รายงานการวิจัย

เรื่อง

The impact of CEO characteristics on corporate investment and financing behaviors

ผลกระทบของคุณลักษณะผู้บริหารสูงสุดที่มีต่อ พฤติกรรมการลงทุนและการจัดหาเงินทุนของบริษัท

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รายงานการวิจัยนี้ได้รับทุนอุดหนุนการวิจัยจากมหาวิทยาลัยธุรกิจบัณฑิตย์ พ.ศ. 2554

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บทคัดย่อ

งานวิจัยชิ้นนี้เป็นการศึกษาผลกระทบของคุณลักษณะผู้บริหารสูงสุดที่มีต่อพฤติกรรมการลงทุนและการจัดหาเงินทุนของบริษัท โดยมีกลุ่มตัวอย่างเป็นบริษัทจดทะเบียนในตลาดหลักทรัพย์แห่งประเทศไทยที่ไม่อยู่ในกลุ่มธุรกิจการเงินระหว่างปี 2544 - 2548 ผู้วิจัยแบ่งกลุ่มคุณลักษณะผู้บริหารสูงสุดออกเป็นสามกลุ่ม ได้แก่ ชีวประวัติ เครือข่าย และแรงจูงใจ ซึ่งอยู่บนพื้นฐานของทฤษฎี Upper echelons ทฤษฎี Resource dependency และ ทฤษฎี Agency ตามลำดับ นอกจากนี้ ผู้วิจัยได้เปรียบเทียบคุณลักษณะระหว่างผู้บริหารสูงสุดที่เป็นสมาชิกในตระกูลของผู้ถือหุ้นที่มีอำนาจควบคุมและผู้บริหารสูงสุดมืออาชีพ และได้ทดสอบผลกระทบของผู้บริหารสูงสุดที่เป็นสมาชิกในตระกูลของผู้ถือหุ้นที่มีอำนาจควบคุมต่อนโยบายทางการเงินของบริษัท

ผู้วิจัยพบว่าสัดส่วนของผู้บริหารสูงสุดมืออาชีพที่มีวุฒิการศึกษาระดับปริญญาโท ความเชี่ยวชาญทางการเงิน ประสบการณ์จากต่างประเทศ และความสัมพันธ์ทางการเมือง มีสัดส่วนมากกว่าผู้บริหารสูงสุดที่มาจากตระกูลของผู้ถือหุ้นรายใหญ่ที่มีคุณลักษณะดังกล่าว ในทางกลับกัน ผู้บริหารสูงสุดที่เป็นสมาชิกของตระกูลมีอายุการทำงานและสัดส่วนความเป็นเจ้าของที่มากกว่า อีกทั้ง ผู้บริหารสูงสุดที่เป็นสมาชิกของตระกูลก่อหนี้มากกว่า ซึ่งอาจเป็นไปเพื่อดำรงอำนาจควบคุมบริษัทของตระกูล นอกจากนี้ ผู้วิจัยพบว่าสัดส่วนความเป็นเจ้าของของผู้บริหารสูงสุดเท่านั้นที่มีผลในทิศทางเดียวกันกับค่าใช้จ่ายในการลงทุน ซึ่งตีความได้ว่าการถือหุ้นของผู้บริหาร

จะเพิ่มแรงจูงใจในการสร้างความมั่งคั่งของผู้ถือหุ้นสูงสุด ผลวิจัยนี้สนับสนุนทฤษฎี Agency อย่างไรก็ตาม โครงสร้างคณะกรรมการส่งผลในทางตรงกันข้ามต่อค่าใช้จ่ายในการลงทุน ตามทฤษฎี Upper echelons การศึกษาของผู้บริหารมีอิทธิพลต่อการเลือกกลยุทธ์ของบริษัท ผลวิจัยแสดงให้เห็นว่าผู้บริหารที่มีการศึกษาในระดับปริญญาโทและเอกเลือกที่จะก่อหนี้ในระดับสูง อ้างอิงจากทฤษฎี Resource dependency ที่ว่าเครือข่ายช่วยลดความยากลำบากในการเข้าถึงแหล่งทรัพยากรภายนอก ผู้วิจัยพบว่า ผู้บริหารที่มีความสัมพันธ์ทางการเมืองสามารถกู้ยืมได้มากกว่าผู้บริหารที่ไม่มีความสัมพันธ์ดังกล่าว โดยรวมแล้ว งานวิจัยชิ้นนี้ตีความได้ว่าคณะกรรมการมีบทบาทสำคัญในการตัดสินใจลงทุน อีกทั้ง ชีวประวัติและเครือข่ายของผู้บริหารสูงสุดไม่ส่งผลต่อพฤติกรรมการลงทุนของบริษัท ในทางตรงข้าม คุณลักษณะของผู้บริหารสูงสุดส่งผลต่อการตัดสินใจจัดหาเงินทุน จากมุมมองของผู้ให้กู้ยืม ลักษณะบางประการของผู้บริหารอาจสะท้อนถึงความสามารถในการจ่ายคืนหนี้ของบริษัทที่ดีกว่า ซึ่งมีผลทำให้เจ้าหนี้ตัดสินใจให้กู้ยืมเงินมากขึ้น นอกจากนี้ งานวิจัยนี้เสนอแนะว่าการศึกษาความสำคัญของผู้บริหารสูงสุดในการกำหนดกลยุทธ์ของกิจการ ควรพิจารณาถึงคุณลักษณะของผู้บริหารอย่างครอบคลุมในหลายๆด้าน

คำสำคัญ: ผู้บริหารสูงสุด การลงทุน การจัดหาเงินทุน ธุรกิจครอบครัว

Title of Research: The impact of CEO characteristics on corporate investment and financing behaviors

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Abstract

This study investigates the impact of CEO characteristics on corporate investment and financing behaviors. Sample firms are non-financial listed firms on the Stock Exchange of Thailand between 2001 and 2005. We classify CEO characteristics into three groups, including biography, network and incentives, based on the upper echelons, resource dependency and agency theories, respectively. We also compare characteristics between family CEOs and professional CEOs and examine the effect of family CEOs on a firm's financial policies.

We find that the proportion of professional CEOs with a master degree, expertise in finance, international background and political connections is higher than that of family CEOs. On the other hand, family CEOs have longer tenure and higher shareholdings than professional CEOs. We also find that family CEOs use more debt possibly to maintain their voting power. Only CEO incentives, measured by ownership, is found to be positively associated with investment spending, implying that CEOs shareholdings increase incentives in maximizing shareholders' wealth. This finding supports the agency theory. Board structure (namely board size, independence and duality), however, negatively affects investment spending. According to the upper echelons theory, education of CEOs has an impact on strategic choices. The result shows that CEOs with postgraduate education choose a higher level of financial leverage. Based on the resource dependency theory, networks ease difficulties to access to external resources. We find that politically connected CEOs could borrow higher debt, compared to non-connected CEOs. Overall, our research implies that a board of directors takes an important part in making an investment decision, and CEO biography and network are not significant in determining corporate investment behaviors. In contrast, CEO characteristics affect financing decisions.

From lenders' point of views, some attributes of CEOs may reflect better repayment abilities of firms, thus encouraging lenders to provide higher loans. Our study also suggests that to thoroughly investigate the significance of CEOs in shaping corporate strategies, wide aspects of CEO attributes should be considered.

Keywords: Chief Executive Officers (CEOs), investment, financing, family firms

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Chapter 1
Introduction

The 1997 Asian financial crisis and 2008 US crisis have raised questions about aggressive behaviors of top executives (Chang & Chen, 2011; Tarraf, 2011) and the effectiveness of corporate governance systems (S. Johnson, Boone, Breach, & Friedman, 2000; Mitton, 2002). Strategic decisions made by chief executive officers (CEOs) could lead to a success or a failure for a company. Several theories discuss the significance of managers in shaping corporate strategies, which in turn have an impact on firm performance. The upper-echelons perspectives argue that important characteristics of upper management are described into two categories, namely observable and psychological characteristics. Such characteristics could indicate risk-taking behaviors of managers and are likely to affect strategic choices and firm performance (Hambrick, 2007; Hambrick & Mason, 1984). The resource dependency theory describes benefits of networks in obtaining external resources (Pfeffer & Salancik, 1978). Connections of key corporate personnel could bring useful information for investment opportunities and provide better access to external funds. The agency theory contends that managerial incentives are one of corporate governance mechanisms, which can be used to align the interests of shareholders and managers (M. C. Jensen & Meckling, 1976). The interest alignment would encourage managers to select strategies that maximize shareholders' wealth.

Based on the theories described above, we construct a comprehensive set of CEO characteristics, which are classified into three aspects, i.e. biography, network and incentives. CEO biography includes gender, age, education, international perspectives and expertise. CEO network is identified by political connections. CEO incentives are measured by tenure, ownership and family membership. We examine the impact of those observable CEO characteristics on key corporate financial behaviors, including investment and financing policies.

In this study, the sample firms are non-financial and listed firms on the Stock Exchange of Thailand (SET) between 2001 and 2005. There are several competent aspects that make Thai firms worth being investigated. Thai firms might have chosen their CEOs in response to public attention of good governance practices after the Asian crisis, for example, expertise, education

and social networks of CEOs. In addition, a majority of Thai listed firms are family-owned and are commonly managed by the family members (Khanthavit, Polsiri, & Wiwattanakantang, 2003; Wiwattanakantang, 1999). It is likely that the CEO appointment of firms in economies where ownership structure is concentrated and family controlled firms are commonly found is different from that in developed countries. Dominant large family shareholders might take control to some degree in managing the CEO appointment procedures. It has been argued that such practices might have led to poor corporate governance because of an insufficient check and balance mechanisms of boards of directors.

Our results show CEO characteristics of Thai firms. Considering CEO biography, females are not commonly appointed as CEOs. Only around 10% of Thai CEOs are female. The average age of CEOs is 55 years old. Around 40% and 38% of CEOs hold the highest degree of a master and bachelor, respectively, while about 13% and 9% of CEOs have a below bachelor and a doctoral degree, respectively. Only 4% of CEOs have expertise in finance, accounting or economics. In addition, more than a half of CEOs have studied overseas. Regarding CEO network, politically-connected CEOs are found in about 9% of firms. Concerning CEO incentives, we find that the average tenure of Thai CEOs is almost 7 years. The average shareholdings of CEOs are roughly 7%. Not surprisingly, around 45% of firms have CEOs, who are members of controlling families.

We also examine whether family CEOs and professional (i.e., non-family) CEOs possess different characteristics. The results show that both types of CEOs are not different in terms of gender and age. As one might expect, the proportion of CEOs with below a bachelor degree is higher among family CEOs than professional CEOs, while the proportion of CEOs with a master degree is higher among professional CEOs. When comparing financial expertise of CEOs, professional CEOs display a higher fraction. Likewise, professional CEOs have greater international perspectives than family CEOs. In addition, political connections are found more often among professional CEOs than family CEOs. Considering CEO incentives, as expected, family CEOs have greater incentives than professional CEOs in terms of longer tenure and higher shareholdings.

The focus of this study is to examine the impact of CEO characteristics on corporate investment and financing behaviors. Our regression models show that CEO biography and network play no important role in determining investment policies. However, we find that CEO ownership is positively associated with capital expenditure levels. As suggested by the agency theory, when CEOs hold higher shares, they have greater incentives to maximize shareholders' wealth, and hence invest more. It, however, means that those CEOs have to oversee additional projects. We also find significant and negative effects of board structure on a firm's investment spending. That is, firms with too large number of directors invest less. The proportion of outside directors is negatively related to firms' investment. Lastly, when CEOs hold the chairmanship, they tend to invest less.

Considering corporate financing policies, educational levels, political connections, and family membership of CEOs appear to have a significant impact. Specifically, CEOs with a postgraduate degree use more debt. This result may suggest that these CEOs are more confident and risk-taking, and thus choose a higher level of financial leverage. CEO network also positively affects a leverage ratio. It is possible that CEOs use their political connections to acquire better access to external sources of funds. In addition, the presence of family CEOs is positively related with financial leverage. This finding may imply that family CEOs adopt a higher debt ratio to maintain the controlling power of their families in the firms. Unlike the impact of board structure on corporate investment behaviors, however, only CEO duality significantly influences financing behaviors. When the titles of CEO and chairman are combined, CEOs become more entrenched and may use lower debt level to reduce firm risks or to avoid monitoring by creditors.

This study contributes to the literature on CEO characteristics and financial policies in several aspects. First, a comprehensive set of CEO characteristics and its impact on a firm's financial behaviors are examined to broaden the literature in economics, finance and organizational theories. We investigate arguments proposed by the upper echelons theory (Hambrick & Mason, 1984), the resource dependency theory (Pfeffer & Salancik, 1978) and the agency theory (M. C. Jensen & Meckling, 1976). Second, we study CEO characteristics of firms in an emerging economy where shareholdings are concentrated, which could be different from that in developed

economies. So far, there has been little evidence about the significance of CEO characteristics in emerging countries. Third, family-owned firms are commonly found around the world. Controlling families are likely to influence the selection of CEOs. We compare the characteristics differences between CEOs of family firms and of non-family firms (i.e. professional CEOs) and examine the impact of family CEOs on firms' financial policies.

Our research suggests that the agency theory could be used to explain the investment behavior of Thai firms. In order to align the interests of CEOs and shareholders, a company may use employee stock ownership plan to encourage CEOs to invest. We also find that board structure is significantly associated with investment spending. To increase corporate investment, firms should not have too large board size and a high proportion of independent directors and should not combine the title of their chairman and CEO. These results imply that corporate governance mechanisms play a more important role than CEO biography and network in making an investment decision.

Considering financing behaviors, the empirical results support the upper echelons theory, the resource dependency theory, and the agency theory. CEOs with higher educational levels could be more aggressive and prefer higher borrowing, leading to a lower cost of capital. Nevertheless, their risk-taking behavior towards financing policies might increase financial risk. To obtain better access to external funds, CEOs with political connections should be more preferable to Thai firms. In addition, family CEOs appear to adopt riskier financing policies potentially to protect their control power. Costs of the higher financial risk, however, would be shared among all shareholders. Therefore, minority shareholders should be aware of this behavior when they choose to invest in a family firm. From lenders' perspectives, CEOs with higher levels of education should have better abilities to manage firms. CEOs with political connections could be perceived as ones who can easily obtain external fund. Also, family CEOs have incentives and interests to sustain their family business. Such CEO characteristics would reflect higher repayment abilities of firms, thus lenders would be more willing to provide higher loans.

The study is structured as follows. Chapter 2 provides literature review on the significance of CEO characteristics on investment and financing behaviors of firms. Chapter 3 discusses the

details of data and methodology used in this study. Chapter 4 shows the empirical findings of this study. Chapter 5 concludes the study and provides suggestion for future research.

Chapter 2
Literature review

Background characteristics of CEOs are significant for management appointment processes and have an impact on business strategies (Hambrick & Mason, 1984). Detailed studies about CEO characteristics and its impact on corporate strategies are needed to provide additional evidence to an aggregate analysis of boards of directors (M. Jensen & Zajac, 2004). In this study, we propose to investigate the impact of CEO characteristics on a firm's investment and financing strategies.

2.1 CEO biography

Based on the upper echelons theory, observable attributes of top management affect corporate strategic choices. Our research proposes to examine the effect of the following characteristics of CEOs on a firm's key financial policies, focusing on investment and financing decisions.

2.1.1 Gender

Considering the gender of CEOs, cognitive psychology and management research suggests that women and men are different, for example, in leadership styles, effectiveness, communicative skills, conservatism, aggressiveness, risk averseness, and decision-making.[1] Fondas & Sassalos (2000) suggest that women bring different points of view and ideas to discussions and hence enhance decision-making. Eagly & Johnson (1990) argue that under contemporary business conditions, the female leadership styles are more effective. A report by Catalyst (2004) documents that the group of Fortune 500 firms with the highest representation of females on their top management shows higher financial performance than the group of firms with the lowest female representation. Likewise, Ellis & Keys (2003) show that firms on the list of Fortune's top diversity promoting firms have significantly positive abnormal returns on the announcement date. Francoeur, Labelle, & Sinclair-Desgagné (2008) document that having women executives generates positive abnormal stock returns for firms operating in complex environments. Peni & Vähämaa (2010) find that female CFOs are more conservative when implementing earnings management activities.

[1] See Byrnes, Miller, & Schafer (1999), Eagly & Johnson (1990), Eagly & Karau (1991), Eagly, Karau, & Makhijani (1995), Eagly & Steffen (1986), Eckel & Grossman (2008), Hyde (1984), Jianakoplos & Bernasek (1998), Johnson & Powell (1994), Powell & Ansic (1997), Schubert (2006), and Sundén & Surette (1998).

Previous studies also show that women are more risk averse (Arch, 1993; Bernasek & Shwiff, 2001; Byrnes, Miller, & Schafer, 1999; Eckel & Grossman, 2008; Jianakoplos & Bernasek, 1998; Sundén & Surette, 1998) and less overconfident (Barber & Odean, 2001; Deaux & Farris, 1977; Lenney, 1977; Lundeberg, Fox, & Punccohar, 1994) than men. These differences in attitudes between women and men could lead to differences in investment and financing decisions made by female and male CEOs. Specifically, female CEOs may invest less and choose to use less debt in the firm's capital structure, compared with male CEOs.

2.1.2 Age

Age has been found to play an important part in a manager's strategic actions, which in turn affect firm performance (Hambrick & Mason, 1984). As a CEO's age increases, his or her intellectual capabilities are enhanced as a result of the knowledge, experience and skills gained from the position, as well as the achievement of education. However, older managers are likely to have less physical and mental stamina (Child, 1974) or less ability to grasp new ideas and learn new behaviors (Chown, 1961). Older managers also have higher tendencies to seek more information, to evaluate information accurately, and to take longer to make decisions, while young managers have greater abilities to integrate information in making decisions and with confidence in decisions (Taylor, 1975). Moreover, older managers tend to be more psychologically committed to the company (Stevens, Beyer, & Trice, 1978). In addition, for older managers, financial and career securities are more important; hence they may avoid risky actions that could interrupt their securities (Carlsson & Karlsson, 1970). Accordingly, older managers are inclined to be more conservative than young managers.

In a similar vein, younger managers tend to be less risk-averse (Vroom & Pahl, 1971). Therefore, young CEOs are more likely to pursue risky strategies, such as unrelated diversification, product innovation, and debt financing. As a result, firms with young CEOs will have higher growth and variability in profitability from industry averages, relative to firms with older CEOs (Hambrick & Mason, 1984). Furthermore, some management and psychology studies suggest that young people are more overconfident than older people (Forbes, 2005; Kovalchik, Camerer, Grether, Plott, & Allman, 2005; Taylor, 1975).

In terms of making corporate decisions, Bertrand & Schoar (2003) show that managers from older generations are less aggressive than those from younger generations as they prefer a lower level of investment and adopt a lower level of financial leverage. Taken together, CEO's age could have a significant effect on corporate investment and financing decisions. We expect that younger CEOs are more aggressive, and hence they invest more and use greater debt when compared with older CEOs.

2.1.3 Education

Finkelstein & Hambrick (1996) note that CEOs with higher educational levels are more willing to take risk. CEO educational background is one of key determinants of firm policies and is essential to management appointments (Bertrand & Schoar, 2003; Smith, Smith, & Verner, 2006). Bertrand & Schoar (2003) document that CEOs with an MBA degree are more aggressive and are positively associated with a level of capital expenditures and debt. MBA executives tend to invest if growth opportunities are high. Smith, Smith & Verner (2006) also find an increase in the proportion of CEOs with higher educational levels over ten years. They also document that education background is a major factor for firms to appoint a CEO. The proportion of CEOs with higher educational levels is positively associated to firm performance. In this paper, it is expected that the educational level of CEOs is associated with higher investment and debt financing as a result of risk-taking behaviors of CEOs with higher educational levels.

2.1.4 International perspectives

Interaction with people from different countries is found to be a fundamental activity of business globalization. CEOs with international experience are important human resources for firms and their international experience leads to higher firm performance (Daily, Certo, & Dalton, 2000). Herrmann & Datta (2002) also shows that international perspectives of CEOs have a positive impact on foreign market entry decision. International experience provides the CEOs with wider views, confidence and abilities to estimate risks and returns of investments. These personal factors provide CEOs with knowledge and confidence to understand how to do businesses in diverse environmental settings. Thus, it is expected that CEOs with international perspectives will be more confident to invest and possibly are more risk-tolerant to financial exposure. Firms

with internationally experienced CEOs may have higher investment spending and corporate borrowing.

2.1.5 Financial expertise

CEO functional background has an influence on personal characteristics and behaviors. Knowledge CEOs gained from work experience affects the way they choose and implement strategies (Gunz & Jalland, 1996). Previous work expertise of CEOs demonstrates CEO risk-taking behavior and shows that CEOs with finance expertise are more likely to pursue diversification activities, than non-finance CEOs (M. Jensen & Zajac, 2004; Malmendier & Tate, 2008; Palmer & Barber, 2001). In addition, Malmendier & Tate (2005) find that the investment of CEOs with finance educational background and employment is less sensitive to internal cash flow, implying that they are more risky in making a financing decision.[2] In addition, those CEOs tend to invest more. As a result, we hypothesize that the presence of CEOs with financial expertise will lead to higher investment and debt financing of firms.

2.2 CEO Network

According to the resource dependence theory, social networks are found to be significant in obtaining information about investment opportunities and for business expansion (Palmer & Barber, 2001; Siegel, 2007). This study focuses on political connections, which are commonly found and are positively related to firm performance (Agrawal & Knoeber, 2001; Kim & Lim, 2010). The experience of retired bureaucrats is considerably useful in some industries, and firms that deal with the government generally appoint ex-bureaucrats as their directors (Agrawal & Knoeber, 2001; Miwa & Ramseyer, 2005). In addition, political connections could also influence government-owned banks to lend to firms that have a politician on their boards of directors (Khwaja & Mian, 2005). Therefore, it is likely that politically-connected CEOs are confident in the information obtained in their network; therefore they are willing to take higher risk and to choose aggressive investment and financing policies.

[2] CEOs with finance education are those who hold an undergraduate or graduate degree in accounting, finance, business (including an MBA), or economics.

2.3 CEO incentives

The agency theory argues that managerial incentives could be used for interest alignment between managers and shareholders, hence influencing strategic decision making of managers. This research measures managerial incentives using CEO tenure, ownership, and membership of controlling families.

2.3.1. CEO tenure

CEO tenure is considered as one of incentives provided to managers in reducing agency problems. A CEO, who has been with a company for a long time, is likely to demonstrate high abilities and proficiency (Hermalin & Weisbach, 1991). CEOs with longer tenure are perceived as those who have experienced a longer learning process, have better abilities to take control over decision making processes and have higher commitment. They are also more likely to receive higher compensation (Barnea & Guedj, 2006). The CEO tenure, thus, positively affects the company's performance (Hambrick, 1991).[3] However, longer-tenured CEOs might have perceived as entrenched managers (Yermack, 2004), thus leading to poorer firm performance (Kaplan & Minton, 1994). Hambrick & Mason (1984) also propose that the relationship between CEO tenure and investment spending in new products and unrelated diversification is negative because of limited knowledge of CEOs in responding to changing environment. Accordingly, the length of CEO tenure could affect CEO confidence and risk preference. We hypothesize that the length of CEO tenure will affect investment and financing policies of firms.

2.3.2. CEO ownership

The agency theory argues that when managers hold a significant fraction of a firm's shares, the interests of these managers will become more aligned with those of outside shareholders (M. C. Jensen & Meckling, 1976). Several empirical studies document that managerial ownership is positively associated with firm performance (Chung & Pruitt, 1996; Morck, Nakamura, & Shivdasani, 2000; Palia & Lichtenberg, 1999). In addition, Agrawal & Mandelker (1987) show that stocks and options held by managers affect corporate investment and financing decisions and conclude that managerial shareholdings play a significant role in reducing agency problems.

[3] In contrast, Zhang & Wiersema (2009) find that CEO tenure is not significantly related to firm performance because of the high correlation between tenure and age of CEOs.

Malmendier & Tate (2005) also document that firms of which managers own higher shareholdings display a smaller investment-to-cash flow sensitivity. They hence argue that higher ownership reduces agency problems.

However, managers with high control rights may become insulated from both internal and external governance mechanisms (Fama & Jensen, 1983; Morck, Shleifer, & Vishny, 1988; Shleifer & Vishny, 1997; Stulz, 1988). DeAngelo & DeAngelo (1985) argue that a high level of managerial ownership will entrench management and create agency problems. Managers with substantial voting power are likely to take actions advantageous to themselves at the expense of outside shareholders. Becht, Bolton, & Roell (2003) also contend that stock options could allow CEOs to enrich themselves and expropriate shareholders. Hence, the managerial entrenchment could lead to lower firm performance.

Agency problems between managers and shareholders can also affect corporate investment decisions made by managers in either way, overinvest or underinvest. Jensen (1986) describes that managers may invest in wasteful, negative net present value projects to reap private benefits from controlling more assets. This is also called empire-building. A high level of ownership may enable CEOs to be aggressive and overconfident and hence more likely to overinvest. Conversely, Aggarwal & Samwick (2006) argue that managers may choose not to invest in value-added projects because they bear private costs from spending more time overseeing additional investments.

Considering financing decisions, Fama (1980) contends that managerial entrenchment could lead to less use of debt than optimal because entrenched managers may desire to reduce firm risk in order to protect their underdiversified human capital. Friend & Hasbrouck (1988) also hypothesize that because managers have invested a large proportion of their wealth in the firm in terms of shareholdings and firm-specific human capital, they have higher incentives than average shareholders to maintain low use of debt in the capital structure. In addition, entrenched managers may try to avoid performance pressures from generating sufficient cash flows to service debt obligation (M. C. Jensen, 1986). Friend & Lang (1988) and Fosberg (2004) empirically show that managerial ownership is negatively related to leverage.

Alternatively, in order to boost entrenchment, managers may take on excessive leverage to raise their voting power so that they are able to finance investment beyond the optimal level and decrease the chance of takeover attempts (Harris & Raviv, 1988; Stulz, 1988). It is also possible that entrenched CEOs could be more aggressive and hence prefer high financial leverage. Mehran (1992) and Berger, Ofek, & Yermack (1997) report that managers' voting power is positively associated with leverage levels.

2.3.3 Family membership

Existing studies show that CEOs who are members of controlling families of the firms have significant impact on corporate strategies and performance/value. Stein (1989) argues that shareholders who have longer investment horizons, such as controlling families, are willing to invest in optimal long-term projects, rather than short-term projects that mainly aim to enhance current earnings preferred by managers. Consistent with this view, James (1999) suggests that since they anticipate transferring the business to their descendents, family CEOs tend to have long-term objectives and take actions that are in the firm's interests. Fama & Jensen (1983) and DeAngelo & DeAngelo (1985) contend that active family participation in firm activities can provide a significant constraint on managerial behaviors. Family reputation and interactions among family members also effectively restrain managerial self-dealings (Denis & Denis, 1994; Holderness & Sheehan, 1988). Morck, Shleifer, & Vishny (1988) and Anderson & Reeb (2003) report a positive association between firm performance and the presence of founding family CEOs. Villalonga & Amit (2006) find that family ownership is valuable when the founder is the CEO or the chairman with a professional CEO.

However, due to their substantial voting rights, family CEOs have the potential and ability to pursue their own objectives at the expense of other stakeholders. It is also generally argued that controlling families may select managers and directors from their unqualified or incapable family members. Consequently, family firms could be competitively disadvantaged relative to non-family firms. Moreover, a controlling family may concentrate on objectives such as firm survival, firm growth, or technological innovation, rather than shareholder wealth maximization (Fama & Jensen, 1985). Also, a family is often a single large shareholder of a company, and

hence is hardly monitored by small shareholders (Porta, Lopez-De-Silanes, & Shleifer, 1999). Controlling families are likely to stay in control longer than the optimal period perceived by other shareholders (Cronqvist & Nilsson, 2003). Consistent with the view that the presence of controlling families is costly to firms and minority shareholders, Thomsen & Pedersen (2000) find a negative relationship between family ownership and firm value in large European corporations. Claessens, Djankov, Fan, & Lang (2002) argue that, in family firms, managers (who are typically members of the controlling family) have more opportunity to extract corporate assets for their own (or family) interests than their counterparts in firms controlled by widely-held companies or institutional investors.

Unlike most previous studies, we focus on the impact of family CEOs versus professional CEOs on corporate investment and financing behaviors. We hypothesize that compared with professional CEOs, family CEOs should have higher incentives in maximizing shareholders' wealth than professional CEOs because they have longer investment horizons in the firms and intend to pass their business to the family members in the future. Accordingly, family CEOs would pursue value-maximizing activities. However, CEOs who are members of the controlling families can be entrenched and use their power to gain private benefits at the expense of other shareholders. The impact of family membership on investment and financing decisions is hence an empirical issue.

Chapter 3
Data and Methodology

This chapter begins with the discussion of our sample and the data sources. Then, the variables, i.e., CEO characteristics and control variables are illustrated. Finally, the chapter reviews the approaches used in our study, namely univariate tests and multiple regressions. Two regression models are used to investigate the impact of CEO characteristics on investment and financing policies.

3.1 Sample

Sample firms are non-financial firms listed on the SET, covering a period of 2001 - 2005. This sample period will reflect the characteristics of CEOs and their qualifications in response to the financial crisis in 1997. The distribution of sample firms is shown in Appendix 1.

The information used to define CEO characteristics is publicly available from the SET. We focus only on CEO data, which are provided in 56-1 forms. The Stock Exchange of Thailand requires all listed firms to submit Form 56-1, which is used to disclose relevant information of the company to the public. In addition, financial data are collected from the SETSMART database, which compiles company information of Thai firms listed on the SET. In this paper, all financial data are winsorized at 1% and 99%.

We exclude firms in the banking and financial sector because of their non-traditional financial statements. Firms with missing 56-1 forms and financial statements are also removed from the sample. In addition, observations are excluded from the sample if the firm data are in the year of rehabilitation. However, missing CEO data of several firms is manually collected from internet in order to increase the number of observations.

3.2 CEO characteristics

We consider three groups of CEO characteristics, including 1) CEO biography (gender, age, educational background, international perspectives, and expertise), 2) CEO network, and 3) CEO incentives (tenure, ownership, and family membership). Gender is a dummy variable that equals

to one if a CEO is male, and zero otherwise. Age is defined as (1) CEO age, and (2) dummy variables representing five age cohorts, which are less than 30 years old, 31-40 years old, 41-50 years old, 51-60 years old, and greater than 60 years old.

The educational background is defined as a dummy variable indicating the highest educational level of a CEO, which is categorized into below bachelor, bachelor, master, and doctoral degrees.[4] International perspectives are defined as a dummy variable that equals to one if a CEO graduates from abroad and zero otherwise.[5] Regarding expertise, we use a dummy variable of financial expertise, which is defined by a dummy variable that equals to one if a CEO has experienced in accounting, finance or economics, and zero otherwise.

Network is defined using political connections. The network variable is measured as a dummy variable that is equal to 1 if a CEO is a former government, police, or military officer, and zero otherwise. Tenure is the number of years since he/she was appointed CEO. Ownership is measured as the ratio of the number of shares owned by a CEO to total shares outstanding. Finally, family membership is defined as a dummy variable that is equal to 1 if a CEO is a member of the controlling family, and zero otherwise.

3.3 Board structure and financial variables

As documented in prior research, we control for board structure and financial characteristics. Board structure variables consist of board size, which is defined as the total number of directors, board independence, which is defined as the fraction of independent directors on the board, and CEO duality, which is defined as a dummy variable that is equal to 1 if a CEO also holds the position of chairman of the board, and zero otherwise.

Financial control variables are different according to the model specifications. Specifically, for the model specification of investment behavior, financial control variables include the ratio of cash flows to fixed assets and the Tobin's q ratio. To measure the investment behavior of a firm, the investment and cash flow sensitivity will be used to measure the degree to which the firm's

[4] We also include an "honorary" doctoral degree.

[5] If a CEO is graduated from a local institution and an institution outside Thailand, we report that he/she is in international perspectives group.

investment is dependent on its internal cash flow. We expect a positive impact of cash flow on a firm's investment, supporting the reliance of investment on internal fund (Fazzari, Hubbard, & Petersen, 1988).

For the model specification of financing behavior, financial control variables include firm size (measured as the natural logarithm of total assets), the ratio of net fixed assets to total assets, and the ratio of net income to total assets. To measure the financing policy, the leverage ratio defined as a ratio of long-term debt to total assets will be used.

3.4 Methodology

We provide the descriptive statistics of CEO characteristics of Thai listed firms. We also use univariate analyses to investigate the differences in characteristics between family CEOs and professional CEOs, and between firms with family CEOs and firms with professional CEOs. The univariate analysis is done by first calculating the mean values of CEO and firm characteristics in the two subsamples of firms. *T*-tests are then conducted to determine whether the means are significantly different from each other. The statistical inference of each specification is drawn from *p*-values of these *t*-tests.

Regression analyses will be used to show the effect of CEO's characteristics on corporate investment and financing behaviors.

The impact of CEO characteristics on a firm's investment behavior will be investigated as shown in the following equation.

$$\frac{I_{i,t}}{K_{i,t-1}} = \alpha_{i,t} + \beta_1 \frac{CF_{i,t}}{K_{i,t-1}} + \beta_2 Q_{i,t-1} + \beta_3 Male_{i,t} + \beta_4 Age_{i,t} + \beta_5 Postgrad_{i,t} + \beta_6 Inter_{i,t}$$
$$+ \beta_7 Fin_{i,t} + \beta_8 PolCon_{i,t} + \beta_9 Tenure_{i,t} + \beta_{10} Own_{i,t} + \beta_{11} FM_{i,t}$$
$$+ \beta_{12} IneffBoardSize_{i,t} + \beta_{13} Independence_{i,t} + \beta_{14} Duality_{i,t} + \beta_{15} Ind_{i,t} + \beta_{16} Year_{i,t} + \varepsilon_{i,t}$$

where $I_{i,t}$ is investment spending or capital expenditure during the year, $K_{i,t-1}$ is the capital stock (i.e., net property, plant and equipment) at the beginning of the year, $CF_{i,t}$ is cash flow or net

income plus depreciation and depletion during the year, and $Q_{i,t-1}$ is a proxy of lagged Tobin's q ratio (measured by the ratio of market value of total assets to book value of total assets) at the beginning of the year.

CEO characteristics are classified into nine variables. $Male_{i,t}$ is a dummy variable that equals 1 if a CEO is male, and zero otherwise. $Age_{i,t}$ is a CEO's age. $Postgrad_{i,t}$ is a dummy variable that equals 1 if a CEO obtains a master degree or above, and zero otherwise. $Inter_{i,t}$ is a dummy variable that equals 1 if a CEO studied abroad, and zero otherwise. $Fin_{i,t}$ is a dummy variable that equals to 1 if a CEO worked in an area of accounting, finance or economics, and zero otherwise. $PolCon_{i,t}$ is a dummy variable that equals 1 if there is a former government, police and military officer on board, and zero otherwise. $Tenure_{i,t}$ is the number of years since an individual appointed as a CEO. $Own_{i,t}$ is measured as the ratio of the number of shares owned by a CEO to total shares outstanding. Finally, $FM_{i,t}$ is defined as a dummy variable that is equal to 1 if a CEO is a member of the controlling family, and zero otherwise.

Board structure factors are used as control variables. $IneffBoardSize_{i,t}$ is a dummy variable that equals 1 if the total number of directors on board is greater than 12 directors.[6] $Independence_{i,t}$ is measured by the fraction of independent directors on the board. $Duality_{i,t}$ is a dummy variable equal 1 if the CEO also holds the position of chairman of the board, and zero otherwise.

The impact of CEO characteristics on a firm's financing behavior will be investigated as shown in the following equation.

$$\begin{aligned} Leverage_{i,t} = {} & \alpha_{i,t} + \beta_1 ROA_{i,t} + \beta_2 Size_{i,t} + \beta_3 Tangibility_{i,t} + \beta_4 Male_{i,t} + \beta_5 Age_{i,t} + \beta_6 Postgrad_{i,t} \\ & + \beta_7 Inter_{i,t} + \beta_8 Fin_{i,t} + \beta_9 PolCon_{i,t} + \beta_{10} Tenure_{i,t} + \beta_{11} Own_{i,t} + \beta_{12} FM_{i,t} \\ & + \beta_{13} IneffBoardSize_{i,t} + \beta_{14} Independence_{i,t} + \beta_{15} Duality_{i,t} + \beta_{16} Ind_{i,t} + \beta_{17} Year_{i,t} + \varepsilon_{i,t} \end{aligned}$$

where $Leverage_{i,t}$ is the ratio of long-term debt to total assets, $ROA_{i,t}$ is the ratio of net income to total assets, $Size_{i,t}$ is the natural logarithm of total assets, and $Tangibility_{i,t}$ is the ratio of net

[6] Inefficient board size is defined as in Malmendier & Tate (2005).

fixed assets to total assets. Variables of nine CEO characteristics and board structure are defined as described above for the investment equation.

Chapter 4
Empirical analyses

In this chapter, we discuss the results of our empirical investigation. We first present the characteristics of CEOs. Then, we make a comparison of characteristics between family CEOs and professional CEOs. We also compare characteristics of firms with family versus professional CEOs. In addition, we provide the results of multiple regressions regarding the impact of CEO characteristics on firms' investment and financing behaviors.

4.1. Descriptive statistics of CEO characteristics

Table 1 provides descriptive statistics of CEO characteristics of non-financial firms listed on the SET during the period of 2001-2005. In total, there are 1,356 firm-year observations in our sample. We first consider CEO biography. Consistent with the findings of previous studies, male CEOs are much more common. To be specific, approximately 90% of sample firms appoint male CEOs. On average, CEOs are 55 years old.[7] The youngest CEO is 28 years old, while the oldest is 92 years old. When separating CEO age into five cohorts, almost 42% of CEOs are in the range of 51-60 years old. Also, about 27% of CEOs passed the retired age of 60 years old. Younger CEOs are found less often. Only around 6% of CEOs are younger than 40 years old.

Regarding educational levels of CEOs, approximately 9%, 40% and 38% of CEOs have the highest degree of a doctoral, master, and bachelor, respectively.[8] CEOs with expertise in accounting, finance, or economics are found in only 4% of sample firms. Furthermore, the result shows that more than 60% of CEOs have international degrees. Concerning CEO network, about 9% of firms hire politically-connected CEOs, who are former bureaucrats.

[7] Polsiri & Sitthipongpanich (2012) also find that the average age of directors of Thai listed firms is 55 years old.
[8] These findings are similar to educational levels of directors reported in Polsiri & Sitthipongpanich (2012).

Table 1 Descriptive statistics of CEO characteristics

This table presents descriptive statistics of board characteristics and composition of non-financial firms listed on the Stock Exchange of Thailand between 2001 and 2005. The number of firm-year observations is 1,356.

CEO characteristics	Mean	Standard deviation	Median	Min	Max
Biography					
Gender:					
Percentage of male CEOs (%)	90.12	-	-	-	-
Age:					
Age of CEOs	55.20	10.00	55	28	92
Percentage of CEOs who are					
- Younger than 30 years old (%)	0.29	-	-	-	-
- 31-40 years old (%)	5.01	-	-	-	-
- 41-50 years old (%)	25.66	-	-	-	-
- 51-60 years old (%)	41.96	-	-	-	-
- Older than 60 years old (%)	27.06	-	-	-	-
Educational levels:					
Percentage of CEOs whose the highest degree is					
- Below bachelor (%)	13.20	-	-	-	-
- Bachelor (%)	37.54	-	-	-	-
- Master (%)	39.90	-	-	-	-
- Doctoral (%)	9.37	-	-	-	-
Financial expertise:					
Percentage of CEOs whose expertise is accounting, finance, or economics (%)	4.20	-	-	-	-
International perspectives:					
Percentage of CEOs who have international education (%)	61.36	-	-	-	-
Network					
Political connections:					
Percentage of CEOs who are a former government, police, or military officer (%)	9.07	-	-	-	-
Incentives					
Tenure:					
CEO tenure	6.60	5.29	5.93	0.04	47.00
Ownership:					
Percentage of CEO shareholdings	6.86	12.03	0.83	0.00	78.34
Family membership:					
Percentage of CEOs who are a member of the firm's controlling family (%)	44.69	-	-	-	-

We then examine CEO incentives in terms of tenure, ownership, and family membership. We find that on average, CEO tenure of Thai listed firms is almost 7 years, with the maximum of 47 years. In addition, CEOs hold roughly 7% of the firms' outstanding shares. Not surprisingly for an emerging market in which family firms are common, around 45% of sample firms appoint members of the controlling families as their CEOs.

4.2. Descriptive statistics of firm characteristics

The descriptive statistics of firm characteristics are provided in Table 2. About board structure, we find that, on average, there are 11 directors on a firm's board of directors with a minimum number of 5 directors and a maximum number of 25 directors. The percentage of independent directors is 32% of total directors. There are around 24% of Thai listed firms whose CEOs are also the chairman of companies. Regarding financial characteristics, we find that the mean value of the ratio of investment to capital is about 25%, while that of cash flow to capital is 65%. The lagged value of Tobin's Q ratio is 1.17, on average. The mean value of leverage ratio, measured by long-term debt to total assets, of sample firms is 16%, approximately. The average values of total assets and sales of sample firms are 9,662 and 7,262 million baht, respectively.

Table 2 Descriptive statistics of firm characteristics

This table presents descriptive statistics of board structure and financial characteristics of non-financial firms listed on the Stock Exchange of Thailand between 2001 and 2005. The number of firm-year observations is 1,356. The number of firm-year observations for lagged variables is 1,289.

Variables	Mean	Standard deviation	Median	Min	Max
Board structure					
Size:					
No. of directors on board	11.37	3.20	11	5	25
Independence:					
Percentage of independent directors (%)	31.66	9.61	30.00	12.00	83.33
CEO duality:					
Percentage of firms with CEO duality (%)	23.75	-	-	-	-
Financial characteristics					
Investment to lagged capital (%)	24.96	42.58	12.85	0.05	331.12
Cash flow to lagged capital (%)	65.49	166.67	28.12	-159.35	119.18
Lagged Tobin's Q ratio	1.17	0.66	0.99	0.33	4.69
Long-term debt to total assets (%)	15.77	18.42	8.44	0.00	72.55
Total assets (million baht)	9,662	23,170	2,407	309	167,978
Sales (million baht)	7,262	17,806	2,210	89	129,173
Net income to total assets (%)	8.24	9.57	8.49	-32.71	32.45
Net fixed assets to total assets (%)	39.71	23.51	38.20	0.94	90.68

4.3. CEO characteristics: Family CEOs versus professional CEOs

This section compares CEO characteristics between family CEOs and professional CEOs. Table 3 shows that regarding CEO biography, there are no significant differences in gender and age between both CEO types. However, CEOs in the younger age range of 31-40 years old are more family CEOs than professional CEOs (7% versus 3%), while CEOs in the older age range of 41-50 years tend to be more professional CEOs than family CEOs (28% versus 23%).

It is interesting to note that the percentage of family CEOs, whose educational level is below a bachelor degree, accounts for 18%. This proportion is significantly higher than that of professional CEOs with the same educational level (about 9%). On the contrary, the percentage of professional CEOs with a master degree is significantly higher than that of family CEOs. The combined proportion of professional CEOs with a master degree and doctoral degree is about 54%, while that of family CEOs is about 44%. However, the fraction of family CEOs with the highest educational level of doctoral degree is significantly higher than that of professional CEOs. In addition, the proportion of professional CEOs who have financial experience is 5.6%, which is significantly higher than that of family CEOs (only 2.48%). We find that the percentage of professional CEOs with international perspectives is also much higher than that of family CEOs (66% versus 56%). In addition, professional CEOs are in political network with a significantly greater percentage than family CEOs. The proportion of professional CEOs with political connections is about 13%; while that of family CEOs is 4%. In general, the findings show that professional CEOs tend to have higher educational levels, experience and connections than family CEOs.

Considering CEO incentives, as expected, family CEOs have served the position for a period longer than that of professional CEOs (eight years versus six years). Moreover, family CEOs hold, on average, a higher fraction of the firms' shares than professional CEOs (13% versus 2%). These findings may indicate that CEOs who are a part of the controlling families have greater incentives to maximize shareholders' wealth, relative to professional CEOs.

Table 3 CEO characteristics and test of differences between family CEOs and professional CEOs

This table reports the mean values of CEO characteristics of non-financial firms listed on the Stock Exchange of Thailand between 2001 and 2005. A family CEO is a CEO who is a member of the firm's controlling family. A professional CEO is a CEO who is not a member of the firm's controlling family. The "*P*-value" column reports *p*-values of the two-tailed t-tests of equal means for each characteristic between two subsamples. The number of firm-year observations is 1,356. The total number of firm-year observations is 1,356. The number of family CEO firm-year observations is 606. The number of professional CEO firm-year observations is 750.

Characteristics	Family CEOs	Professional CEOs	*P*-value
Biography			
Gender:			
Percentage of male CEOs (%)	88.94	91.07	0.19
Age:			
Age of CEOs	55.06	55.31	0.64
Percentage of CEOs who are			
- Younger than 30 years old (%)	0.50	0.13	0.22
- 31-40 years old (%)	7.26	3.20	**0.00**
- 41-50 years old (%)	22.61	28.13	**0.02**
- 51-60 years old (%)	40.43	43.20	0.30
- Older than 60 years old (%)	29.21	25.33	0.11
Educational levels:			
Percentage of CEOs whose the highest degree is			
- Below bachelor (%)	18.48	8.93	**0.00**
- Bachelor (%)	37.62	37.47	0.95
- Master (%)	32.01	46.27	**0.00**
- Doctoral (%)	11.88	7.33	**0.00**
Financial expertise:			
Percentage of CEOs whose expertise is accounting, finance, or economics (%)	2.48	5.60	**0.00**
International perspectives:			
Percentage of CEOs who have international education (%)	55.78	65.87	**0.00**
Network			
Political connections:			
Percentage of CEOs who are a former government, police, or military officer (%)	4.29	12.93	**0.00**
Incentives			
Tenure:			
CEO tenure	7.84	5.59	**0.00**
Ownership:			
Percentage of CEO shareholdings (%)	12.87	2.00	**0.00**

4.4. Firm characteristics: Firms with family CEOs versus firm with professional CEOs

Table 4 presents differences in board structure and financial characteristics between firms with family CEOs and firms with professional CEOs. Concerning board structure, the results show that firms with family CEOs prefer smaller boards than firms with professional CEOs. In particular, the average number of directors is 11 and 12 in family CEO firms and professional CEO firms, respectively. In terms of board independence, firms with family CEOs appoint more independent directors than firms with professional CEOs. However, the percentage of independent directors on board in both subsamples is around one-third of total number of directors as required by Thai law. As one might expect, it is more common for family CEOs to also hold the position of the chairman of the board. Specifically, CEO duality is found in around 38% of firms with family CEOs, compared with 12% of firms with professional CEOs.

We find that the ratio of cash flow to capital of firms with family CEOs is significantly higher than that of firms with professional CEOs. However, the size of firms with family CEOs, measured by total assets and sales, is significantly smaller than that of firms with professional CEOs. In addition, firms with family CEOs have lower tangibility ratio, compared to firms with professional CEOs.

Table 4 Firm characteristics and test of differences between firms with family CEOs and firm with professional CEOs

This table reports the mean values of board structure and financial characteristics of non-financial firms listed on the Stock Exchange of Thailand between 2001 and 2005. A family CEO is a CEO who is a member of the firm's controlling family. A professional CEO is a CEO who is not a member of the firm's controlling family. Board size is the number of directors on board. Board independence is the percentage of independent directors. CEO duality is percentage of firms with CEO duality. The "*P*-value" column reports *p*-values of the two-tailed t-tests of equal means for each characteristic between two subsamples. The total number of firm-year observations is 1,356. The number of family CEO firm-year observations is 606. The number of professional CEO firm-year observations is 750. As for lagged variables, the total number of firm-year observations is 1,289. The number of family CEO firm-year observations is 575. The number of non-family CEO firm-year observations is 714.

Firm characteristics	Firms with family CEOs	Firms with professional CEOs	*P*-value
Board structure			
Size	10.77	11.86	**0.00**
Independence (%)	32.33	31.12	**0.02**
CEO duality (%)	38.11	12.13	**0.00**
Financial characteristics			
Investment to lagged capital (%)	25.32	24.68	0.79
Cash flow to lagged capital (%)	79.72	54.04	**0.01**
Lagged Tobin's Q ratio	1.14	1.20	0.14
Long-term debt to total assets (%)	15.36	16.09	0.47
Total assets (million baht)	6,307	12,372	**0.00**
Sales (million baht)	4,485	9,506	**0.00**
Net income to total assets (%)	8.46	8.06	0.45
Net fixed assets to total assets (%)	37.64	41.38	**0.00**

4.5. Regression analysis: Investment equation

Table 5 shows the findings of the impact of CEO characteristics on a firm's investment behavior. The coefficient of cash flow is 0.079 and significant at the 1% level, capturing the positive impact of internal liquidity on investment. The results support that firms rely on internal cash flow for their investments (Fazzari, Hubbard, & Petersen, 1988).

Table 5 The impact of CEO characteristics on a firm's investment behavior

This table reports the results of the pooled OLS regression. The dependent variable is the ratio of investment (measured by capital expenditure during the year) scaled by lagged capital (measured by net property, plant and equipment at the beginning of the year). Cash flow/Lagged Capital is defined as the ratio of net income plus depreciation and depletion during the year to lagged capital. Proxy of lagged Tobin's Q is the ratio of market value of assets to book value of assets at the beginning of the period. Male is a dummy variable that equals 1 if a CEO is male, and zero otherwise. Age is a CEO's age. Postgraduate is a dummy variable that equals 1 if a CEO obtains a master degree or above. International perspective is a dummy variable that equals 1 if a CEO studied abroad. Financial expertise is a dummy variable that equals to 1 if a CEO worked in an area of accounting, finance or economics, and zero otherwise. Political connections is a dummy variable that equals 1 if there is a former government, police and military officer on board, and zero otherwise. CEO Tenure is the number of years since an individual appointed as a CEO. CEO ownership is measured as the ratio of the number of shares owned by a CEO to total shares outstanding. Family CEO is defined as a dummy variable that is equal to 1 if a CEO is a member of the controlling family, and zero otherwise. Inefficient board size is a dummy variable that equals 1 if the total number of directors on board is greater than 12 directors. Independence is measured by the fraction of independent directors on the board. Duality is a dummy variable equal 1 if the CEO also holds the position of chairman of the board, and zero otherwise. The White's standard errors are adjusted for heteroskedasticity. The regression controls for industry effects and year effects. The statistical significance at levels of 1% (***), 5% (**) and 10% (*) is reported. The figures in parentheses report p-value for two-tailed tests.

	Investment/Lagged Capital	
Cash flow/Lagged Capital	0.079	***
	(0.000)	
Lagged Tobin's Q	0.045	
	(0.139)	
Male	0.034	
	(0.289)	
Age	-0.001	
	(0.487)	
Postgraduate	0.018	
	(0.504)	
International perspective	-0.021	
	(0.444)	
Financial expertise	0.056	
	(0.433)	
Political connections	0.035	
	(0.438)	
CEO tenure	-0.002	
	(0.296)	
CEO ownership	0.003	**
	(0.022)	
Family CEO	-0.013	
	(0.579)	
Inefficient board size	-0.054	**
	(0.028)	
Independence	-0.223	*
	(0.089)	
Duality	-0.057	**
	(0.050)	
Number of observations	1,289	
Adj R-squared	0.144	

It seems that CEO characteristics do not have significant effects on firms' investment decisions of Thai firms. Female CEOs are not different from male CEOs when making an investment decision. The result does not support previous studies that women are more risk averse and less overconfident than men. Age of CEOs has also no significant impact on a level of capital expenditures, suggesting no evidence that older CEOs are less aggressive than younger ones.[9] This result, however, is not consistent with Bertrand & Schoar (2003) who find that older managers prefer a lower level of investment than younger managers.

Considering the educational level of CEOs, although Bertrand & Schoar (2003) argue that a CEO's educational background reflects his/her aggressive character in increasing a firm's investment spending, our findings show that the postgraduate degree of CEOs does not have an impact on a firm's investment behavior. The results in Table 5 also show that investment of firms is not associated with the fact that CEOs studied abroad; even though Herrmann & Datta (2002) document that CEO with wider views from their international experience would have abilities to estimate potential investments. In addition, our findings about CEO's financial expertise are not consistent with previous research, which shows a significant impact of finance-experienced CEOs on firms' investment activities(Malmendier & Tate, 2005).[10] We also find no significant effect of CEO's political connections on a firm's investment. This is contrary to Palmer & Barber (2001), which shows the impact of well-networked top managers on investing activities.

Regarding the impact of CEO incentives on investment behaviors, the effect of CEO tenure is not significant. The length of CEO tenure is not a factor determining a firm's investment behavior. Yermack (2004) argues that CEOs with long tenure might be entrenched; therefore, it is likely that they do not have incentives to invest. However, we find a positive relationship between managerial ownership and capital expenditure levels. This finding suggests that at a higher level of managerial shareholdings, managers have greater incentives and can be more aggressive, and hence are more likely to invest. Malmendier & Tate (2005) also show that stock

[9] Likewise, Graham, Harvey, & Puri (2008) and Malmendier & Tate (2008) also report no relationship between CEO age and the likelihood of acquisitions.

[10] For the robustness check, we replace our variable of expertise in finance with a variable of education in finance defined in Malmendier and Tate (2005). Our findings are unchanged.

holdings of managers are positively associated with corporate investment. However, it is also possible that managers with excessive shareholdings can be entrenched and may invest more in non-value projects to obtain private benefits from controlling more assets. In addition, we find that CEOs who are from the controlling families are as likely to invest as professional CEOs although we expect they are different in making investment decisions.

Board structure appears to have a significant impact on a firm's investment decision. Too large board size leads to a lower level of capital expenditures. This result is in line with Malmendier & Tate (2008) who show that efficient board size leads to higher probability of diversifying acquisitions. Board independence and CEO duality are negatively associated with firms' investment. The negative relationship between board independence and investment may imply that inside directors have superior firm-specific knowledge relative to outside directors (Klein, 1998; Rosenstein & Wyatt, 1990). Likewise, when insiders' representation on a board increases, managers are more willing to invest in uncertain projects (Baysinger, Kosnik, & Turk, 1991). Hutchinson (2002) find a positive relationship between the percentage of executive directors and firms' investment opportunities. The negative effect of CEO duality on investment decisions suggests when CEOs have concentrated power, they may choose to invest less because they bear private costs to spend more time overseeing additional investments. Malmendier & Tate (Malmendier & Tate, 2005) also report a negative relationship between CEO duality and investment although it is insignificant.

4.6. Regression analysis: Leverage equation

The findings in Table 6 show the impact of CEO characteristics on a firm's financing behavior. Financial characteristics of Thai listed firms, i.e. the return on assets, firm size and tangibility, are significantly associated with the leverage ratio at the 1% level. We find that the return on assets is negatively related to the leverage ratio. According to the pecking order theory, firms with higher performance would be more likely to rely on their internal funds rather than external debt financing. Our findings about the relationship between firm size and leverage ratio are consistent to the argument of Fama & Jensen (1983). They document that larger firms tend to have lower information asymmetric problem and monitoring cost; thus they are more likely to have higher debt ratio. In addition, the results show that the tangibility ratio is a determinant of

debt financing. Firms with higher collateral, i.e. net property, plant and equipment, or assets-in-place, are more likely to have leverage ratio (Myers, 1977).

Similar to the impact of CEO characteristics on investment behaviors, gender of CEOs appears to have no significant effects on financing behaviors. In other words, female managers are not less aggressive than male directors when making financing decisions. Graham, Harvey, & Puri (2008), nevertheless, show that although firms with male and female managers are not different in terms of debt ratio, male managers appear to use more short-term debt than female managers. Moreover, unlike Bertrand & Schoar (2003) who document that managers from older generations use a lower level of debt, we find that age of managers is not associated with a level of debt.

The level of education of CEOs is positively related to a firm's debt financing. The coefficient of postgraduate dummy is positively related to leverage ratio at the 5% significance level. CEOs with higher educational levels seem to be more confident (Bertrand & Schoar, 2003); thus they are more likely to borrow more than CEOs with a bachelor degree or below. Although Herrmann & Dattta (2002) argue that CEOs with international perspectives are more confident, this characteristic of CEOs is not a determinant of debt financing of Thai listed firms. Furthermore, Malmendier & Tate (2005) argue that CEOs who have experienced in finance area are risk-taking; the results, however, show that previous experience of CEOs in accounting and finance is not related to a firm's borrowing policy.[11]

The results also show that the presence of politically-connected CEOs is positively associated to leverage ratio. Firms with politically-connected CEOs are more likely to have higher debt financing because those CEOs are connected into broader network and could obtain preferential treatments from external resource providers (Faccio, 2010; Khwaja & Mian, 2005). From lenders' point of views, it is likely that CEOs characteristics of postgraduate education and political connections reflect abilities of CEOs to manage the firms and generate sufficient returns to pay back their borrowings.

[11] We also use another proxy of finance expertise of CEOs as in Malmendier and Tate (2005); however, the results remain the same.

Table 6 The impact of CEO characteristics on a firm's financing behavior

This table reports the results of the pooled OLS regression. The dependent variable is the leverage ratio, measured by long-term debt to total assets. ROA is the ratio of return on assets. Size is measured as the natural logarithm of total sales. Tangibility is the ratio of total property, plant and equipment to total assets. Male is a dummy variable that equals 1 if a CEO is male, and zero otherwise. Age is a CEO's age. Postgraduate is a dummy variable that equals 1 if a CEO obtains a master degree or above. International perspectives is a dummy variable that equals 1 if a CEO studied abroad. Financial expertise is a dummy variable that equals to 1 if a CEO worked in an area of accounting, finance or economics, and zero otherwise. Political connections is a dummy variable that equals 1 if there is a former government, police and military officer on board, and zero otherwise. CEO Tenure is the number of years since an individual appointed as a CEO. CEO ownership is measured as the ratio of the number of shares owned by a CEO to total shares outstanding. Family CEO is defined as a dummy variable that is equal to 1 if a CEO is a member of the controlling family, and zero otherwise. Inefficient board size is a dummy variable that equals 1 if the total number of directors on board is greater than 12 directors. Independence is measured by the fraction of independent directors on the board. Duality is a dummy variable equal 1 if the CEO also holds the position of chairman of the board, and zero otherwise. The White's standard errors are adjusted for heteroskedasticity. The regression controls for industry effects and year effects. The statistical significance at levels of 1% (***), 5% (**) and 10% (*) is reported. The figures in parentheses report p-value for two-tailed tests.

	Leverage ratio	
ROA	-0.396	***
	(0.000)	
Size	0.041	***
	(0.000)	
Tangibility	0.209	***
	(0.000)	
Male	0.023	
	(0.143)	
Age	0.001	
	(0.173)	
Postgraduate	0.021	**
	(0.022)	
International perspectives	-0.015	
	(0.130)	
Financial expertise	-0.013	
	(0.502)	
Political connections	0.026	*
	(0.094)	
CEO tenure	-0.001	
	(0.555)	
CEO ownership	0.000	
	(0.687)	
Family CEO	0.035	***
	(0.001)	
Inefficient board size	-0.015	
	(0.242)	
Independence	0.040	
	(0.447)	
Duality	-0.022	**
	(0.033)	
Number of observations	1,356	
Adj R-squared	0.250	

The longer CEO tenure could lead to higher control and confidence for CEOs to make a decision (Hermalin & Weisbach, 1991). However, our findings do not support the association between CEO tenure and leverage ratio. CEOs with longer tenure of Thai firms might avoid high use of debt to lower creditors' monitoring, according to Jensen (1986). Likewise, we do not find a significant relationship between CEO ownership and financial leverage, although we expect that CEO ownership would have significant effects on capital structure because it increases CEOs' incentives to maximize shareholders' wealth and CEOs' undiversified investment in the firms. Similarly, using Thai data, Wiwattanakantang (1999) documents no impact of managerial shareholdings on financial leverage. However, Wiwattanakantang (1999) shows that in family firms, managerial ownership positively affect the use of debt. We also find that family CEOs prefer more financial leverage than professional CEOs. It is possible that owner-managers use higher debt to increase their voting power (Harris & Raviv, 1988; Stulz, 1988) and to ensure that their families retain the controlling power. This result is consistent with Wiwattanakantang (1999) who shows that family owned firms adopt a higher level of financial leverage.

Considering board structure, similar to Wiwattanakantang (1999), we find no effect of board size on financing behaviors, although prior research shows that board size significantly affects leverage ratios (Berger, Ofek, & Yermack, 1997; Mehran, 1992). Board independence also has no effect on financial leverage. The result is in line with Anderson & Reeb (2003). Consistent with our result on investment behaviors, CEO duality appears to be inversely associated with the use of debt. This finding implies that when CEOs are also chairmen of the boards, they can be entrenched. As a result, they may use less debt to reduce firm risk in order to protect their undiversified human capital (Fama, 1980) or to avoid pressures from making enough cash flows to fulfill debt commitment (M. C. Jensen, 1986). Abor (2007), however, reports a positive relationship between CEO duality and leverage levels.

Chapter 5
Conclusion and Suggestion

Using the data of non-financial listed firms in Thailand, we show CEO characteristics and investigate their impact on corporate investment and financing behaviors. Our sample period starts from 2001 to 2005. This chapter concludes the empirical findings and provides suggestion for future research.

5.1. Conclusion

In this research, we study the characteristics of CEOs of Thai listed firms and compare the characteristics between family and professional CEOs. Then we examine the effect of CEO characteristics on investment and financial policies.

The descriptive statistics of CEO characteristics show that Thai firms are dominantly managed by male CEOs, accounting for 90% of sample firms. The average age of CEOs is 55 years old. About 50% of CEOs holds a master degree or above as their highest education. We find that only 4.2% of CEOs has experienced in accounting, finance, or economics areas. However, more than half of CEOs of Thai firms studied aboard. CEOs that are politically connected account for 9%. The average CEO tenure is 6.6 years and Thai firms provide ownership incentives to their CEOs, indicated by CEO shareholdings of 7%, approximately. Consistent with previous findings that a majority of Thai firms are owned by families, almost half of sample firms are run by CEOs who are members of controlling families.

We also compare firms with family CEOs and professional CEOs. We find that the proportion of family CEOs is significantly higher than that of professional CEOs in the 31-40 years old age cohort, while the opposite is found in the older age cohort of 41-50 years old. The educational levels of family CEOs are different from those of professional CEOs. At the educational levels of doctor degree and of below bachelor degree, the fraction of family CEOs is significantly higher than that of professional CEOs. However, the percentage of family CEOs with a master degree is higher than that of professional CEOs. The proportion of professional CEOs whose

expertise is finance and who have international experience and political connections is significantly higher than that of family CEOs. The findings also show that professional CEOs are more highly experienced and better-connected, relative to family CEOs. Regarding managerial incentives, the results show that CEO tenure and shareholdings of family CEOs are much higher than those of professional CEOs.

Our investment regression shows that only CEO ownership has a positive impact on investment policies, suggesting that Thai firms provide ownership incentives to align the interests of CEOs and shareholders. We also find that board structure, representing corporate governance practices, significantly affects investment policies of Thai firms. The relationship between all measures of board structure (inefficient board size, independence and duality) and investment is negatively significant. The results imply that CEO biography and network are not significant factors, compared to corporate governance mechanisms, in determining firm investment behaviors of Thai listed firms.

The financing regression shows significant effects of CEO characteristics on financing policies, namely postgraduate education, political connections, and family membership of CEOs. The relationship between CEOs with a postgraduate degree and a leverage ratio is positively significant. CEOs, who are politically connected, seem to be in an extensive network and thus could help firms acquire higher external financing. Moreover, firms that are managed by family CEOs have a higher leverage ratio, compared to those with professional CEOs.

5.2. Suggestion

There are some limitations in this research that, however, provide future research direction. Although we apply a variety of measures of CEO characteristics, we are aware of other soft factors and psychological attributes of CEOs, which could be considered for further study. In addition, this paper examines the impact of CEO characteristics on firm strategic choices. It, nevertheless, could not indicate whether CEO characteristics are beneficial or incur some costs to firms. Therefore, the effect of CEO characteristics on firm performance and value could be further examined to measure the significance of CEO characteristics.

Furthermore, although the impact of CEO characteristics on a firm's investment spending is provided in this study, we do not test consequences of such investment whether it adds firm value. Our aim is also not to explain the relationship between CEO characteristics and over-investment or under-investment problems. This, therefore, has been left for further investigation.

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Appendix 1 Distribution of sample firms by year and industry

This table presents distribution of non-financial firms listed on the Stock Exchange of Thailand between 2001 and 2005. The number of firm-year observations is 1,356. There are seven industries: 1) Agribusiness and Food Industry, 2) Consumer Products, 3) Industrials, 4) Property and Construction, 5) Resources, 6) Services, and 7) Technology.

	Year					
Industry	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
1) Agribusiness and Food Industry	29	34	37	36	37	173
2) Consumer Products	34	35	34	34	35	172
3) Industrials	37	36	41	45	58	217
4) Property and Construction	35	46	53	63	73	270
5) Resources	8	11	13	16	18	66
6) Services	51	60	65	74	78	328
7) Technology	20	20	27	31	32	130
Total	214	242	270	299	331	1,356