firm. Because the two types of firms have different operating features, which also affect the choice of the CEO's background, we use the fitted probability $\hat{\rho}_{it}$ from equation (1), which uses industry numbers as independent variables to classify the firms. If the fitted probability is larger than 0.5, it means, according to the firm's operating features, the largest shareholder is predicted to use a family member as the CEO; therefore, we classify the firm as a "High-Expropriation" type, otherwise, as a "High-Skill" type.

Firm performances can be affected by the CEO's background and other factors as in equation (2):

$$Performance_{it} = \theta(FamilyCEO)_{it} + \beta x_{it} + \sum_{91}^{99} \delta_t D_t + e_{it} \qquad (2)$$

where *Performance* refers to firm performance. Because our sample is made up of listed family firms, profitability and stock price are the main concern of both the market and the shareholders[3]. Therefore, we use a profitability-based measure, return on assets (ROA), and a market-based measure, Tobin's q, of firm performance. Return on assets (ROA) is calculated with earnings before interest, tax, and depreciation to total assets by percentage. Tobin's q is measured by market-to-book value of total assets. *Family CEO* is a dummy variable, which is equal to 1 if the CEO is a family member of the largest shareholder; otherwise, it is equal to 0. D_t=1 for year t. A firm's performance, *Performance*, depends on the background of the CEO, *Family CEO*, and observable firm characteristics, x_i.

Besides the variable of the background of the CEO (*Family CEO*), we include four variables of firm characteristics commonly used in previous studies (e.g. Morck et al., 1988; Anderson and Reeb, 2003) to explain firm performance. The four variables are as follows. Firm size measured by the natural logarithm of the book value of assets controls the size effect. R&D intensity and advertising spending control the intangible assets and future growth opportunity. R&D intensity is measured by the ratio of R&D spending to the book value of total assets. Advertising spending is measured by advertising expenditure to total assets by percentage. Debt ratio controls the positive tax-shield effect and the negative financial distress effect and is measured by the book value of debt divided by total assets.

Firm performances can also be affected by variables that are unobservable to researchers. This will create a correlation between the error term and CEO background. The endogeneity problem can lead to a spurious relationship between the CEO's background and performance. Consider two firms that are identical except that one of the firms operates with more discretionary spending, which is hard to evaluate and related to high managerial discretion. The largest shareholder of this firm is more likely to use a family CEO considering the high private benefits of control resulting from high discretionary spending. This firm will have a lower valuation because more resources are diverted to managerial perquisites through the discretionary spending. In this example, the discretionary spending induces a negative correlation between the presence of a family-member CEO and the firm's performance, but this relationship is spurious, not causal.

We follow Himmelberg et al. (1999) in handling the endogeneity problem by including the fixed firm effect in regression (2) to control a firm's unobservable characteristics[4]. By introducing the fixed firm effect, we are essentially looking at firms that use both family and professional CEOs and comparing performances between different backgrounds.

Sample and data description

Sample

In this study, we use family firms that are listed in Taiwan as our sample. The stock market of Taiwan is characterized by weak legal protection for shareholders, high ownership concentration, and a prevalence of family firms, which is similar to other emerging markets (La Porta et al., 1999; Lemmon and Lins, 2003; Yeh et al., 2001). The controlling family of a listed firm in Taiwan usually separates the voting rights from the cash-flow rights by using pyramid structures and/or cross shareholdings (Classens et al., 2000; Yeh et al., 2001).

To investigate the determinants of the CEO in family firms, we follow La Porta et al. (1999) to trace out the largest shareholder of a company by studying ultimate shareholdings and use the following criteria for family control proposed by Morck and Yeung (2004) to distinguish family firms: (1) the largest group of shareholders in a firm is a specific family, and (2) the stake of that family is no less than 10% of the voting shares. We justify the relationship between the CEO and the largest shareholder with the information in company prospectuses and “Business Groups in Taiwan”, published annually by the China Credit Information Services[5]. If the CEO is a family member of the largest shareholder, we designate the CEO as a family-member CEO. Otherwise, we designate the CEO as a professional. Ownership data are collected from company prospectuses and “Business Groups in Taiwan”. Firm variables are calculated with data drawn from the Taiwan Economics Journal (TEJ) database.

The sample includes all listed non-financial family firms during the 1991-2000 periods in Taiwan; in other words, listed firms that have disappeared during the sample periods are still included in our sample. There were 575 listed non-financial firms in Taiwan during the 1991-2000 periods. After excluding observations with incomplete data, there remained 2,030 firm-years, containing 375 firms. We used the criteria proposed by Morck and Yeung (2004) to distinguish family firms and finally ended up with 1,065 firm-years, composing 232 firms. It shows that 61.87% (= 232/375) of the listed non-financial firms in Taiwan were controlled by families during the 1991-2000 periods.

In our sample, the proportion of family-member CEOs is higher than that of professional CEOs in family firms: 55.49 percent and 44.51 percent, respectively. This distribution does not contradict the general image that family firms are often managed by members of the family. However, the competitive proportion of professional CEOs being used shows that family members are not the only candidates for the CEO position in family firms and what factors make family firms decide to delegate management to professionals is just one of our research questions. We also observe that the percentage of family CEOs in family firms is decreasing with the years. The proportions of family and professional CEOs, up to the year 2000, are 52.26% and 47.74%, respectively. The decreasing proportion of family CEOs may be reflective of the growing portion of listed firms requiring high managerial skill. As we proposed in hypothesis 1 (H1), firms requiring high skill tend to have a professional CEO. We use R&D intensity to proxy for the requirement of managerial skill and find that there is a significant higher R&D intensity in the later sample period, which suggests that the proportion of the presence of professional CEO is higher in the later sample period.

Summary statistics

Table 1 presents three panels of descriptive information on our firm sample.

Panel A provides means, medians, standard deviations, and maximum and minimum values for the variables of a firm's operating characteristics in our sample. Panel B shows the univariate comparisons of these variables between family CEO firms and professional CEO firms. The tests show that there are significant differences in company characteristics between family firms with a family-member CEO and those with a professional CEO. Family firms with a family-member CEO are small in size, and have a low R&D intensity in comparison to family firms with a professional CEO. In addition, the presence of a family CEO is related to high advertising spending and fixed assets ratios.

Insert Table 1 Here

Panel C provides a simple correlation matrix for the variables in the sample. Consistent with previous analysis, family CEOs' presence has a negative relationship to both firm size and R&D intensity. There is a positive relationship between the presence of family CEOs and advertising spending and fixed assets. In addition, there is a negative correlation (-0.22) between R&D intensity and fixed assets ratios. Cash holding has a moderately positive relationship to R&D intensity. To estimate the partial effects of these characteristic variables on the choice of the CEO's background, we provide regression tests in the following section.

Empirical results

Logistic regression results

In Table 2, we examine the determinants of the CEO background by using logit models for a sample of publicly listed family companies in Taiwan from 1991-2000. The dummy dependent variable, *Family CEO* is equal to 1 if the CEO is a member of the largest shareholder's family; otherwise, it is equal to 0.

Insert Table 2 Here

Column 1 uses the variables of the operating characteristics of the firms as independent variables. The regression results show that firm size, R&D intensity, and advertising spending have a significant relationship to the presence of a family CEO. The coefficient estimates for firm size and R&D intensity are negative: it is less likely that there will be a family-member CEO for large and high R&D firms. The results indicate that in firms with large size and high R&D intensity, the effects of productivity generated by the CEO is more influential relative to the agency costs incurred by using a professional manager. As expected, there is a positive relationship between advertising spending, which proxies for discretionary spending, and the probability of having a family CEO.

Column 2 shows regression results that include both variables of operating characteristics and the ownership structure. The signs of coefficients for operating characteristic variables are the same as those presented in Column 1. The coefficient estimator for relative power is positive, which is consistent with the findings of Smith and Amoako-Adu (1999). The positive coefficient shows that the more power the largest shareholder has relative to the other shareholders, the higher the possibility of having a family CEO is.

Because of the endogeneity consideration in the relationship between a firm's characteristics and the CEO's background, we test for endogeneity by using industry numbers as instrumental variables. The statistic for the test χ^2 is 23.97 with a p-value of 0.0002. The low p-value suggests that firm operating characteristics are endogenous.

To check the robustness of previous results against the possibility of biased estimates due to the endogeneity of a firm's operating characteristics, we also use industry numbers to measure operating characteristics. The results of regressions reported in Columns 3 and 4 are similar to those of regressions that use company data as independent variables. The signs of coefficients for industry data stay the same, but the coefficient estimate for industry R&D intensity becomes insignificant. This may be caused by the high correlation between industry R&D intensity and cash holdings (the coefficient of correlation is 0.71).

In sum, the empirical findings presented in Table 2 support our hypotheses H1 and H2 that the largest shareholder will consider the requirements for managerial skills and the potential for expropriation in the firm's daily operations when deciding on a CEO's background. A high requirement for managerial skill will reduce the possibility of using a family CEO; on the other hand, a large potential for expropriation will increase the possibility of using a family CEO.

A CEO's background and firm performance

To examine the impact of a firm's characteristics on the performance of a CEO, we divided the sample into two groups[6]: high-expropriation type and high-skill type, and used the two sub-samples respectively to estimate the coefficient of family CEOs. The results are reported in Tables 3 and 4. All regressions include fixed firm effects and year dummy variables, but we did not present the coefficients in the tables.

Insert Table 3 Here

Table 3 presents the empirical results for high-skill firms. In Columns 1 to 4, we report the results when firm performance is measured with return on assets (ROA), and Columns 5 to 8 present the results using Tobin's q to measure performance. Columns 1 and 5 show that the coefficient estimate for family CEOs is negative and significant in high-skill firms, which supports hypothesis H3.1: that a professional CEO, on average, performs better than a family CEO in firms needing advanced managerial skills.

Furthermore, we test hypothesis H3.2 to investigate whether the largest shareholder affects a professional CEO's performance in high-skill firms. To examine the hypothesis, we created three dummy variables. The dummy variable, *Professional CEO and Low cash-flow rights*, equals one when a professional CEO is present and the cash-flow rights of the largest shareholder are less than 12.25% (i.e. belongs to the bottom 30% in the cash-flow rights of the sample), and zero otherwise. *Professional CEO and Low voting rights* equals one if a professional CEO is present and the voting rights of the largest shareholder are less than 16.25% (i.e. belongs to the bottom 30% in the voting rights of the sample). *Professional CEO and Low affiliated director* equals one when a professional CEO is present and the proportion of the affiliated directors of the largest shareholder is less than 20% (i.e. belongs to the bottom 30% of the affiliated directors of the sample). Directors are identified as being affiliated when they are the largest shareholder, the largest shareholder's identifiable relative[7], or legal representative from other companies or entities controlled by the largest shareholder. The results are in Table 3, with Columns 2-4 using ROA, and Columns 6-8 using Tobin's q.

Consistent with our hypothesis, the coefficient estimates for the three dummy variables, which represent firms using a professional CEO and having the largest shareholder with less control over the firm, are positive. When performance is measured by ROA, the positive coefficients on *Professional CEO and Low cash-flow rights* and *Professional CEO and Low voting rights* show that a firm belonging to the high-skill type has a better accounting performance when the firm uses a professional CEO and the largest shareholder has low cash-flow rights and low voting rights. As Tobin's q is the dependent variable, the coefficient of *Professional CEO and Low cash-flow rights* is significantly positive, which suggests that firm performance has a positive association with the presence of a professional CEO together with the largest shareholder possessing low cash-flow rights.

Summarizing the empirical results in Table 3, we document that using a professional CEO is beneficial for a high-skill type firm especially when the largest shareholder of the firm maintains less control over the firm. It supports the argument that when high managerial skills are crucial to a family firm's operation, using a professional CEO can creates value even though there is a conflict of interest between the professional CEO and the family shareholder. Our findings are consistent with the argument proposed by Burkart et al. (2003) that a high requirement for managerial skills will lead to a separation of ownership from management.

Insert Table 4 Here

Table 4 reports the results of examining the relationship between the CEO's background and firm performance in high-expropriation type firms. Columns 1-4 present the results when firm performance is measured with return on assets (ROA), and Columns 5-8 show the results using Tobin's q to measure performance. First, we only explore the impact of the CEO's background and do not consider the feature of the largest shareholder. The coefficients of *Family CEO* reported in Columns 1 and 5 are positive but insignificant. We did not find evidence to support a difference in performance on average between family members and professional CEOs, as hypothesized in H4.1.

We further examine hypothesis H4.2 and analyze whether the largest shareholder affects the relationship between the CEO's background and firm performance. We created three binary indicator variables to test the hypothesis: *Family CEO and High cash-flow rights*, *Family CEO and Low voting rights*, and *Family CEO and Low* *affiliated director*. The definitions of these variables are similar to those dummy variables used to investigate the performance of professional CEOs in Table 3. The dummy variable, *Family CEO and High cash-flow rights*, equals one when Family CEO is present and cash-flow rights of the largest shareholder is larger than 23.71% (i.e. belongs to the 30% in the cash-flow rights of the sample), and zero otherwise. *Family CEO and Low voting rights* equals one if a family CEO is present and the voting rights of the largest shareholder are less than 16.25% (i.e. belongs to the bottom 30% in the voting rights of the sample). *Family CEO and Low affiliated director* equals one when a family CEO is present and the proportion of affiliated directors of the largest shareholder is less than 20% (i.e. belongs to the bottom 30% in the proportion of affiliated directors of the sample). The results are in Columns 2-4 and 6-8 of Table 4.

The empirical results show that, in high-expropriation type firms, a firm has a better accounting performance when the firm has a family CEO and the largest shareholder holds high cash-flow rights. In Column 2, the coefficient of *Family CEO and High cash-flow rights* is positive and significant, which is consistent with our suggestion in hypothesis H4.2. However, we do not find that weak control by the largest shareholder greatly improves the performance of a family CEO; the coefficients on *Family CEO and Low voting rights*, and *Family CEO and Low* *affiliated director* are both insignificant in regressions using ROA and Tobin's q as performance measures.

In Table 4, we find that in high-expropriation type firms, the high cash-flow rights of the largest shareholder is an essential mechanism that motivates a family CEO to enhance firm performance. The results support the argument suggested by previous studies (La Porta et al., 2002; Claessens et al., 2002; Yeh, 2005) that high cash-flow rights of the largest shareholder has a positive incentive effect on firm performance. Our findings suggest that in high-expropriation type firms, a family CEO may be a better choice than a professional CEO for increasing firm value when the family shareholder owns high cash-flow rights.

Conclusion

Although family firms play an important role in the world economy empirical research on this sector is relatively small, partly because a large amount of the literature focuses on privately-held firms, for which reliable information is difficult to obtain (Wortman, 1994). In this study, we use a sample of publicly listed Taiwanese family firms to investigate why some family firms have a family CEO, others have a professional CEO, and what is the link to firm performance. Our results show that there is a significant relationship between a firm's operating characteristics and the CEO’s background, which support the arguments of Burkart et al. (2003) and Bhattacharya and Ravikumar (2004). Although family firms are generally perceived as handing over management to family members, our results indicate that, for the family, the choice of family management, which is affected by the operating characteristics of the firm, is not overwhelmingly preferable to that of professional management.

The analysis also shows that both family CEOs and professional CEOs can help a firm’s performance as long as CEOs are hired by “suitable” firms and “appropriate” governance mechanisms are in place. We find that if a family firm has a high requirement for managerial skills in its operations, using a professional manager as a CEO can improve firm performance, especially when the largest shareholder has low cash-flow rights and weak control over the firm. When there is great opportunity for expropriation in a family firm, the firm's performance will be better if the CEO is a family member and the largest shareholder has high cash-flow rights.

Our findings have important implications for governance in family business. In family-controlled firms, the owner is normally reluctant to delegate to non-family members and an independent professional manager may find it difficult to operate effectively (Sheehy, 2005). In addition, Burkart et al. (2003) indicate that the controlling family may impose high levels of monitoring to prevent expropriation by a professional manager. The results in this paper suggest that tight control by the controlling family will hamper a professional CEO in bringing all available expertise into play, which dilutes the benefits of using a professional CEO and can be harmful to firm performance when the CEO's expertise is crucial to the firm. In other words, if the advanced managerial skills of a professional manager are essential to a family firm's success, weaker control by the controlling family and full delegation to the professional manager is necessary. Although our analysis is focusing on family firms, we believe the suggestion would also be suitable for non-family firms.

Previous research indicates that high cash-flow rights can induce a positive incentive effect on firm performance (Claessens et al., 2002; Yeh, 2005). Our results reinforce this argument and suggest that the positive effect of high cash-flow rights can effectively decrease the negative entrenchment effect of family control, especially when the largest shareholder keeps management in the family. Our findings also suggest that when the management has been delegated to a professional manager, the positive effect is limited; we infer that the reason for this is that high ownership induces tight control, which constrains the initiative of a professional manager and may offset the positive effects In sum, our results imply that in family firms, the choice of a CEO's background is important to the arrangement of governance.

Notes

1. See La Porta, Lopez-de-Silanes, Shleifer, and Vishy (1998), Claessens et al. (2000), and Claessens et al. (2002). Taiwan is a German-civil-law country. According to the investigation of La Porta et al. (1998), the average country score for five legal enforcement variables is 8.08 for Taiwan, compared to the average score 9.52 for United States and 9.40 for United Kingdom. The rating on accounting standards is 65 for Taiwan, compared to the rating 71 for United States and 78 for United Kingdom.
2. The attributes of a firm are affected by industry and firm-specific factors. The information technology (IT) industry, for instance, requires high R&D activities to sustain innovative breakthroughs and that results in a common characteristic: high R&D spending by firms in the IT industry. The leading company in the IT industry will make greater R&D expenditure relative to the average for the industry to maintain its leadership; this is its firm-specific factor. A firm's factor, relative to the industry factor, is more vulnerable to decision making by the CEO. We regard industry factors as exogenous characteristics of firms that are unaffected by any single CEO, and industry data can be instrumental variables.
3. We also use sales growth to proxy for performance. The results of regressions show that there is no significant relationship between a firm’s sales growth and the CEO’s background.
4. To make sure the model specification of fixed firm effect is appropriate, we also implement a Hausman test for the appropriateness of the random effects specification. The Hausman statistics χ^2 for model (1) and model (5) of Table 3 is 24.57 with p-value 0.03 and 36.44 with p-value 0.0009, respectively. The Hausman statistics χ^2 for model (1) and model (5) of Table 4 is 54.85 with p-value < 0.0001 and 277.99 with p-value < 0.0001, respectively. The low p-values suggest that fixed effects model is more appropriate.
5. In Taiwan, the Securities and Exchange Act requires publicly listed companies to file with the competent authority and announce to the public the class and number of shares held by its directors, managers, and shareholders who hold more than ten percent of the total shares of the company.
6. The criterion to identify a firm’s type is described in empirical method of this study.
7. The identifiable relatives refer to spouse, parents, children, siblings, mother-in-law, father-in-law, sons and daughters-in-law, brothers and sisters-in-law.

References

Anderson, R. C., and Reeb, D. M. (2003) Founding-Family Ownership and Firm Performance: Evidence from the S&P 500, *Journal of Finance*, 58, 1301-1328.

Barclay, M. J. and Holderness, C. G. (1989) Private Benefits from Control of Public Corporations, *Journal of Financial Economics*, 25, 371-395.

Barth, E., Gulbrandsen, T., and Schøne, P. (2005) Family Ownership and Productivity: the Role of Owner-management, *Journal of Corporate Finance*, 11, 107-127.

Bhattacharya, U. and Ravikumar, B. (2004) From Cronies to Professionals: the Evolution of Family Firms, in Klein E. (ed.) *Capital formation, governance and banking, Financial Institutions and Services*. Hauppauge, NY: Nova Science Publishers.

Birley, S. (1986) Succession in The Family Firm: The Inheritor's View, *Journal of Small Business Management*, 25, 409-415.

Burkart, M., Gromb D., and Panunzi, F. (1997) Large Shareholders, Monitoring, and the Value of the Firm, *Quarterly Journal of Economics*, 112, 693-728.

Burkart, M., Panunzi, F., and Shleifer, A. (2003) Family Firm, *Journal of Finance*, 58, 2167-2202.

Cannella, A., and Lubatkin, M. (1993) Succession as a Sociopolitical Process: Internal Impediments to Outsider Selection, *Academy of Management Journal*, 36, 763-793.

Chu, T. C., and MacMurray, T. (1993) The Road Ahead for Asia's Leading Conglomerates, *McKinsey Quarterly*, 3, 117-126.

Claessens, S., Djankov, S., and Lang, L. (2000) The Separation of Ownership and Control in East Asian Corporations, *Journal of Finance Economics*, 58, 81-112.

Claessens, S., Djankov, S., Fan, J. and Lang, L. (2002) Disentangling the Incentive and Entrenchment Effects of Large Shareholder, *Journal of Finance*, 57, 2741-2771.

Davis, J. F., Schoorman, D., and Conaldson, L. (1997) Toward a Stewardship Theory of Management, *Academy of Management Review*, 22, 20-47.

European Corporate Governance Network (ECGN) (2001) Fabricio Barca, Marco Becht (eds.) *The Control of Corporate Europe*: Oxford University Press.

Faccio, M. and Lang, L. (2002) The Ultimate Ownership of Western European Corporations, *Journal of Financial Economics*, 65, 365-395.

Finkelstein, S., and Hambrick, D. (1996) *Strategic Leadership: Top Executives and Their Effects on Organizations*. Minneapolis-St. Paul: West.

Fredrickson, J. W., Hambrick, D. C., and Baumrin, S. (1988) A Model of CEO Dismissal, *Academy of Management Journal*, 32, 516-542.

Handler, W. C. (1994) Succession in Family Business: A Review of the Research, *Family Business Review*, 7(2), 133-157.

Henderson, A. D. and Fredrickson, J. W. (1996) Information Processing Demands as a Determinant of CEO Compensation, *Academy of Management Journal*, 39, 575-606.

Himmelberg, C. P., Hubbard, R. G., and Palia, D. (1999) Understanding the Determinants of Managerial Ownership and the Link between Ownership and Performance, *Journal of Financial Economics*, 53, 353-384.

Jensen, M., and Meckling, W. (1976) Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3, 305-360.

Kets de Vires, M. (1993) The Dynamics of Family Controlled Firms: The Good News and The Bad News, Organizational Dynamics, 21, 59-68.

Klapper, L. F. and Love, I. (2004) Corporate Governance, Investor Protection, and Performance in Emerging Markets, *Journal of Corporate Finance*, 10, 703-728.

La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. (1999) Corporate Ownership around the World, *Journal of Finance*, 471-518.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1998) Law and Finance, *Journal of Political Economy*, 106, 1113-1155.

Lank, A., Owens, R., Martinez, J., Reidel, H., Visscher, F., and Bruel, M. (1994) The State of Family Business in Various Countries Around the World, *Family Business Network Newsletter*, 3-7.

Lee, K. S., Lim, G. H., Lim, W. S. (2003) Family Business Succession: Appropriation Risk and Choice of Successor, *Academy of Management Review*, 28, 657-666.

Lemmon, M. L. and Lins, K. V. (2003) Ownership structure, Corporate Governance, and Firm Value: Evidence from the East Asian Financial Crisis, *Journal of Finance*, 58, 1445-1468.

Lubatkin, M. H., Ling, Y., and Schulze, W. S. (2003) Explaining Agency Problems in Family Firms Using Behavioral Economics and Justice Theories. Paper presented at the Academy of Management meetings, Seattle, WA.

Miller, D. (1993) Some Organizational Consequences of CEO Succession, *Academy of Management Journal*, 36, 644-659.

Morck, R. K., and Yeung, B. (2004) Family Control and The Rent-Seeking Society. *Entrepreneurship Theory & Practice*, 28, 391-409.

Morck, R. K., Shleifer, A., and Vishny, R. (1988) Managerial Ownership and Market Valuation: An Empirical Analysis, *Journal of Financial Economics*, 20, 293-315.

Morck, R. K., Strangeland, D. A., and Yeung, B. (2000) Inherited Wealth, Corporate Control, and Economic Growth. In Randall K. Morck (ed.) *Concentrated*

Corporate Ownership. Chicago: The University of Chicago Press.

Morris, M. H., Williams, R. O., Jeffery, A., and Avila, R A. (1997) Correlates of Success in Family Business Transitions, *Journal of Business Venturing*, 12, 385-401.

Ocasio, W. (1999) Institutionalized Action and Corporate Governance: The Reliance on Rules of CEO succession, *Administrative Science Quarterly*, 44, 384-416.

Rosen, S. (1992) Contracts and the Market for Executives, In Wein L. and Wijkander, H. (ed.) *Contract Economics*. Blackwell Publishers.

Schulze, W. S., Lubatkin, M. H., Dino, R. N., and Buchholtz, A. K. (2001) Agency Relationships in Family Firms: Theory and Evidence, *Organization Science*, 12, 99-116.

Sharma, P., Chrisman, J. J., Pablo, A., and Chua, J. H. (2001) Determinants of initial Satisfaction with the Succession Process in Family Firms: A Conceptual Model, *Entrepreneurship Theory and Practice*, 25, 1-19.

Sheehy, J. (2005) Family Business: Tradition and Professionalism, Accountancy Ireland, 37, 56-58.

Shleifer, A. and Vishny, R. (1989) Management Entrenchment: the Case of Manager-specific Investments, *Journal of Financial Economics*, 25, 123-140.

Smith, B. F., and Amoako-Adu, B. (1999) Management Succession and Financial Performance of Family Controlled Firms, *Journal of Corporate Finance*, 5, 341-368.

Wooldridge, J. M. (2002) *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

Wortman Jr., M. S. (1994) Theoretical Foundations for Family-Owned Businesses: A Conceptaul and Research Based Paradigm. *Family Business Review*, 7, 3-27.

Yeh, Y. H. (2005) Do Controlling Shareholders Enhance Corporate Value? *Corporate Governance: An International Review*, 13, 313-325.

Yeh, Y. H., Lee, T. S., and Woidtke, T. (2001) Family Control and Corporate Governance: Evidence for Taiwan, *International Review pf Finance*, 2, 21-48.

Table 1 Descriptive data for family CEO and professional CEO firms

Panel A: Summary Statistics for the Full Sample

Firm characteristics	Mean	Median	Standard Deviation	Max.	Min.
Firm size	15.65	15.53	1.04	19.24	12.74
R&D intensity (%)	0.78	0.11	1.40	9.50	0.00
Advertising spending (%)	0.54	0.05	1.66	23.08	0.00
Cash holding	0.10	0.06	0.09	0.57	0.0001
Fixed assets	0.36	0.35	0.18	0.97	0.001

Panel B: Comparison of Family CEO Firms and Professional CEO Firms

	Mean		Median		T test	Kruskal-Wallis test
Firm characteristics	Family CEO Firms	Professional CEO Firms	Family CEO Firms	Professional CEO Firms	T value	Chi-Square
Firm size	15.49	15.86	15.38	15.87	-5.79***	36.80***
R&D intensity (%)	0.67	0.92	0.12	0.10	-2.92***	0.01
Advertising spending (%)	0.69	0.35	0.07	0.04	3.55***	3.79*
Cash holding	0.09	0.09	0.07	0.06	0.09	1.78
Fixed assets	0.37	0.34	0.36	0.33	2.75***	8.01***

Panel C: Correlation of firm characteristics

	Family CEO	Firm size	R&D spending (%)	Advertising spending (%)	Cash holding	Fixed assets
Family CEO	1.00					
Firm size	-0.17***	1.00				
R&D intensity (%)	-0.09***	-0.09***	1.00			
Advertising spending (%)	0.10***	-0.15***	0.04	1.00		
Cash holding	0.002	-0.19***	0.13***	0.005	1.00	
Fixed assets	0.083***	-0.16***	-0.22***	-0.03	-0.15***	1.00

Panel A shows the basic statistics for the variables of a firm's operating characteristics in our sample. Firm size: The natural log of the book value of assets. R&D intensity: The ratio of R&D spending to the book value of total assets by percentage. Advertising spending: Advertisement expenditure to total assets by percentage. Cash holdings: The ratio of cash and marketable securities to total assets. Fixed assets: The sum of land, plant, and machinery value, divided by total assets. Panel B shows the univariate comparisons of these variables between family CEO firms and professional CEO firms. Panel C provides a simple correlation matrix for the variables in the sample.

*, ** and *** indicate statistical significance at 10%, 5% and 1% level, respectively.

Table 2 Logistic regressions of determining the CEO background

	Family CEO			
	(1)	(2)	(3)	(4)
Intercept	5.425***	3.232***	8.323***	7.224**
	(1.111)	(1.173)	(2.831)	(2.909)
Company firm size	-0.341***	-0.348***		
	(0.066)	(0.067)		
Company R&D intensity (%)	-0.150***	-0.154***		
	(0.048)	(0.050)		
Company advertising spending (%)	0.162***	0.187***		
	(0.062)	(0.065)		
Company cash holdings	-0.243	-0.286		
	(0.679)	(0.697)		
Company fixed assets	0.417	0.374		
	(0.368)	(0.373)		
Industry firm size			-0.547***	-0.627***
			(0.174)	(0.179)
Industry R&D intensity (%)			-0.174	-0.249
			(0.149)	(0.153)
Industry advertising spending (%)			0.355***	0.369***
			(0.107)	(0.110)
Industry cash holdings			-0.771	0.103
			(2.899)	(2.961)
Industry fixed assets			1.689***	1.621***
			(0.615)	(0.627)
Relative Power		2.729***		2.814***
		(0.426)		(0.454)
Wald statistics	51.086***	85.026***	47.003***	84.697***
Observations	1065	1065	1065	1065

Dependent Variable is Family CEO. Family CEO = 1 if the CEO is a member of the largest shareholder's family, else 0. The relative power of the largest shareholder is measured by the ratio of the voting rights of the largest shareholder to the sum of the voting rights of the largest and the second largest shareholders. For each firm, the industry number is measured against the industry mean, which includes all the firms in the industry to which the firm belongs. Estimated standard errors are in the parentheses. Statistical significance at: *** 1% level; ** 5% level; * 10% level.

Table 3 The Impact of the CEO's background on a firm's performance in high-skill firms

	High-Skill Firms [a]							
	ROA				Tobin's q			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family CEO	-1.742*				-0.218*			
	(0.931)				(0.120)			
Professional CEO and Low cash-flow rights		1.859†				0.294**		
		(1.206)				(0.123)		
Professional CEO and Low voting rights			2.064*				0.054	
			(1.197)				(0.107)	
Professional CEO and Low affiliated director				0.064				-0.007
				(1.086)				(0.142)
Firm size	2.935**	3.04**	3.122**	3.164**	-0.267	-0.255	-0.239	-0.238
	(1.260)	(1.238)	(1.239)	(1.240)	(0.186)	(0.183)	(0.180)	(0.180)
Debt ratio	-0.059	-0.054	-0.061	-0.058	0.002	0.002	0.002	0.002
	(0.045)	(0.045)	(0.044)	(0.045)	(0.004)	(0.004)	(0.004)	(0.004)
R&D intensity	1.412***	1.382***	1.398***	1.373***	-0.019	-0.023	-0.023	-0.024
	(0.491)	(0.497)	(0.496)	(0.505)	(0.083)	(0.084)	(0.085)	(0.086)
Advertising spending	-1.278***	-1.299***	-1.291***	-1.307***	-0.046**	-0.048**	-0.049**	-0.049
	(0.119)	(0.111)	(1.116)	(0.111)	(0.023)	(0.023)	(0.025)	(0.024)
Adjusted R square	0.636	0.636	0.637	0.634	0.677	0.678	0.675	0.676
Observations	391	391	391	391	391	391	391	391

[a] The criterion to identify firm type is described in empirical method of this study.

Dependent Variable is Performance. Return on assets (ROA): Earnings before interesting, tax, and depreciation to total assets by percentage. Tobin's q: Market-to-book value of total assets. Professional CEO and Low cash-flow rights = 1 when a professional CEO is present and the cash-flow rights of the largest shareholder are less than 12.25% (i.e. belongs to the bottom 30% in the cash-flow rights of the sample), else 0. Professional CEO and Low voting rights = 1 if a professional CEO is present and the voting rights of the largest shareholder are less than 16.25% (i.e. belongs to the bottom 30% in the voting rights of the sample). Professional CEO and Low affiliated director = 1 when a professional CEO is present and the proportion of affiliated directors of the largest shareholder is less than 20% (i.e. belongs to the bottom 30% in the proportion of affiliated directors of the sample). Estimated standard errors (reported in parentheses) are consistent in the presence of heteroskedasticity

Statistical significance at: *** 1% level; ** 5% level; * 10% level. †: P-value=0.12.

Table 4 The Impact of the CEO's background on a firm's performance in high-expropriation firms

	High-Expropriation Firms							
	ROA				Tobin's q			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family CEO	0.858				0.108			
	(2.329)				(0.300)			
Family CEO and High cash-flow rights		2.318**				0.112		
		(1.078)				(0.105)		
Family CEO and Low voting rights			-0.402				0.151	
			(0.861)				(0.116)	
Family CEO and Low affiliated director				2.341				-0.215
				(2.049)				(0.165)
Firm size	1.733	1.637	1.804	1.813	-0.251*	-0.250*	-0.247	-0.244
	(1.266)	(1.308)	(1.303)	(1.306)	(0.104)	(0.152)	(0.154)	(0.153)
Debt ratio	-0.106***	-0.112***	-0.106***	-0.102**	0.002	0.002	0.002	0.002
	(0.040)	(0.041)	(0.039)	(0.043)	(0.003)	(0.003)	(0.003)	(0.003)
R&D intensity	0.691	0.794	0.701	0.687	0.065	0.070	0.064	0.065
	(0.666)	(0.686)	(0.648)	(0.648)	(0.043)	(0.044)	(0.041)	(0.042)
Advertising spending	0.886*	0.921*	0.888*	0.827	0.037	0.034	0.036	0.042
	(0.500)	(0.517)	(0.515)	(0.507)	(0.062)	(0.062)	(0.063)	(0.063)
Adjusted R square	0.534	0.539	0.534	0.536	0.701	0.702	0.703	0.702
Observations	674	674	674	674	674	674	674	674

Dependent Variable is Performance. Return on assets (ROA): Earnings before interesting, tax, and depreciation to total assets by percentage. Tobin's q: Market-to-book value of total assets. Family CEO and High cash-flow rights = 1 when a family CEO is present and the cash-flow rights of the largest shareholder are larger than 23.71% (i.e. belongs to the top 30% in the cash-flow rights of the sample), else 0. Family CEO and Low voting rights = 1 if a family CEO is present and the voting rights of the largest shareholder are less than 16.25% (i.e. belongs to the bottom 30% in the voting rights of the sample). Family CEO and Low affiliated director = 1 when a family CEO is present and the proportion of affiliated directors of the largest shareholder is less than 20% (i.e. belongs to the bottom 30% in the proportion of affiliated directors of the sample). Estimated standard errors (reported in parentheses) are consistent in the presence of heteroskedasticity

Statistical significance at: *** 1% level; ** 5% level; * 10% level.