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# CEO characteristics of acquired firm and post-acquisition performance: Focusing on Korean in-bound deals

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**Abstract:** This research addressed acquired firm CEO's demographic characteristics' impact on post-acquisition performance based on upper echelons theory and managerial networking theory. Unlike domestic M & As, cross-border transactions are always accompanied with management issue of newly acquired foreign organization. Efficient use of local resource and system, successful post-merger integration progress, and appointing appropriate top management would be one of the most important issues that acquirer needs to address (Hambrick & Mason, 1984; Tihanyi et al., 2000). Recently Korea society has skeptical perspective on over-educated qualification and its substantial usefulness due to continuous disappointing performance of highly-educated and well-networked CEOs (Kim et al., 2013). Thus, this study tried to approach theoretical considerations in an empirical way. In case of in-bound cross-border M & As in Korea over the last ten years, generally accepted preferable characteristics for the top management of acquired firm were not accorded with empirical observation at least in this study and it supported theoretical assertions regarding CEO's demographic characteristics' influence on firm performance such as an impact of age and education level of CEO.

## I. Introduction

For the successful M & A, factors affecting post-acquisition performance had been

academically approached in many different ways over the last several decades. Some academic perspectives addressed from antecedent side of M & A and some perspectives focused on the period in the middle and after the close of M & A. As for the antecedent considerations, conglomerate mergers (Agrawal, Jaffe, & Mandelker, 1992; Berger & Ofek, 1995; Lubatkin, 1987), relatedness (Hayward and Hambrick, 1997; Lubatkin, Srinivasan, and Merchant, 1997; Walker, 2000; Wansley, Lane, and Yang, 1983), method of payment (Franks, Harris, and Mayer, 1988; Travlos, 1987; Walker, 2000), acquisition experience (Franks, Harris, and Titman, 1991; Haleblan and Finkenstein, 1999; Hayward, 2002; Kroll et al., 1997) issues were addressed by prior researchers. For the post-acquisition perspectives, there had been academic approaches on integration process/management (Ashekenas et al., 1998; Quah & Young, 2005; Burgelman & McKinney, 2006; Birkinshaw et al., 2000), integration impact on synergy creation (Moon, 2007), integration success factors (Quah & Young, 2005; Shimizu et al., 2004; Cartwright & Cooper, 1993), and integration depth/policy (Berry, 1980).

Among the academic approaches regarding post-acquisition performance, integration team and its leader including appointment of right leader, structuring appropriate organization and empowerment and so on, gets more attention from practitioners and researchers. The importance of top executives and CEO on firm performance had been widely recognized by academia and can find various academic addresses (Hambrick & Mason, 1984; Hambrick, 2005). Upper echelons theory and managerial networking theory provide academic foundations for studying the importance and the relationship between top executives and firm performance. Upper echelons theory asserts top management gives significant influence on organization's performance. In addition, it includes the concept that top managements' demographic characteristics affect their recognition system to make a strategic decision so that top it enables leading organizational strategic decision making process and eventually result in firm performance (Hambrick & Mason, 1984). Managerial networking theory asserts top management's social network and connection with the upper class can reduce firm's transaction cost and contribute to overall performance (Luo, 2003). Based upon this theoretical ground, empirical research on top management's demographic characteristics and firm performance had been occasionally conducted (Eisenhardt & Schoonhoven, 1990; Hambrick, 2005; Cheng et al., 2010). However, the academic research on top management's demographic characteristics influence on post-acquisition performance in the context of M & A had not been addressed and empirical studies in the area remain largely unexplored.

## II. Review of literature

### 1. Findings of prior researches

An active role of top management in an extraordinary situation such as M & A is rather important than ordinary times. Considering the nature of M & A as one of the biggest investment occasion, top managements including CEO and top management teams are unavoidable to take the most decisive role for the success (Tihanyi et al., 2000). Overall operation for the post-acquisition integration need to be addressed by top managements appropriately and it requires overarching insights and delicate aspects to lead and manage complex processes. Nonetheless, relatively little research had academically approached for the roles and responsibilities of the leaders of post-merger integration but there are increasing academic attentions on this area (Ashkenas & Francis, 2000). Ashkenas and Francis (2000) described diverse responsibilities of integration leaders and team reflecting various complicated circumstantial issues comparing ordinary business environment.

Epstein (2004) also posited that integration leaders should be more ambitious, confident and independent of preconceptions from professional ancestry or personal experiences than ordinary business managers. The importance of integration leaders' special role was known through the difficulties of AOL and TimeWarner's case, which had

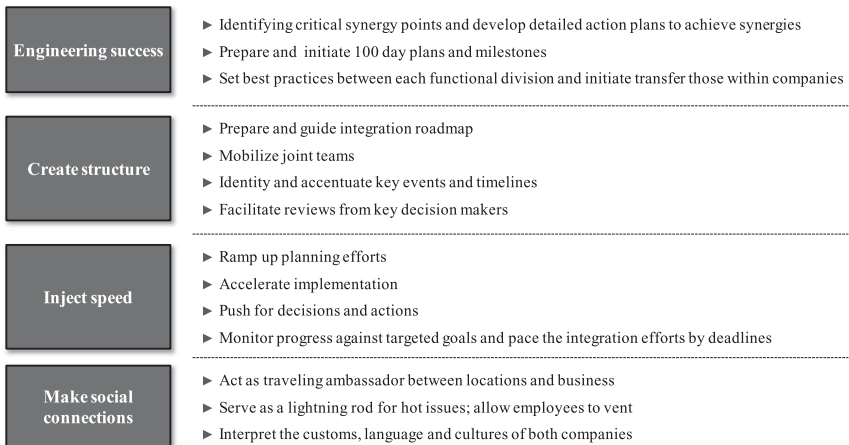


Figure 1. Categories of responsibility for integration managers<sup>1</sup>

<sup>1</sup> Modified from the initial categorization by Ashkenas and Francis (2000)

troubled in effective communication between executives from each company. And, in Daimler Chryslers' case of failure, Mr. Schrempp's imbalanced and biased perspective against Chrysler such as regarded Chrysler as subdivision of Daimler, resulted in huge financial loss and departure of key talents from Chrysler (Epstein, 2004). Thus, an event of M & A requires CEO's diverse capabilities and concentration on integration works which makes organization to rely highly on CEO's talent than normal period (Schuler & Jackson, 2001) The academic approach in the area to address the required capabilities and characteristics of integration team, leaders and CEO, will contribute both in theoretical and practical purposes (Ashkenas & Francis, 2000).

Considering CEO's significant contribution on the successful firm performance and acquisition performance, many prior academic approaches had been explored this area as Table 1 describes.

Research result shows that diverse variables, accounting for CEO's characteristics have significant relationship with firm performance and related measures. For example, CEO's age shows negative relationship with R & D spending and international diversification while CEO's education was positively related to firm performance and international diversification (Barker & Mueller, 2002; Jalbert et al., 2002, Tihanyi et al., 2000). Prior research efforts focused more on addressing CEO and top management team (TMT)'s association with normal firm performance or strategic commitment. Plus, studies had been focused on U. S. based firms and tested theoretical assertions only with that samples. Thus, expanding the scope of dependent variable to other dimension, which combines that commitment and performance, could be meaningful for future research and covering other regional base would be able to provide another theoretical contribution.

## **2. CEOs in Korea**

After the Korean War, the intervening six decades have seen South Korea change dramatically from a war torn nation with few resources into Asia's 4th largest economy, and the world's 15th largest (Stangarone, 2013). In the meanwhile, Korean companies developed their management style from traditional Asian one, based on Japanese management style to westernized one accepting more practical and efficiency driven management style such as U. S. corporations usually takes. And due to the increasing inflow of high level managers having higher educational background at U. S. and westernized countries rather than Asia, management style changes faster and extensively. Thus, current Korean companies have fairly unique organizational and management style, which could be called as a 'hybrid' style of east and west side of the world (Chen, 2004).

**Table 1.** Findings of prior researches on CEO's characteristics and firm performance

Researcher	Description	Dependent Variable	Independent Variable	Empirical study result	Regional coverage	Control Variables
Barker & Mueller (2002)	Examines impacts of the characteristics of CEOs on R & D spending	R & D spending	CEO tenure	Insignificant	Business week 1,000 listed companies from 1989 and 1990	Firm size, institutional stock holdings, past financial performance, related diversification, unrelated diversification
			CEO age	Negatively related to R & D spending		
			CEO stock ownership	Positively correlated with R & D spending		
			CEO career experience and education in eng., science, and R&D	Positively associated with R & D spending		
			CEO education	Insignificant		
Ling et al. (2007)	Investigates the effects of founder-CEOs value on firm performance	Firm performance	CEO collectivism	Positively correlated with older firms while negatively related with younger firms	SMEs at New England, U. S.	Top Management Team (TMT) size, TMT tenure, type of industry, environmental uncertainty
			CEO novelty	Positively associated with firm performance and greater in younger firms than in older firms		
Jalbert et al. (2002)	Addresses the impact of CEO's educational background on firm performance and CEO's compensation	Firm performance and CEO's compensation	CEO educational background (Possession of a degree, where the degree earned)	Positive association with firm performance Degree: Positive relations with CEO compensation-School attended: No significant effect	U. S firms	Debt ratio, growth in sales, firms size (log asset)

Matta & Beamish (2008)	Examines the association of CEO career horizon with the engagement in international acquisitions	Engagement in international acquisitions	CEO career horizon (time to retirement for a CEO)	Positive effect on the probability of international acquisitions	U. S. firms	CEO educational level, functional background, international experience, tenure, salary and bonus, prior firm performance, firm age, firm size, firm level of internationalization, variance of historical returns, institutional ownership, industry classification
			CEO in-the-money option holdings	Positive relation with entry through international acquisitions		
			CEO equity holdings	Interaction effects shows significantly positive relationship		
Tihanyi et al. (2000)	Investigates the impact of various top management team characteristics on firm international diversification	International diversification	Age	Negatively related to the degree of international diversification	U. S. -based computer and electronics manufacturers	Prior performance, size, top management team size
			Tenure	Positively associated with international diversification		
			Elite education	Positively correlated with the degree of international diversification		
			International experience	Positive relation with international diversification		

A pool of professional executives from outside who take in charge of improving overall performance in private equity funds' portfolio company or being assigned a very special task such as integration or restructuring as a top management, appeared recently and the size grows bigger and bigger (Tseng, 2008). Thus, Korea possesses various interesting aspects in terms of management style, CEO characteristics and, of course, the importance

as an economically successful country in Asia. To test the proposed theoretical foundations on CEO characteristics and post-acquisition performance, Korea would be one of the best places to address those theoretical hypotheses empirically and empirical test comparing with other Asian countries would be much interesting considering delicate differences in management style between those Asian countries. Consistently, this study would like to empirically address theoretical propositions regarding CEO's characteristics and post-acquisition performance using M & A cases in Korea to provide a perspective on selection of right person as an integration leader.

Korean society traditionally looks upon higher educational background as one of the most important qualifications like China does (Sollenberger, 1968). From Confucianism's influence, Koreans tends to emphasize education itself and consider academic achievement as the biggest part of the success of life (Pearce, 2006). This tendency affects prior and current Korean government's public official recruiting system, which select only few outstanding candidates through rigorous public examination. The tradition of public official recruiting process has been supported during several hundred years ago. So, naturally, Korea society appreciate higher educational background and certificates or titles qualifying certain public exams or recruitment process such as doctors, certified public accountants, lawyers, and public officials. But recently in Korea, there are skeptical perspectives on over-educated qualification and its usefulness. There had been many disappointing cases reported, which had bankrupted after appointing outsiders as top management who are well-educated and experienced at various professional area and even at public sectors (Kim, Y., Yim, S., & Seo, M., 2013). And it became a shock to Korea society so that people became to be skeptical to over-educated qualification. But, on the other hand, there is strong social ties between members of qualified people networks and usually tend to cooperate with each other. These strong ties attract firms to hire those who have a membership in the network (Chen, 2004). In reality, major university professors frequently takes roles at government minister, high level public officials takes top management or senior advisor position for the largest private conglomerate companies and the largest financial institutions in Korea (Kim et al., 2013). Moreover, to precede a smooth integration progress after executing M & A, firms in regulatory industry assign prior high level government officials for managing regulatory authorities and appoint specialized veterans to get over specific difficulties such as restructuring professionals and supply-chain experts (Tseng, 2008). Thus, these characteristics of Korean society are able to provide solid ground for testing upper echelons theory and management networking theory.

Multi-national companies pay more attention to the economic growth of Asia due to the continuous marginal growth of old Western economy (Kim & Cho, 2012). The intention to get into Asian market has been grown so that multi-national companies' acquisitions in the area became active. Among other countries, a country which gives more comfortableness to investors such as Korea has been considered the most preferred targets (Kim & Cho, 2012). However, academic researches empirically addressing CEO and post-acquisition performance (or firm performance) had rarely been covered Korea. As stated above, Korea has many interesting and meaningful aspects in terms of academic research considering their successful economic growth, a hybrid corporate culture, and Korean society's atmosphere related with upper echelons and top management's networks. An earnest effort to address Korean corporates would be meaningful and contributable for both academic and practical purposes. Thus, through this study, I would like to address upper echelons theory and managerial networking theory for Korean acquired firms in an empirical way by extending existing firm performance perspective into post-acquisition context. The study addresses the impact of CEO's demographic characteristics on post-acquisition firm performance for Korean companies, focusing on cross-border in-bound transactions.

### **III. Hypotheses**

There are many theoretical considerations regarding organizational mechanisms producing collective outcome. They asserted that diverse surrounding environmental factors and organizational decision making system determine organizational outcome (Hall, 1977; Hannan & Freeman, 1977). Some scholars paid attention on the perspective that human capital should be regarded as the most significant intangible asset for a firm's operation and their characteristics are connected with firm performance and successful execution of firm strategy (Hitt et al., 2001; Wright et al., 2001). Recently, theories that top management's demographic characteristics and individual attributes dominantly contribute to create organizational outcome, are frequently addressed by many researchers (Hambrick, 2005; Hambrick & Mason, 1984).

According to the upper echelons theory, top managements' demographic elements of education, age, experience and etc. have strong ties with firm performance. Particularly, educational background can be considered as standards of personal skill set and intellectual competencies. Of course, intellectual competency is an essential element to make managerial capability, can result in organization's competitive advantage and superior firm performance (Wailderdsak and Suehiro, 2004; Boyatzis, 2004). Amount of formal



education of CEO were positively associated in innovativeness of organization and CEO's greater cognitive complexity (Hitt & Tyler, 1991; Bantel & Jackson, 1989; Thomas et al., 1991; Barker & Mueller, 2002). Thus, education level gives significant influence on enhancing adaptability in uncertainty, flexibility from confidence and capability finding alternatives. It also enables to possess capability to resolve complicated problematic situation and not to be too much conservative on decision making process (Hambrick & Mason, 1984; Hitt & Tyler, 1991). On the other hand, some studies assert firm performance would be influenced by the type of higher education received by their CEO and not directly associated with the amount of education (Hambrick & Mason, 1984; Tyler & Steensma, 1998). Due to the nature of advanced academic programs (i.e. PhD and above), which attract conservative, risk-averse students and give lessons on analytic skills to avoid potential risks and mistakes, too much educated CEOs are likely not to commit innovative or risk-taking moves (Hambrick & Mason, 1984; Barker & Mueller, 2002, Hambrick & Finkelstein, 1996). Particularly, in Barker and Mueller (2002)'s empirical research about CEO's characteristics, they posited that education level showed curve linear relations, which positively associated until CEO's college degree and slightly negative relations with R & D spending and organizational performance. Especially, Korea society often shows skepticism on the top management's over-educated qualification and its direct association with firm performance since Korea society has too much respect on educational background, which even becomes a social problem (Kim et al., 2013). Thus, in overall, empirical evidences regarding influence of education level and type are mixed. Accordingly, considering the situational distinctiveness of M & A, which requires leader's innovative and adventurous aspect to go through fickle environment, I expect CEO's educational level's gradually diminishing association with acquisition performance.

*Hypothesis 1: CEO's education level is diminishing association with acquisition performance after a certain level of education*

The most persisting assertions regarding top management and CEO's age is that older managers tend to be conservative, avoid risks and pursue stable outcomes by taking proven manners (Hambrick and Mason, 1984; Barker and Mueller, 2002). Earlier empirical research conducted by Child (1974) found older top managements follow lower-growth strategy and they have less physical and mental stamina required to execute overall change of organization. Learning theory also supports older executives' difficulty in accepting new idea and adopting new behaviors (Hambrick and Mason, 1984). Plus, Carlsson and

Karlsson (1970) pointed out older executives, considering their career life span, may think much of financial and career security so that any risky decisions and moves that may harm their achievement. Due to Confucianism's influence in Asian countries including Korea, age gives negative impression on the adventurous decision making (Pearce, 2006). On the other hand, there are perspectives that experienced long-tenured old managers can get over diverse difficulties and utilize effective strategies leveraging their various experiences (Barker & Mueller, 2002). From the organizational learning perspective, experience and age should be regarded as an important element that enrich the knowledge and experience so that the performance can be developed (Reed & Defillippi, 1990). Miller (1991) asserted experience of top managements provides confidence and substantial capability to operate and manage the organization properly with having competence in control and managing risks resulting in solid firm performance eventually. Thus, theories and research results around top management and CEO's age are mixed. However, considering the situational distinctiveness of M & A, which force top management to have more decisive and risk-taking aspects (Barker and Mueller, 2002), I would like to hypothesize negative relationship of CEO's age with post-acquisition performance.

*Hypothesis 2: CEO's age is negatively associated with acquisition performance*

Social networks of top management level significantly influence on organizational performance and outcomes (Adler & Kwon, 2002; Shipilov & Danis, 2006). Particularly, top managements' personal network and relationships can affect significantly in the case of unusual events such as M & A. The type of membership of social network that top managers participate helps measuring social ties and networking capability of top managements (Luo, 2003; Cheng et al., 2010). Individuals who hold membership at important professional association, political parties, and socially influential groups are likely to have better and much more social relationship capital rather than having memberships for less important groups (i.e. leisure sports clubs, socializing groups). This can be adapted to business performance. Top executive's diverse and profound social networks and relationship capital can help achieving market information, guide of changing regulation and even works for persuading and getting support from various stakeholders inside or outside of company (Luo, 2003). In the same vein, Korean government and large conglomerate companies in Korea often employ outsiders who hold advanced degrees and certificates in specific area (Kim et al., 2013). Individuals who hold

certificates or titles such as doctor/PhD, lawyer, CPA, etc. which qualification is publicly recognized and have experienced professional institutions such as investment banks, consulting firms, research institutions and etc. can possess strong social ties and much more relationship capital. Consistently with this perspective, I expect positive influence of CEO's professional experience on post-acquisition performance.

*Hypothesis 3: CEO's professional experience is positively related to acquisition performance*

Acquisition experience has been regarded one of the most important factor which affect post-acquisition performance in prior academic researches on this area and many researches had been conducted based upon behavioral learning theory and learning-curve perspective (Haleblian & Finkelsetin, 1999). Bruton et al. (1994) hypothesized firms with acquisition experience acknowledge when to buy and how to manage outside financial, and legal advisors and understand key factors to lead successful integration. They found positive association with acquisition experience and post-acquisition performance. And Hitt et al. (1998) also found similar supportive relations between acquisition performance and firm's acquisition experience. Accordingly, I hypothesize positive association of firm's acquisition experience with post-acquisition performance.

*Hypothesis 4: Acquisition experience is positively related with acquisition performance*

Relatedness of acquirer and target firms also a frequently addressed issue in post-acquisition performance related studies. Many scholars empirically addressed relationship between the relatedness of acquiring firms and post-acquisition performance and successfully proved a positive influence (Salter & Weinhold, 1978; Homburg & Bucorius, 2006). Prior studies also stated that the relatedness relieves acquiring firm managers burden to get to know of the acquired business and it results in positive performance (Hitt, Harrison, & Ireland, 2001). Consistently with these perspectives, I expect industry relatedness' positive relationship with post-acquisition performance.

*Hypothesis 5: Industry relatedness of acquirer and target firms is positively associated with post-acquisition performance*

### III. Data and methodology

#### 1. Data

This research targets companies of listed and non-listed companies in Korea but covers only externally audited firms to make sure of accuracy of data. Corporate financial information comes from audit report submitted to financial advisory committee in Korea. CEO's individual information were referred from Naver portal's people database and got additional information from KISLINE HR source. Companies' historic name changes and CEOs' name were traced by KISLINE corporate data. Corporate financial information had been collected with 3 years of period from the year of acquisition executed. M & A information had collected from Mergermarket data from 2003 to 2012 and verified the events using JOINS.

Total number of transaction<sup>2</sup> in Korea over the last 10 years from 2003 to 2012, was 2,228 and Korea targeting cross-border transaction was 298 cases. Considering two years of period for estimating post-acquisition performance, and invalidity of accurate transaction information, 169 transactions were remained during the period of 2005 to 2010. Then, considered only majority deals, completed deals, verification results, bankruptcies, re-sale and etc., final samples remained were only 27 deals.

#### 2. Dependent variable

Selecting appropriate measure of post-acquisition performance is also an important issue to address M & A and its accompanying performance. Koo (2012) described categories of measures of post-acquisition performance: 1) financial performance measures (e.g. profitability, sales growth, etc.), 2) capital market focused measures (e.g. cumulative abnormal returns, cumulative excess returns, etc.) and 3) qualitative measures on HR and cultural issues (e.g. top management turnover, employee resistance, degree of acculturation etc.). Plus, within the category of financial performance measures, prior researches considered various time horizon and types when estimating M & A's influence, such as long-term financial performance (Chatterjee, 1992; Harrison et al., 2005; Lubatkin et al., 1997, etc.), short-term financial performance (Berger & Ofek, 1995; Capron & Pistre, 2002; Chatterjee, 1991; Eckbo, 1983; Seth et al., 2002, etc.) and normal accounting measures (Anand & Singh, 1997; Brush, 1996; Krishnan et al., 1997; Morosini et al., 1998, etc.). In addition, Zollo & Meier (2008) described three types of measures of post-acquisition performance in their research: 1) The task level. This is the

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<sup>2</sup> includes 30% or more share deals

**Table 2.** Categories of post-acquisition performance measures<sup>3</sup>

Level of analysis	Time horizon	
	Short-term	Long-term
Task	-Integration process performance -Knowledge transfer -Systems conversion	-Customer retention -Employee retention
Acquisition	-Short-term financial performance (event study)	-Overall acquisition performance -Acquisition survival
Firm		-Accounting performance -Long-term financial performance -Innovation performance -Variation in market share

measure helps considering the degree of progress proceeded among overall integration process planned (i.e. IT system integration/conversion, productivity enhancement practice transfer, etc.). It helps considering whether both organizations' integration progress completed satisfactorily or not. 2) The transaction level. This helps measuring the degree of substantial value created directly from transaction, which planned when decided an execution of acquisition. The substantial value as realized synergy such as cost efficiency enhancement and revenue growth difference would be examples of this type of measures. 3) The firm level. It measures post-acquisition performance as a performance of combined entity. The firm level measures consider post-acquisition performance as an aggregated outcome of complicated interactions of various elements surrounding an event of M & A. Table 2 describes Zollo & Meier (2008)'s categories of post-acquisition performance measures.

Accordingly, this study adopted financial performance measures representing overall firm's outcome to consider successful business operation after M & A. At first, revenue, operational income, net income, returns on asset (ROA), returns on equity (ROE) were considered for the post-acquisition performance measures. Considering the performance change in the first and second year of acquisition, the first and second year of each performance measures were individually employed. However, initial regression results allowed us to consider ROA and ROE to be our ultimate post-acquisition performance

<sup>3</sup> Revised the original table from the Zollo & Meier (2008)'s study (Zollo & Meier (2008), "What is M & A performance?," *Academy of Management Perspectives*, Aug.: 55-76

measures, considering statistical accountability for proposed research model.

### 3. Independent variables

I used key independent variables to test proposed hypotheses. First, I adopted Edu to measure the education level through putting the years of formal education that CEO received. Age was considered as the CEO's age in the first year of acquisition. Professional experience is a dummy variable and was coded 1 if CEO had experienced more than two years at consulting firm, Security Company, banks, and research institutions or if he/she holds doctoral degree, pass the public official exam, have certified accounting and financial professional (i.e. certified public accountants, certified financial analyst, etc.) and coded 0 otherwise. As for acquisition experience (i.e. Acq. Exp) is a dummy variable considering firm's acquisition experience, coded 1 if buyer possess prior M & A experience and 0 otherwise. Industry relatedness is also a dummy variable explaining buyer and target firm's industry accordance, coded 1 if they are in the same industry and 0 if they belong in different industry.

To enhance accountability of my research model, several control variables were employed. International D is a dummy variable for considering CEO's international experience, coded 1 if CEO has international experience including study abroad and work experience outside Korea and 0 otherwise. Insider and outsider D is also a dummy variable to take into account CEO's origin of workplace, coded 1 if CEO is an outsider and 0 if insider. In addition, firm size was controlled with log value of total assets and financial stability was also controlled with debt-equity (DE) ratio of the firm.

### 4. Regression model

In conclusion, the regression model for cross-sectional analysis to address proposed hypotheses had been drawn as described below.

$$\text{Acquisition performance (ROA, ROE)} = \alpha_0 + \beta_1 \text{ Edu} + \beta_2 \text{ Age} + \beta_3 \text{ Prof. exp} \\ + \beta_4 \text{ Insider/Outsider D} + \beta_5 \text{ Intl D} + \beta_6 \text{ Relatedness D} + \beta_7 \text{ Acq. exp D} + \beta_8 \text{ Log} \\ \text{Firm size} + \beta_9 \text{ DE Ratio}$$

## IV. Empirical results

Table 3 describes descriptive characteristics of variables. Based upon samples characteristics, CEOs took the roles in the event of M & A showed difference in demographic characteristics comparing with normal Korean large companies' CEOs.

**Table 3.** Descriptive statistics

	N	Minimum	Maximum	Mean	Standard Deviation
<i>ROAY1</i>	38.00	- 34.02	51.78	3.46	18.69
<i>ROAY2</i>	38.00	- 37.16	45.07	1.62	16.39
<i>ROEY1</i>	38.00	- 1.93	0.77	- 0.06	0.54
<i>ROEY2</i>	38.00	- 5.43	5.77	- 0.02	1.36
<i>Edu</i>	28.00	16.00	23.00	17.71	2.31
<i>Age</i>	28.00	33.00	67.00	48.50	7.39
<i>Prof exp 1, no 0</i>	28.00	0.00	1.00	0.25	0.44
<i>Outsider 1, insider 0</i>	38.00	0.00	1.00	0.63	0.49
<i>Intl exp 1, no 0</i>	28.00	0.00	1.00	0.46	0.51
<i>Related 1, unrelated 0</i>	38.00	0.00	1.00	0.92	0.27
<i>Acq. exp. 1, no exp. 0</i>	38.00	0.00	1.00	0.87	0.34
<i>LogFSY1</i>	38.00	0.94	4.75	2.06	0.77
<i>LogFSY2</i>	38.00	0.87	4.72	2.08	0.75
<i>DEY1</i>	38.00	- 705.84	2,048.78	249.79	466.86
<i>DEY2</i>	38.00	- 8,108.57	1,966.67	- 84.23	1,660.21

CEOs in our sample (M & A CEOs<sup>4</sup>) show younger age and higher education level than normal large companies' CEOs<sup>5</sup>. Table 4 shows correlations for all the major variables and found no abnormal cases.

Initial investigation on the relationship with hypothesized key variables of age and education and acquisition performance, shows interesting results, which generally shows a negative relationship between education level and post-acquisition performance. But, above master's degree, a stronger negative relationship was observed.

As for the age, it shows negative relationship with post-acquisition performance as figure 3 describes. It also supports hypothesized proposition of age's negative impact on acquisition performance.

<sup>4</sup> M & A CEOs represent sample CEOs of this research

<sup>5</sup> Asia economic daily, a Korean newspaper company reported research result on Korean top 100 companies' CEOs. Research targeted the largest 100 companies' CEOs held title of Chief Executive Officer or more, non-family owners. (*Asia Economic Daily*, 2013.8.26)

**Table 4.** Correlation matrix

Pearson Correlation																
	ROAY	ROAY2	ROEY1	ROEY2	Edu	Age	Prof exp I, no 0	Outsider I, insider 0	Intl exp I, no 0	Related I, unrelated 0	Acq. exp. I, no exp. 0	Log FSY1	Log FSY2	DEY1	DEY2	
ROAY1	1.000															
ROAY2	.863**	1.000														
ROEY1	.802**	.628**	1.000													
ROEY2	0.275	.327*	0.009	1.000												
Edu	-0.215	-0.413*	-0.308	-0.325	1.000											
Age	-.375*	-0.333	-0.233	-0.011	-0.258	1.000										
Prof exp I, no 0	-0.143	-0.103	-0.215	0.086	.473*	-0.097	1.000									
Outsider I, insider 0	-0.271	-0.235	-0.251	0.188	0.095	0.167	.412*	1.000								
Intl exp I, no 0	-0.200	-0.167	-0.233	0.153	0.212	0.094	.455*	.645**	1.000							
Related I, unrelated 0	-0.008	0.028	-0.098	0.006	0.16	-0.199	-0.109	-0.021	-0.196	1.000						
Acq. exp. I, no exp. 0	.338*	0.234	.460**	0.051	-0.197	-0.072	-0.011	0.025	-0.040*	-0.114	1.000					
LogFSY1	-0.041	0.019	0.161	-0.053	-0.243	0.160	0.086	0.295	0.300	-0.353	0.112	1.000				
LogFSY2	-0.056	0.049	0.120	-0.042	-0.260	0.183	0.166	0.279	0.289	-0.339	0.102	.986**	1.000			
DEY1	-0.208	-0.145	-.408*	.344*	-0.14	0.123	-0.126	0.306	0.240	0.022	-.188*	.363*	.365*	1.000		
DEY2	0.041	-0.007	0.183	-.655**	0.137	-0.097	0.000	0.024	0.111	-0.05	0.227	0.085	0.088	-0.062	1.000	

\* Correlation is significant at the 0.05 level (2-tailed)

\*\* Correlation is significant at the 0.01 level (2-tailed)



Dependent Variable: ROA Y2

Equation	Model Summary					Parameter Estimates			
	R Square	F	df1	df2	Sig.	Constant	b1	b2	b3
Linear	.70	5.340	1	26	.029	56.759	-3.004		
Quadratic	.233	3.796	2	25	.036	-285.171	33.725	-.968	
Cubic	.232	3.770	2	25	.037	-167.105	15.117	0.000	-.017

The independent variable is Edu

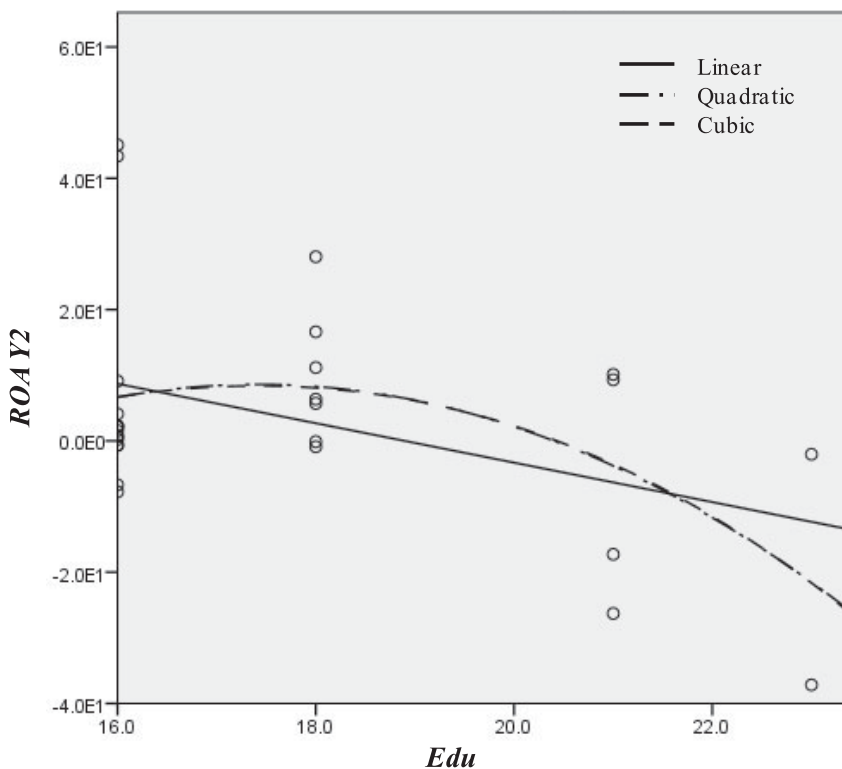


Figure 2 Educational background acquisition performance (Model summary and parameter estimates)

Result of cross-sectional analysis based on the proposed research model is as table 5 exhibits. Among other dependent variables, models with dependent variable of ROA and ROE for first and second year allowed us to find statistically significant outcomes especially enable us to discover supporting evidence of proposed relations. In overall,

Dependent Var: ROAe: Y2

Equation	Model Summary					Parameter Estimates	
	R Square	F	df1	df2	Sig	Constant	b1
Linear	.111	3.251	1	26	.083	40.274	-.757
Inverse	.163	5.062	1	26	.033	-37.781	1957.058

The independent variable is Age.

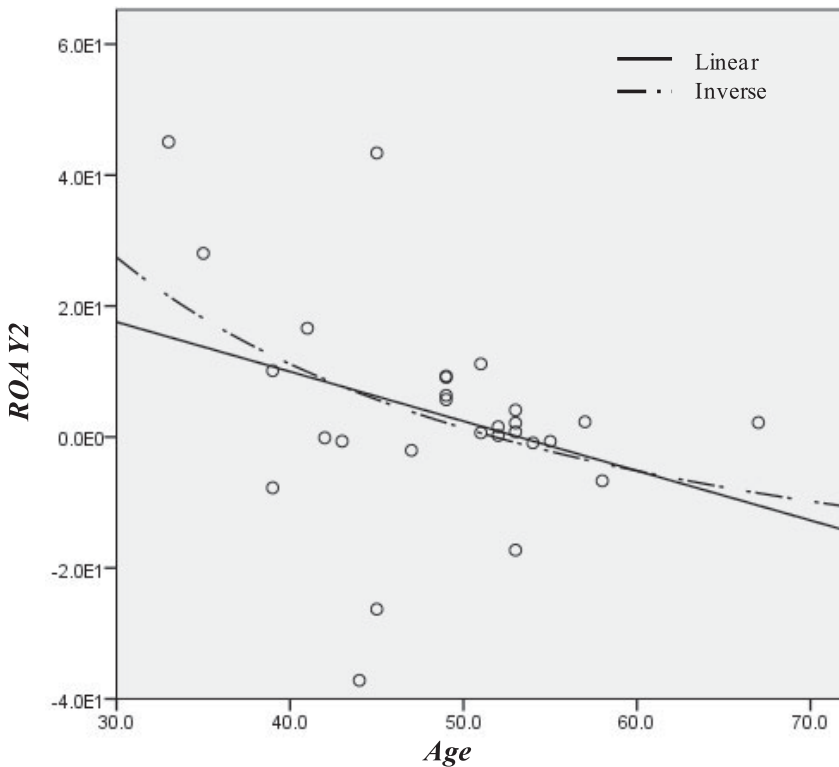


Figure 3 Age and post-acquisition performance (Model summary and parameter estimates)

model's explanation power is not high due to small sample size. However, key variables' relationships with post-acquisition measures were able to be interpreted with statistical significance. As for the education, age and acquisition experience, cross-sectional analysis also holds the hypothesized relationship with post-acquisition performance in accordance with simple regression analysis as above. It supports education and age's diminishing

**Table 5.** Regression results

	ROA Y1		ROA Y2		ROE Y1		ROE Y2	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
<i>Intercept</i>	1.148	1.885*	1.318	2.536**	2.222	1.518	2.964	0.927
<i>Edu</i>	-0.029	-1.409	-0.046	-2.750**	-0.074	-1.504	-0.218	-2.130**
<i>Age</i>	-0.011	-1.989*	-0.010	-2.198**	-0.022	-1.622	-0.010	-0.348
<i>Outsider</i>	-0.021	-0.187	-0.041	-0.447	0.036	0.133	-0.106	-0.190
<i>Prof Exp</i>	-0.025	-0.217	0.079	0.878	-0.224	-0.814	0.591	1.073
<i>Intl Exp</i>	0.036	0.338	0.015	0.179	0.017	0.067	0.701	1.350
<i>Relatedness</i>	-0.039	-0.270	0.026	0.216	-0.060	-0.173	0.057	0.076
<i>Acq. Exp</i>	0.116	0.889	0.034	0.315	0.168	0.537	1.656	2.473**
<i>LogFS</i>	-0.043	-0.575	-0.024	-0.356	0.112	0.621	-0.368	-0.869
<i>DE</i>	-0.017	-1.191	-0.001	-0.368	-0.088	-2.632**	-0.014	-0.663
R <sup>2</sup>	0.351		0.425		0.479		0.473	
F-stat	1.080		1.478		1.839		1.794	
#of observation	27		27		27		27	

\* Significant at 0.1 level

\*\* Significant at 0.05 level

association with acquisition performance and acquisition experience's positive impact. Unfortunately, hypothesis 3 and 5, the influence of CEO's professional experience and firms' industry relatedness were not able to be verified with statistical significance. In addition to the hypothesized variables, debt-equity ratio<sup>6</sup> showed statistically significant result.

Result of empirical analysis cannot be regarded as enough successful to confirm the proposed hypotheses, since research model itself exposes limitations to contain enough sample size, controlling statistical mistakes and so on. However, the research effort provides meaningful grounds for further research to address the CEO or top management's demographic characteristics which enables acquired firm's performance to be successful. Considering the area covered by prior researches and rapidly changing business environment, proposed research effort will contribute both practical and academic perspective.

## V. Discussion

Empirical results of this study interestingly conformed to proposed hypotheses and attract us to go further solid research. Specifically, research result supports that too highly

<sup>6</sup> Debt-equity ratio (DE) was negatively correlated with dependent variable of ROE Y1.

educated top management can be too conservative and risk-averse to decide any adventurous actions, which are necessary in the event of M & A and post-merger integration process. And, in terms of age, research result can be interpreted that too much aged top management can have passive attitude on risk-taking moves and pursue more stable outcomes. Thus, older CEO's such tendency can get make firm's situation worse when conducting post-acquisition integration to take planned benefits. Considering M & A's unordinary situation, CEO's agile and smart decision making is necessary for successful post-acquisition performance. Thus, a certain level of experience, age, and knowledge would be required but too much considerations and thoughts would not be unnecessary as research result shows.

However, unfortunately, there are indisputable limitations to be complemented by further research. First of all, this study cannot have sufficient amount of sample, which need to include longer range of period or expand regional coverage including other emerging countries in Asia. Plus, considering diverse influencing relationship of post-acquisition performance, appropriate statistical control should be accompanied, which requires profound understanding on the regional business environment and availability of corresponding data to take proper statistical processing.

This study brings an opportunity to broaden theoretical perspective of addressing the influence of CEO's demographic characteristics on firm performance in two aspects. First, it expands the scope of research objective from normal firm performance to post-acquisition performance. It enables elaborative analysis on finding relationship between CEO characteristics and firm performance in the particular event of M & A. Another contributive aspect of this study is that the research intends to cover Asian emerging country such as Korea, while prior research efforts had primarily been focused on Western business environment so far. Hence, the point that research objective extends from normal performance to the performance after the event of M & A and it expands the focus of regional coverage toward emerging economy at far-east Asia, this research will offer significant contribution on both practical and theoretical perspectives.

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