

UPPER ECHELON AND THIRD PARTY ENDORSEMENT AND HARVEST PERFORMANCE

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ABSTRACT

Using a sample of 304 IPOs in the Korea, this paper examines interlinks between the characteristics of executives, the endorsement by the governments or parent companies and IPO performance measured in terms of the market capitalization of IPO firms. The results demonstrated that educational level, functional background and school prestige of executives are positively associated with the market capitalization at IPO. But age of executives, venture certification by Korean government and corporate venturing which this paper regards as the endorsement by third party have no significant relationship.

Keywords: Initial Public Offering, Funds, Echelon, IPO Performance.

INTRODUCTION

Initial public offering (IPO) as a harvest option from both the entrepreneur's and investor's point of view is one of the uniquely entrepreneurial process (Reynold & White, 1997; Petty, 1997). An IPO generates funds that accrue directly to entrepreneurs and investors as a function of selling their personal stakes in the firm. The firm also benefits, as many of the funds generated will be used to foster growth opportunities. While numerous studies have investigated the determinants of the going public decision (Booth & Smith, 1986; Jain & Kini, 1999; Ritter, 1987) and postissue performance (Beatty & Ritter, 1986; Brav et al., 2000; Espenlaub & Tonks, 1998; Michaely & Shaw, 1994), there are relatively little studies on the related but equally important issue of what factors may affect the IPO's performance.

The IPO process is characterized by a considerable amount of uncertainty. Much of this uncertainty is a function of the relative lack of information available to the various parties involved in the IPO process. In the process of the IPO, the firm is engaged in a set of formal and informal relationships with the regulator, the share issue advisors and underwriters, and the broader investment community. Given this situation, signaling theory has been basis for empirical investigations of the factors associated with IPO performance (Certo et al., 2001b; Leland & Pyle, 1977; McBain & Krause, 1989). Signaling theory, within the IPO context, can serve as a foundation to help explain how IPO firm managers effectively communicate the firm's value to external parties. Certo et al. (2001a, b) observed that this can help IPO firm managers/owners maximize the price at which they can sell their shares with the initial stock offering.

Existing studies mainly have paid attention to upper echelon and third party endorsement as the signal to inform firms' value to external parties in IPO process. The upper echelon studies have relied on agency theory as the basis for empirical investigations of the factors associated

with IPO performance, so they have been interested in the corporate governance system (McBain & Krause, 1989; Mikkelsen et al., 1997; Certo et al., 2001a, b; Higgins & Gulati, 2003). But they overlook the attributes of upper echelon as the signal. Therefore, this study focuses on the attributes of upper echelon as the signal with resource-based view. The third party endorsement studies regard venture capitals and alliance partners as the signals (Stuart et al., 1999; Meggins & Weiss, 1991). In addition, this study verifies that corporate venturing and governmental support may play the role of third party endorsement as the signal.

As research background, Korean venture industry provides a suitable setting for our study. Korean venture industry started to develop since KOSDAQ (Korea Securities Dealers Automated Quotations) opened in July 1, 1996. KOSDAQ was a new stock market where the stocks of young companies are traded, differentiated from the existing KSE (Korea Stock Exchange). With the opening of the KOSDAQ market, Korean government expected the venture industry to be vitalized through efficient financing. For this, IPO in KOSDAQ was more favourable than KSE. In addition, the government permitted institutional investors and foreign investors to invest in KOSDAQ. KOSDAQ grew rapidly as a centre of the direct financing market and surpassed KSE in the first half of 2000 before internet bubble crashed. Given this situation, easy IPO encouraged a lot of entrepreneurs to found start-ups, for they could harvest their business in short time. Furthermore, the efficient financing in KOSDAQ is a contributing factor for existing firms to create new business entities or establish the spin-off of internal business in the form of corporate venturing. Consequently, a lot of start-ups and corporate ventures rushed into KOSDAQ.

In the development of venture industry in Korea, the government introduced a unique support policy, which was namely 'venture certification system' in 1998. The government selected promising companies by itself and certificated them as 'venture firm'. Young companies should meet one of the four requirements to be 'venture firm'. First, 'venture firm' indicates an enterprise in which the investment of including convertible bond of venture capital is more than 20 percent of its existing equity or in which venture capital holds more than 10 percent of its existing equity. Second, 'venture firm' is defined by an enterprise in which the ratio of R&D expenditure to the sales of previous year is more than 5 percent. Third, 'venture firm' is defined by an enterprise in which the sales or exports created from its patent are more than 50 percent or 25 percent of the total sales respectively. Lastly, 'venture firm' can be an enterprise which receives excellent ratings of business feasibility through some evaluation agencies designated by the government. For 'venture firm', the government provides its support, for example tax benefit, R&D sponsor, the preferential purchase of the government, favorable condition for IPO and etc. Thus, 'venture certification system' of Korean government plays the role of endorsement for promising companies accompanying its support program.

This paper extends previous work in several ways. Firstly, this study provides a contribution to signalling research by considering how the characteristics of upper echelon may influence IPO performance on resource based view. And then, this study further extends third party endorsement research by taking into consideration the government support and corporate venturing on IPO performance.

HYPOTHESIS

Upper Echelon and IPO Performance

Previous studies have adopted agency theory for the influence of upper echelon on IPO performance. A major underlying assumption of these studies is that of an information asymmetry between the corporate insiders and outside investors that may create agency costs. To reduce these agency costs, IPO firms may seek mechanisms in order to communicate their expected value to potential investors using signals that are difficult (costly) to imitate for lower quality firms (Michaely & Shaw, 1994). These idiosyncratic signals may be associated with governance-related signals of IPO firms that may potentially enhance firm value. In particular, retained share ownership by IPO executives is widely acknowledged as a potent sign of the high quality of the firm (Certo et al., 2001; McBain & Krause, 1989). According to signalling research, the managers of high-quality firms will try to retain shares since when the private information is fully incorporated in the aftermarket price, they can recoup their loss of wealth associated with under-valuation in IPO at a later date. By retaining shares, the executive owners communicate private favorable information to outside investors (Espenlaub & Tonks, 1998). Agency theorists indicate that the interests of executives and outside shareholders become less closely aligned as executives' stakes decrease and this may be associated with inferior performance (Beatty & Zajac, 1994; Mikkelsen et al., 1997). Again, by retaining equity, executive directors send positive signals to outside investors.

From an agency perspective, an agent is a rational actor who seeks to maximize his individual utility (Jensen & Meckling, 1976). The principal's main concern is that his interests may not be satisfied (Jones & Butler, 2001; Wright et al., 2001; Wright et al., 1996). He encounters risks of adverse selection and moral hazard in his relationship with the agent and must therefore seek to minimize these risks (Eisenhardt, 1989, Uzzi, 1997; Hendry, 2002). Agency risks therefore arise from an agent's inclination to use his autonomy to enrich himself at the cost of the principal (Wright et al., 2001). The principal must provide incentives and incur monitoring costs to lead the agent to behave in a manner consistent with his objectives and to verify skills and detect what the agent is doing (Jensen & Meckling, 1976; Eisenhardt, 1989). Incentives amount to rewards aimed at aligning principal agent interests (Davis et al., 1997). The assumption is that agents receiving compensation for the successful achievement of the principal's objectives will be motivated to behave in a manner consistent with his interests. Incentives are particularly desirable when monitoring is costly or impossible (Davis et al., 1997).

Agency theory has been criticized for being too narrow because of its emphasis on the contract between principal and agent, and on the ways in which the contract can be made more efficient from the perspective of the principal (Eisenhardt, 1989; Perrow, 1986). That is, the restrictive assumptions of agency theory discount the possibility that diverse individuals in various situations may behave differently. This leads to concerns that strict adherence to agency theory's assumptions provides limited applicability to the actual management context. Failure to perform as expected may not result from the misrepresentation underlying adverse selection, for example. Some agent may not have the things necessary to meet the principal's performance expectations (Davis et al., 1997). He may not know what competence is required, particularly in complex and uncertain situations, or he may misunderstand or misinterpret the principal's

objectives (Perrow, 1986; Hendry, 2002). Thus, in addition to agency costs, the ability of agent should be considered to judge their expected performance. Therefore, in the context of IPO, the signal of upper echelon may be not only the retained share ownership by IPO executives but also the abilities of IPO executives.

The resource-based view of the firm (Barney, 1991; Wernerfelt, 1984) is applicable to our focus on the attributes of IPO executives that outside investors might utilize in pricing an IPO offering. Consistent with this theoretical perspective, firms develop resources that distinguish the firm from other firms and provide sources of sustained competitive advantage. A common focus of resource-based view studies is the relationship between resources and firm processes and outcomes. Normally, start-ups don't possess the requisite resources enough to survive or grow, compared to mature firms. Moreover, their main resources are generally human resource like superior labour rather than financial resources. In most of start-ups, these resources are possessed by their executives (Aldrich & Auster, 1986). Deeds et al. (2000) find a positive relationship between the top executives' skills and product development activities in the high-tech setting. Entrepreneurship researches have argued that the attributes of executives in start-ups might be firm-specific resources and could indicate a positive signal to venture capitals.

In the popular business press, Byrne(2000) suggest that VCs commonly report that "nothing is more important than people" and, in particular, that they look "for people who have high levels of energy, are willing to work around the clock and are still hungry for success". In a recent review of the academic literature, Zacharakis & Meyer (2000) find, similarly, that top executives' experience and skills are the most frequent selection criteria self-reported by VCs. Zucker et al. (1998) find that the founding of new biotechnology firms depends importantly on the number of "star scientists," corroborating that human capital is a key factor in biotechnology. Thus, the identity and background of top management are widely regarded as important signals of a start-up's future potential, increasing its chances of obtaining VC financing. Burton et al. (2002) find, for example, that prominence of the prior employers of a start-up's founding management team increases the likelihood that the start-up will obtain external financing at the time of its founding. Moreover, demonstrating the greater importance of human capital signals under conditions of uncertainty; they report that the effects of founding managers' prior employer prominence held only for "innovative" (and not "incremental") startups. And Colombo et al. (2009) find that the characteristics of human capital of founders that are positively associated with the growth of new technology-based firms have the positive influence the likelihood of obtaining venture capitals.

In the process of IPO, Higgins & Gulati (2003) suggest that the greater the collective number of outside links associated with the members of the board, the stronger the signal of the young firm's quality and the greater the likelihood that the firm will attract a prestigious investment bank. From the resource-based view, extra organizational links of nonexecutive directors may provide the firm with additional bargaining power in its relationship with the underwriter (Pfeffer, 1972; Provan, 1980). Gulati & Higgins (2003) find similar top management career experience effects on investment bank behavior. Specifically, more prestigious investment banks took on IPOs for U.S. biotechnology start-ups with top managers who had more prominent previous employers, although these affiliations did not, in turn, necessarily affect the IPO's

valuation. Thus, no researches verify the signal effect of the attributes of executives on IPO performance.

IPO firms, which represent an intermediate stage between start-ups and established ones, struggle with developing new skill and adapting their strategy to match the opportunities and threats they might encounter for their sustained growth (Daily & Dalton, 1992). In start-ups, management activities are based in their founders and key members of the top management team. These activities are usually informal and improvisational. But changes in these activities begin to occur as firms move from their start-up phase to top management stage after IPO (Zahra & Filatotchev, 2004). In the IPO process, outside investors participate to expect the additional and sustained growth of IPO firms for their capital gain. They look for many kinds of factors in the prospectus which indicate the future growth of IPO firms. In fact, there are no factors which guarantee the growth, so they take their some risk in the IPO participation. Nevertheless, the executives of IPO firms might be an important signal to their decision-making, for the future growth of IPO firms is most influenced by top executives based on upper echelon perspective (UEP).

Hambrick & Mason (1984) introduced the model of UEP in which top executives play a pivotal role in shaping major organizational outcomes. At its core, the upper echelon perspective centers on executive cognition, values and perceptions and their influence on the process of strategic choice and resultant performance outcomes. Upper echelon characteristics, such as age, functional background and educational experiences are taken as observable proxies for the psychological constructs that shape the team's interpretation of the internal and external situation and facilitate formulation of appropriate strategic alternatives. What's more, Hambrick & Mason (1984) were explicit in arguing the need to focus on the top management team as opposed to other units, most especially the CEO alone. Their collectivist approach was born of observations that strategic choice is an arduous task, far exceeding the capabilities of individual executives (Cyert & March, 1963).

Older executives may have less physical and mental stamina (Child, 1974), or may be less able to grasp new ideas and learn new behaviors (Chown, 1960). Managerial age has been negatively associated with the ability to integrate information in making decisions and with confidence in decisions, though it appears to be positively associated with tendencies to seek more information, to evaluate information accurately and to take longer to make decisions (Taylor, 1975). And older executives have greater psychological commitment to the organizational status quo (Alutto & Hrebiniak, 1975; Stevens et al., 1978). Older executives may be at a point in their lives at which financial security and career security are important. Their social circles, their spending traits and their expectations about retirement income are established. Any risky actions that might disrupt these generally are avoided (Carlsson & Karlsson, 1970). So, what emerges is a picture of youthful managers attempting the active and risk-taking. The association between the age of top executives and organizational characteristics has not been the subject of many studies, but the few that exists yield strikingly consistent results. Managerial youth appears to be associated with corporate growth (Child, 1974, Hart & Mellons, 1970). And in line to the reasoning with youth's characteristics of the active and risk-taking, Hambrick & Mason (1984) propose that firms with young managers will be more inclined to pursue risky strategies than will firms with older managers. Specific forms of risk

include unrelated diversification, product innovation, and financial leverage. And they also propose that firms with young managers will experience greater growth and variability in profitability from industry averages than will firms with older managers. In the IPO process, outside investors participate to expect the additional and sustained growth of IPO firms for their capital gain. Looking for many kinds of factors in the prospectus which indicate the future growth of IPO firms, they regard the traits of executives as an important signal to indicate the growth. Because they take some risk in investment at IPO stage to pursue their profit aggressively, they prefer the active and risk-taking executives to the conservative and risk-averse ones. Consequently, outside investors are likely to view IPO firms with young executives more positively, which leads to higher valuation at IPO.

H1-1 Age of executives will be negatively associated with IPO performance.

The functional background orientation may not dominate the strategic choices an executive makes, but it can be expected to exert some influence. For example, Dearborn & Simon (1958) found that when a group of executives from different functional areas was presented with the same problem (a case study) and asked to consider it from a company-wide perspective, they defined the problem largely in terms of the activities and goals of their own areas. Functional backgrounds have been classified into three categories, the first two of which are based on an open-systems view (Katz & Kahn, 1966) and also align with the functional areas described as key in Miles & Snow's (1978) strategic typology. "Output functions"-marketing, sales and product R&D-emphasize growth and the search for new domain opportunities and are responsible for monitoring and adjusting products and markets. "Throughput functions"-production, process engineering and accounting-work at improving the efficiency of the transformation process. A third functional classification was suggested by Hayes & Abernathy (1980), who documented that major firms are increasingly dominated by executives whose backgrounds are in areas such as law and finance, which are not integrally involved with the organization's core activities. Among three areas, former two problem areas are somewhat distinct in their emphasis and individuals who work within them are likely to develop distinctly different orientations to the firm and its environment (Lawrence & Lorsch, 1967; Miles & Snow, 1978). Based on this, Hambrick & Mason (1984) propose that the degree of out-function experience of top managers will be positively associated with growth. In the context of IPO, outside investors expect the growth potential of IPO firms. Looking for many kinds of factors which influence the growth potential of IPO firms, they regard the functional background of executives as an important signal. Because the executives with output functions deepen their understandings of products and markets, they appear to be more able to explore new opportunities for the future growth of their firms. Consequently, this study would expect outside investors to view IPO firms with executives of output function background more positively, which results in higher valuation at IPO.

H1-2 Output function background of executives will be positively associated with IPO performance.

Formal educational background may yield rich but complex information. To some degree, education indicates a person's knowledge and skill base. A person educated in

engineering generally can be expected to have a somewhat different cognitive base from someone educated in history or law. Beyond that, if it is assumed that most people take seriously their decisions about education, and then education serves to some extent as an indicator of a person's values, cognitive preferences and so on. Granted, people make their educational decisions at a relatively early age, with incomplete information and they sometimes later transcend those decisions. But, on average, it could be expected that students enrolled in an English literature curriculum are somewhat different from students enrolled in a business curriculum. Perhaps even students who choose to attend the Harvard Business School are somehow different from those who attended the University of Chicago Business School. Inclusion of the educational backgrounds of managers in macro-organizational research has been limited primarily to studies attempting to predict innovation. The consistent finding is that level of education (either of the CEO or other central actors) is positively related to receptivity to innovation (Becker, 1970; Kimberly & Evanisko, 1981; Rogers & Shoemaker, 1971). These studies did not consistently include controls for age and so may be masking the tendency toward increased education in recent years. Kimberly & Evanisko examined the type of educational curriculum (administration vs. nonadministration degrees) and found no associations with the adoption of organizational innovations. Based on this, Hambrick & Mason (1984) propose that the amount, but not the type, of formal education of a management team will be positively associated with innovation. At IPO stage, the firms struggle with developing new skill and adapting their strategy to match the opportunities and threats they might encounter for their sustained growth (Daily & Dalton, 1992). So outside investors will perceive that IPO firms need innovative management and pay attention to the education level of executives. Executives with higher level of education seem to be more innovative. Consequently, outside investors are expected to view IPO firms with executives of higher level of education more positively, which makes higher valuation at IPO.

H1-3 Education levels of executives will be positively associated with IPO performance.

The executives' social networks to external environments are considered as one of the important managerial characteristics in UEP researches. Like the pursuit of other economic goals, extracting resources from the environment is probably accompanied by such non-economic constructs as sociability, approval, status and power (Granovetter, 1992). An organization's ability to extract resources from its institutional environment depends on the social networks owned by the executives is the main link between the organization and its institutional environment. Institutional environment can be defined as the environment encompassing the focal organization's key suppliers, resource and product consumers, regulatory agencies, governments and other organizations that produce similar services and products (DiMaggio & Powell, 1983). In France, graduating from one of the prestigious schools, known as grandes écoles, provides lifetime opportunity status, thereby increasing the opportunities to get to know high-level government officials, business leaders, etc., because most business and political leaders in France are from these écoles. Several studies suggest that a degree from elite institutions is an indicator of external networking ability (Lee, 1994; Useem & Karabel, 1986). A degree from an elite school generally provides the basis for later friendships and contacts that not only allow companionship but networks that are at times beneficial to one's career. Geletkanycz

& Hambrick (1997) studied how top managers' ties to external organizations give them increased opportunity for boundary-spanning activities. Collins & Clark (2003) provide additional evidence of a link between the social networks of executives and firm performance. Organizations are not closed, but open systems whose success and failure are largely determined by their ability to extract valuable resources from the environment (Pfeffer & Salancik, 1978). In the process of IPO, Higgins & Gulati (2003) suggest that the greater the collective number of outside links associated with the members of the board, the stronger the signal of the young firm's quality and the greater the likelihood that the firm will attract a prestigious investment bank. And extra-organizational links of nonexecutive directors may provide the firm with additional bargaining power in its relationship with the underwriter (Pfeffer, 1972; Provan, 1980). Similarly, the executives' social networks could be the positive signal to outside investors. Looking for many kinds of social networks which influence the growth potential of IPO firms, they regard the school prestige of executives as an important signal. Because the executives from elite schools have high level networks, they appear to be more able to explore new opportunities for the future growth of their firms. Consequently, this study would expect outside investors to view IPO firms with executives from elite school more positively, which results in higher valuation at IPO.

H1-4 School prestige of executives will be positively associated with IPO performance.

Third Party Endorsement and IPO Performance

The IPO of firms involves considerable uncertainty, for IPO firms are relatively unknown in capital markets. Such uncertainty makes outside investors have great difficulty properly pricing new issues (Sanders & Boivie, 2004). It helps reduce this uncertainty to gain legitimacy from well-regarded individuals and organizations. Zimmerman & Zeitz (2002) argued that legitimacy, which connotes a social judgment of acceptance, appropriateness, and desirability, is a resource by itself. Therefore, third party endorsement by respectable individuals and organizations could be positive signals.

Previous researches suggest that venture capitals play a pivotal role of third party endorsement in IPO context. In evolutionary models of entrepreneurship, entrepreneurs generate variation by founding new firms, pursuing different strategies and attempting to combine different bundles of assets to do so. Selection is then generated by the decisions of external resource holders to allocate their resources among these firms (Aldrich, 1999). In the entrepreneurial setting, financial intermediaries such as venture capital firms (VCs) have been cited as perhaps the dominant source of selection (Anderson, 1999). VCs affect selection by providing financial resources to cash-hungry start-ups and by favouring new firms with or requiring them to adopt, particular strategies, practices or other characteristics. VCs may also provide management expertise or access to other capabilities that bolster the competitive advantage of start-ups that they fund (Hellmann and Puri, 2002). Further, because they are perceived to be "informed agents" able to identify particularly promising start-ups, their investment provides a certification benefit that can enable the start-up to obtain other resources (Megginson & Weiss, 1991). Thus, VCs can affect selection by acting as what we term a "scout" able to identify potential and as a "coach" (Hellmann, 2000) that can help realize it.

Other resource holders view venture capital firms' investment as a strong signal of a start-up's quality and future prospects (Spence, 1974; Freeman, 1999; Podolny, 2001; Stuart et al., 1999). Furthermore, Venture capital equity holdings in the IPO firm may operate to reduce uncertainty with regard to the firm's performance prospects. By doing so, the endorsing venture capitals' legitimacy carries over to the recipient. VCs certify the value of their ventures to more prestigious underwriters (Meggison & Weiss, 1991). Furthermore, high prestige underwriters provide a signal of quality to potential investors in the IPO (Carter & Manaster, 1990) and to investors in seasoned offerings as well (Helou & Park, 2001). Thus, endorsement by respectable venture capital firms not only signals the quality of a start-up but also serves as a vote of confidence in the IPO firms (Chang, 2004).

Strategic alliances also provide the endorsement to IPO firms. Strategic alliances with suppliers, buyers and other businesses partners bring the complementary resources and capabilities that start-ups need and facilitate the flow of knowledge among partners, thereby resulting in faster growth and higher performance (Ahuja, 2000; Gulati, 1999; Nohria & Garcia-Pont, 1991; Pisano, 1990; Powell et al., 1996). Several studies have confirmed that strategic alliances improve start-ups' performance. Shan et al. (1994) showed that biopharmaceutical start-ups' cumulative cooperative ties positively influence their performance as measured by patent outputs. Deeds & Hill (1996) found that strategic alliances among biotechnology startups improve the rate of new product development, although the benefits from alliances decrease as the number of alliance increases. Stuart (1998) showed that start-ups' number of technology alliances and their partners' innovativeness positively affected patent and sales growth rates. Dyer & Singh (1998) showed that firms could generate competitive advantages by accessing social, technical, and managerial resources through forming strategic alliances. Stuart et al. (1999) and Stuart (2000) found that technology firms with prominent alliance partners performed better in IPO performance. By having strategic alliances with prominent partners, a start-up gains the benefit of these partners' reputations and thereby improves outside constituencies' perceptions of itself. Thus, strategic alliances can also affect not only growth but also IPO performance by providing legitimacy.

This paper presents a government support and corporate venturing as third party endorsement which could be a positive signal in IPO context. Many governments are keenly interested in nurturing their new ventures as they can create new employment, develop new technology, and contribute to national economic growth (Acs & Audretsch, 1990). Due to these positive externalities coming from the promotion of new business start-ups, the government needs to distribute more resources to new start-ups than free markets typically do. Namely, because venture capitalists make their commitments for a capital gain, they are not concerned with positive socio-economic externalities. Therefore, the government provides financial resource to early stage start-ups in which venture capitalists are reluctant to invest (Tan & Tay, 1994; Griliches, 1998; Lach, 2000). Regarding the effects of Small Business Innovation Research (SBIR) program in the U.S., Lerner (1999) finds that SBIR-backed start-ups grows faster. Interestingly enough, SBIR-backed start-ups obtain more venture capital than others. The support of SBIR itself provides a positive signal to venture capital funding rather than the amount of support. Recently, the governments in advanced countries provide more indirect

supports in regulation, policy and certification rather than direct ones financially (USSA, 1995; OECD, 1997).

In the research context, Korean government introduced 'venture certification system' in 1998. The government selected promising companies by itself and certificated them as 'venture firm'. For 'venture firm', the government provides its support, for example tax benefit, R&D sponsor, the preferential purchase of the government, favorable condition for IPO and, etc. Thus, 'venture certification system' of Korean government plays the role of endorsement for promising companies accompanying its support program. This study regards 'venture certification system' as a kind of endorsement by respected organizations. Other resource holders can view 'venture certification system' as a strong signal of start-ups' quality and future prospects. In the context of IPO, the signalling role of 'venture certification system' could complement legitimacy to IPO firms. By being certifying as 'venture firm', IPO firms provide a positive signal to outside investors. This positive signal makes outside investors' judge the firms' quality and future prospects rosy. Consequently, outside investors will be encouraged to value the firm higher at IPO.

H2-1 'Venture certification' will be positively associated with IPO performance.

Corporate entrepreneurship refers to the process of organizational renewal and relates to two distinct but related phenomena (Guth & Ginsberg, 1990). Narayanan et al. (2009) state that corporate venturing focuses on the various steps and processes associated with creating new businesses and integrating them into the firm's overall business portfolio. In Sharma and Chrisman's (1999) hierarchy of corporate entrepreneurship, corporate venturing can be divided into internal and external corporate venturing. Internal corporate venturing involves the creation of new businesses that generally reside within the corporate structure although they may be located outside the firm as semi-autonomous entities, such as spin-offs. Pre-existing internal organization structures may accommodate these new ventures or newly created organizational entities may be created within the corporate structure (Kuratko, 2007). Corporations may also invest in young, early growth-stage businesses created by external parties (external corporate venturing), which includes corporate venture capital, licensing, acquisitions and joint ventures. Corporate venturing, internal or external, has a big difference from entrepreneurial venturing. An entrepreneur is the most important actor in the entrepreneurial process (Shane & Venkataraman, 2000; Archer, 2000). In the process, entrepreneurs confront the lack of resources, such as human power, financial assets, information and knowledge (Stinchcombe, 1965). To overcome this problem, they have only to depend on their experience (Archer, 2003). Relative to emergent firms, corporate ventures are replete with human, financial and intellectual capital. And also, when corporate ventures struggle in their business, the parent companies would provide various supports to them. Based on this reason, in the uncertain context of IPO, outside investors will prefer established firms to individual entrepreneurs as the major shareholders of IPO firms. Because established firms are better regarded than individual entrepreneurs, they can provide legitimacy to corporate ventures. This study regards corporate venturing as a kind of endorsement by respected organizations in the context of IPO. Outside investors can view corporate venturing as a strong signal of IPO firms' quality and future prospects. Consequently, outside investors will be encouraged to value the firm higher at IPO.

H2-2 Corporate venturing will be positively associated with IPO performance.

METHODS

Sample

To verify these theoretical propositions, the authors collected data on all IPOs that have been floated on the KOSDAQ (Korea Securities Dealers Automated Quotation) from July 1, 2000 to December 31, 2005. Our primary list of IPOs was obtained from an electronic disclosure system called DART (Data Analysis, Retrieval and Transfer System). The main variables of interest were obtained from information provided in the IPO listing prospectuses, which contain detailed information on the career histories. The IPO prospectuses were obtained from the DART (Data Analysis, Retrieval and Transfer System), which provides comprehensive coverage of companies' files for publicly quoted firms in Korea. The missing listing prospectuses were collected directly from the firms and/or their advisors by sending written requests. The final sample included 304 IPOs.

Dependent Variables

This study defines firm's market capitalization conditional on it undertaking an IPO (market value and all other nominal figures are converted into real dollars) as IPO performance. The market value of a firm at IPO is defined as: $V^* = (P_u Q_t - P_u Q_i)$ where P_u is the IPO subscription price, Q_t is the total number of shares outstanding, and Q_i is the number of shares offered in the IPO. In other words, this study subtracted from the firm's total market capitalization the dollar amount raised in the IPO. V^* is a measure of the market's assessment of the value of a firm at IPO. Stuart et al. (1999) used the IPO subscription price to compute V^* ; in unreported models, they observed results similar to the ones this study reports here when defining V^* on the basis of the first day closing price of a new issue. And, this study applies log to this variable for the adjustment of scale.

Independent Variables

This study has two precedents such as upper echelons and endorsements. First, this study defines upper echelons as the executives who are also on the board of directors for the firms, for executives in the firms generally play the role of directors in board because of liability of smallness. Age of executives is defined as the mean age of executives. And, this study applies log to this variable for the adjustment of scale. Regarding the educational background, this study codes if they had an undergraduate degree or lower versus a master's or doctoral degree and measure the overall level of education as the proportion of executives with a master's or doctoral degree. With regard to the functional background, this study distinguishes output functions such as R&D and sales/marketing from throughput functions such as operations, engineering and accounting (Hambrick & Mason, 1984). This study measures the overall level of output functional background with the proportion of executives with the output functional background.

Elite schools are defined as Seoul National University, Yonsei University, Korea University or KAIST (Korea Advanced Institute of Science and Technology) which Korean society generally regards as elite school. This study measures the overall level of school prestige of executives with the proportion of executives from the elite schools. Second, this study defines ‘venture certification’ and corporate venturing as dummy variables.

Control Variables

The market value of a firm at IPO which this study defines as IPO performance is calculated as: $V^* = P_u(Q_t - Q_i)$ where P_u is the IPO subscription price, Q_t is the total number of shares outstanding, and Q_i is the number of shares offered in the IPO. Investment bankers are responsible for coordinating the stock offering for the IPO firm’s managers (Benviste & Spindt, 1989). They calculate the reference price for IPO subscription and determine the offer price spread, which must be disclosure either in the preliminary prospectus or shortly after filing the registration statement in an amended prospectus. And the actual price of IPO subscription is determined higher or lower than the reference price in the offer price spread or rarely out of the spread by outside investors which are mainly institutional investor in Korean stock market system. The reference price for IPO subscription is calculated as: $P_u = EPS \cdot PER$, where EPS is earning per share and PER is price earnings ratio. EPS is based on the net profit in the previous year of IPO. This study controls the net profit in the previous year of IPO. And, this study applies log to this variable for the adjustment of scale. PER have variations according to similar firms in the stock market and the stock market condition. Investment bankers use the average value of PER of similar firms in same industry. To control for possible industry effects, four industry dummy variables which are based on KOSDAQ industry basic classification, used for information technology, manufacturing, distribution, and service. Equity index shows “hot” and “cold” markets for IPO. To control inter-temporal differences in the receptivity of equity markets to stock issues, this study uses KOSDAQ index. And, this study applies log to this variable for the adjustment of scale.

Analysis

The hypotheses address the extent to which the characteristics of upper echelon and the endorsement by third parties are likely to inform outside investors’ valuation of IPO firms. Given these hypotheses and based on the interval level nature of the dependent variables, this study relies on multiple regression analyses for hypothesis testing. Multiple regression analysis is appropriate, as it enables an assessment of the extent to which each of the hypothesized variables uniquely contributes to the explained variance in the dependent variable.

To test our regression models this study used SPSS. And this study can utilize SPSS to compute variance inflation factors (VIFs). VIFs for all of the regression models were less than 2. VIFs are well below the guideline of 10 recommended by Chatterjee and Price (1991) and confirm that multicollinearity does not affect the regression models. This study therefore retains all independent variables.

RESULTS

Tables 1A and 1B contain the results of the correlations among all study variables.

Table 1A CORRELATION MATRIX								
Variables	Mean	S.D	1	2	3	4	5	6
Age	44.01	4.92						
Education level	0.19	0.2	-0.26***					
Functional B/G	0.49	0.23	-0.32***	0.36***				
School prestige	0.27	0.25	-0.29***	0.41***	0.26***			
Venture certification	0.84	0.37	-0.27***	0.16**	0.47***	0.20***		
Corporate venturing	0.03	0.16	0.10 ⁺	0.02	-0.07	0.03	0.02	
Net profit	2.18	0.44	-0.06	0.15*	0.20**	0.14*	0.1	-0.02
IT	0.68	0.47	-0.31***	0.13*	0.47***	0.18**	0.52***	-0.02
Manufacturing	0.25	0.43	0.27***	-0.15**	-0.44***	-0.17**	-0.44***	-0.04
Distribution	0.02	0.15	-0.03	0	-0.08	-0.12*	-0.11 ⁺	0.03
Service	0.04	0.2	0.16**	0.04	-0.07	0.03	-0.17**	-0.04
KOSDAQ index	685.88	233.85	-0.06	0.07	0.05	-0.03	-0.02	0.15**
Market capitalization	23.47	26.08	-0.15*	0.35***	0.33***	0.26***	0.24***	0.04

Table 1B CORRELATION MATRIX						
Variables	7	8	9	10	11	12
Age						
Education level						
Functional B/G						
School prestige						

Venture certification						
Corporate venturing						
Net profit						
IT	0.11 ⁺					
Manufacturing	-0.07	-0.85***				
Distribution	-0.13*	-0.23***	-0.09			
Service	-0.02	-0.31***	-0.12*	-0.03		
KOSDAQ index	-0.17**	0.08	-0.10 ⁺	0.06	-0.02	
Market capitalization	0.59**	0.26***	-0.24***	-0.08	-0.02	0.17**

N=304, , |P|<0.10:⁺, |P|<0.05:*, |P|<0.01:**, |P|<0.001:***Two-tailed tests

In terms of general characteristics of firms in our sample, the averages of the net profit in the previous year of IPO and market capitalization at IPO are 2.18 million \$ and 23.47 million \$, which clearly indicates that our firms are relatively small. Over two third of firms are from information technology, with firms from the manufacturing, distribution, and service sectors accounting for 25, 2, and 4 percent of our sample respectively. The average of KOSDAQ index is 685.88, but the standard deviation is very big with 233.85, which indicates there were huge fluctuations of stock market in the sample period.

With regard to executives' characteristics, on average, the age of executives is approximately 44. The average of proportions of executives with master's degree or Ph.d, with output function background, from elite school in executives accounts 19, 49, and 27 percent of our sample respectively. And, 84 percent of our firms in sample are certificated as venture firms by the government and corporate ventures account for 3 percent.

In terms of the control variables, the regression coefficients for the firms' net profits of the previous year of IPO are positive and strongly significant in all models, suggesting that the profitability of IPO firms affects the market capitalization of IPO. The regression coefficients for information technology dummy are positive and significant. In addition, KOSDAQ index is also significant, which indicates that stock market condition have much impact on the market capitalization of IPO, as this study expected.

As Table 2 shows the effect of the characteristics of upper echelon and the endorsement by third parties on IPO performance, the age of executives is negatively associated with the market capitalization of IPO firms, but the regression coefficients are insignificant in all models. Contrary to our expectation, our findings do not support Hypothesis 1-1, which suggests that the age of executives may be a signal of the quality of the firm. The regression results, however, do show that some executive's characteristics affect the extent of the market capitalization of IPO firms, as suggested by Hypothesis 1-2, 1-3, and 1-4. In particular, the education level of executives is positively and significantly associated with the market capitalization of IPO firms in all models. The regression coefficients for the functional background of executives are positive, but significant only Models 4 and 5. It seems that outside investors attribute high

quality to firms with a larger proportion of executives whose functional background is output function background. Table 1 show that both of adjusted R2s of Model 6 and 7 are smaller than one of Model 5. Therefore, our results may be linked to outside investors' evaluation of the functional background of executives in relation to the market capitalization of IPO firms. And the school prestige has significantly positive relationship with the market capitalization of IPO firms in all models. In sum, our findings support Hypothesis 1-2, 1-3, and 1-4. However, both of the variables of the endorsement are significantly associated with the dependent variable, as this study did not expect, and Hypothesis 2-1 and 2-2 do not receive support.

Table 2							
THE EFFECTS OF EXECUTIVES' CHARACTERISTICS AND THIRD PARTY ENDORSEMENT ON IPO PERFORMANCE							
MODELS							
	1	2	3	4	5	6	7
Net profit	0.61***	0.61***	0.58***	0.57***	0.57***	0.57***	0.57***
IT	0.24***	0.22***	0.2***	0.15**	0.14*	0.13*	0.13*
Distribution	0.05	0.05	0.03	0.03	0.03	0.03	0.03
Service	0.03	0.04	0.01	0.01	-0.01	0	-0.01
Manufacturing(ref) KOSDAQ index	0.25***	0.25***	0.24***	0.24***	0.25***	0.25***	0.25***
Age		-0.06	-0.03	0.01	0.02	0.03	0.03
Education level			0.21***	0.19***	0.16**	0.17**	0.17**
Functional B/G				0.1+	0.1+	0.1	0.1
School prestige					0.09+	0.09+	0.09+
Venture certification						0.03	0.03
Corporate venturing							-0.02
Adjusted R^2	0.46	0.46	0.5	0.504	0.51	0.508	0.507
ΔR^2		0	0.04	0.004	0.006	0.002	0.001
ΔF		7.246	0.113	3.974	3.065	3.149	2.57

N=304, |P|<0.10:+, |P|<0.05:*, |P|<0.01:**, |P|<0.001:***Two-tailed tests

CONCLUSION

The main objective of this research was to analyse the effect of the characteristics of upper echelon and the endorsement by third parties on IPO performance in Korean context. First, our findings indicate that the characteristics of executives are associated with IPO performance. Previous studies have taken agency theory for the effect of upper echelon on IPO performance, assuming that an information asymmetry may create agency costs. To reduce these agency costs, they emphasize the corporate governance-related signals of IPO firms that may potentially enhance firm value, such as retained share ownership by IPO executives (Certo et al., 2001; McBain and Kruse, 1989). Agency theory has been criticized for being too narrow because of its emphasis on the contract between principal and agent (Eisenhardt, 1989; Perrow, 1986). That is, the restrictive assumptions of agency theory discount the possibility that diverse individuals in various situations may behave differently. This leads to concerns that strict adherence to agency theory's assumptions provides limited applicability to the actual management context. In addition to agency costs, the ability of agent should be considered to judge their expected performance. This study applies the resource-based view (Barney, 1991; Wernerfelt, 1984) to our focus on the abilities of IPO executives that outside investors might utilize in pricing an IPO offering. Therefore, our study provides a contribution to IPO signaling research. This study differentiates previous analyses of corporate governance by adopting the resources-based view. Our empirical analysis demonstrates the potential importance of executives' characteristics at the time of the IPO. As this study expected, a high proportion of executives with the degree above master's, output function, and elite school background increase the market capitalization of the IPO firms. But, contrary to our expectation, the results show that outside investors do not consider the ages of executives as the signal. These findings are consistent with the notion that these characteristics may have been strategically used to attract financial resources during the initial flotation

Second, our results show that the venture certification of Korean government and corporate venturing do not play the role of endorsement, which is positively associated with IPO performance. Based on the study results, the hypothesized relationships are unsupported. While counter to our expectation, based on signaling theory which suggest that the endorsement by third party serves as effective signals to reduce the uncertainty surrounding the IPO, the results of this study are consistent with Loughran & Ritter's(2002) finding that IPO price adjustments only partially incorporate publicly available information. Despite the lack of support for the hypothesized relationships, these findings are informative. Our results show that outside investors do not consider the venture certification of Korean government support as the endorsement by respectable third party. Venture capitals' investment serves as an endorsement in the IPO firms(Chang, 2004), for they are perceived to be "informed agents" able to identify particularly potential, which we term a "scout" (Hellmann, 2000). While based on our results, it would be that outside investors do not perceive the venture certification of Korean government to be able to identify the potential of IPO firms. However, Lerner (1999) finds that the support of SBIR itself provides a positive signal to venture capital funding rather than the amount of support. This study do not deny all of the role of endorsement by the government, but only show that the venture certification of Korean government does not provide the endorsement to outside investors in the context of IPO in Korea. Therefore, the endorsement by government is open to

study. And our results also show that outside investors do not consider a corporate venturing as the endorsement by respectable third party. Unlike emergent firms by entrepreneurs, corporate ventures, when they struggle in their business, would be provided various supports by their parent companies. Based on this reason, in the uncertain context of IPO, this study suggests that corporate venturing could be a kind of endorsement by respected organizations in the context of IPO. Against our expectations, the results do not support the hypothesized relationship. Based on this study, it would appear that outside investors do not discriminate entrepreneurial ventures from corporate ventures.

There are several limitations of our findings. The variance of the dependent variables explained by each model is modest, indicating that many factors which may potentially impact on the IPO performance are not included in our analysis. In particular, the presence or reputation of venture capital firms among the IPO original shareholders, the underwriter reputation, firm-related risk factors, etc., have been identified as factors that may affect the extent of market capitalization (Certo et al., 2001). Future research should also attempt to examine the impact of upper echelon and endorsement on the IPO performance

Future research, then, may need to identify the more factors of upper echelon to improve the IPO performance based on the resource based view and expand upper echelon by taking into consideration not only executives, but also nonexecutives and outside directors. Johnson et al. (1996) labeled outside directors as service role and resource dependence role. The service role of outside directors entails board acting as advisors who provide counsel to the CEO and executives. The resource dependence role involves boards who act as channels to networks not normally accessible to insiders. Additionally outsiders play a crucial role in linking organization and the environment, and perform certain external roles such as managing resource dependence (Johnson et al., 1996). Therefore, this study needs to pay attention to the impact of outside directors on IPO performance. Research investigating this issue promises to add valuable insights into strategies IPO firms owners might employ to acquire more value at the time of IPO.

This study also encourages future research to identify the role of endorsement by government support in other types and countries. Many governments are keenly interested in nurturing their new ventures as they can create new employment, develop new technology, and contribute to national economic growth (Acs & Audretsch, 1990). Due to these positive externalities coming from the promotion of new business start-ups, the government needs to distribute more resources to new start-ups than free markets typically do. Namely, because venture capitalists make their commitments for a capital gain, they are not concerned with positive socio-economic externalities. Recently, the governments in advanced countries provide more indirect supports in regulation, policy, and certification rather than direct ones financially (USSA, 1995; OECD, 1997). The governments have limited resources but are interested in maximizing the effect of distributing more resources to promising firms. Therefore, they try to find indirect supports to play the role of endorsement to induce other resource holders to provide their resources favorably. Research finding this issue will be helpful for the governments which are considering indirect support.

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