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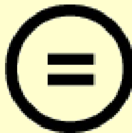

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Interaction of CEO's attitude towards risk and Institution in deciding Entry Strategies:

In Korean Biotechnology Industry

CEO의 위험 인지와 제도의 상호작용이 FDI 전략에 미치는 영향: 한국의 바이오 산업을 중심으로

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Abstract

According to previous research, institution influences choice of the entrants and needs for resources impact entry strategies in different contexts. This perspective calling for considerations of institutional effects with their integration with RBV, however, lacks delicacy in that many firms nowadays seek for both tangible and intangible asset simultaneously.

By setting CEO' s attitude towards risk, this paper can explore beyond Meyer(2008)' s review, which focused on the 'cost' side rather than 'risk' involved. Going beyond transaction cost and information cost, risk management actually matters in choosing entry mode of FDI. By focusing on each risk of entry mode choices, we can see how CEO' s attitude actually influences entry mode decisions, through the CEO' s perception of the risk involved.

To be specific, this paper examines how multinational companies choose among three modes of entry of FDI; JV, acquisition, and Greenfield operation. Hypotheses are tested by survey data with archival data from Korean Biotechnology Industry. Korean companies enter into 7 different Asian countries which show variation in the development degree of the institutions.

Keyword : Institution, Risk perception, Entering Strategies, FDI Biotechnology Industry

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1. INTRODUCTION

How do companies decide their entry mode? From previous research, one can infer that top management team or CEO's characteristics play a big role in company's everyday decisions. CEO's attitude towards risk, in this manner, would play a big role regarding change of strategies, including situations regarding FDI entry mode. While common consensus among CEOs is to avoid risks, some CEOs indeed do enjoy exhibiting aggressive actions and taking initiatives. But even considering for the individual differences, no CEOs would refuse to choose optimal entry mode for the company. That is, CEOs would be assumed as rational enough to consider what is best for the company, albeit bounded in the process.

Past literature, especially Hambrick and Mason's (1984) work constitutes the base of the research on the 'upper echelon' of organizations. In contrast to organizational demography research that emphasizes demographic make-up of organizations, Hambrick and Mason emphasizes organization's top level, stating that characteristics of the upper echelon and executive preferences affect firm's outcomes. According to Hambrick, what manager brings to a TMT decision depends on managerial perceptions and interpretations which in turn influences firm's subsequent strategic choices. Then, how would managerial perception of the risk interact with the institutional context?

Although previous literature of institutional theory has developed many explanations for antecedents and consequences of FDI and entry mode, it did not really focus on the risk the underdeveloped institutional context possesses. Rather, it focused on the transaction cost or information cost the weak institutional context incurred on the focal firm. The perceived risk that reflected institutional strength could influence company's entry mode decision, but there were none of the research questions regarding institutional context

influencing CEO' s risk management, ultimately affecting the choice of entry mode decisions.

This paper builds on and integrates literatures on upper echelons, institution and test a model of whether the degree of the influence institutional development exerts on entry mode decision is moderated by CEO' s attitude towards risk.

In determining foreign market entry strategies, institutions in the host economy significantly matters. (Peng, 2003; Wright et al., 2005). Macro-level institutions affect transaction costs (North, 1990). In contrast to traditional transaction cost research (Williamson, 1985) new era of research suggests that institutions matter more than background conditions to formulate and implement strategy (Ingram and Silverman, 2002). In emerging economies, institutional frameworks differ greatly and the influence of institutions can be examined in this context.

According to Meyer (2008), institution influences choice of the entrants and needs for resources impact entry strategies in different contexts. This perspective calling for considerations of institutional effects with their integration with RBV, however, lacks delicacy in that many firms nowadays do not seek either tangible asset or intangible assets only. They seek for both tangible and intangible asset simultaneously and in this case, separate entry mode decision become meaningless.

By setting CEO' s attitude towards risk, this paper can explore beyond Meyer(2008)' s review, which focused on the 'cost' side rather than 'risk' involved. Going beyond transaction cost and information cost, risk management actually matters in choosing entry mode of FDI. By focusing on each risk of entry mode choices, we can see how CEO' s attitude actually influences entry mode decisions, through the CEO' s perception of the risk involved.

To be specific, this paper examines how multinational companies choose among three modes of entry of FDI; JV, acquisition, and Greenfield operation. Hypotheses are tested by survey data with

archival data from Korean Biotechnology Industry. Korean companies enter into 7 different Asian countries which show variation in the development degree of the institutions.

Overall, this paper makes two contributions to the literature. First, this paper explores institution-based literature view(Oliver, 1997; Peng, 2003) by following Meyer(2008)’s notion of analysis in the relationship between institutional influence and entry modes. Primary hypotheses follows Meyer(2008)’s suggestion that reliance on a partner in joint venture reduces with the institutional development. At the same time this paper suggests that CEO’s risk aversive attitude increases the preference for acquisition and JV, but not greenfield. Second, this paper argues that institutions moderate CEO’s attitude towards risk when choosing entry strategies. More specifically, if institutional development is not strong enough JVs are used to avoid too big a risk. However, where institutions are strong and when market effectiveness is ensured, JVs become less efficient while acquisitions become a more significant tool to ‘exploit’ the developed institutional framework.

2. THORY AND HYPOTHESES

2.1 Entry mode choices

The modes of FDI can be classified into Greenfield, acquisition or JV (Kogut and Singh, 1988). JVs and acquisitions both provide access to resources of local firms, but the difference is that JVs partially provide access to local resources from a local partner and acquisitions allow firms to integrate as a whole. A greenfield does not provide a bundle of resources straightforward, but entering firm can use markets in the local area for resources.

In theory, three modes are apart from each other and suffices different motives. But most research has used frameworks that suggest the choices to be sequential and bimodal (Anderson and Gatignon, 1986) However, it was Meyer' s paper 『Institutions, Resources, and Entry Strategies in emerging economies』 that first brought into focus the possibility that the process of choosing entry mode might not be sequential as suggested, but simultaneous and intertwined. Since the degree of the development of the institutional framework influences the entry mode decisions in a simultaneous process, the three entry mode should be assessed in this interaction respect.

Acquisition and Joint ventures are considered the optimal way to access the ready-made resources from another organization. The question is for which reason entrants do not exploit the local market for the resource, that is, exploit the efficiency of doing it oneself with broad options to choose from? Standard market transactions should be the basic and at the same time best option if market-efficiency is secured. Acquisition poses major challenges of management in acquired business (Capron and Swaminathan, 2001), and JV creates considerable coordination challenges (Kogut, 1988; Buckley and Casson, 1998). Thus, if the local market is sufficiently efficient, investors could go through standard market transactions and choose greenfield operation (Meyer, 2008) Not only greenfield operations but also markets for acquisitions may be problematic in emerging economies (Peng and Heath, 1996). All in all, markets for local resources may be suboptimal due to surrounding institutional environment (North, 1990; Peng, 2006).

2.2 Institutions and Entry Strategies

Institutions support efficient functioning of the market so that individuals can engage in transactions freely with low cost (North, 1990; Peng, 2009). These institutions include the legal framework and the degree to which it is enforced. (Meyer, 2008) Institutional

development is deemed to be 'strong' if they enhance voluntary exchange while deemed as 'weak' if they fail to do so.

Institutional differences matters for MNEs operating in multiple geographical contexts (Globerman and Shapiro, 1999). Formal rules directly formulate possible choices of entry mode but informal rules indirectly influence on mode decisions. Legally one country could limit the equity stake of foreign investors (Delios and Beamish, 1999) and informal values, such as ethics regarding bribery may disadvantage MNEs (Peng, 2003). Since it is costly to engage in business in these markets, companies have to come up with new strategies to overcome restraints (Peng, 2009). Institutions also provide information about business to reduce information asymmetries (Arrow, 1971; Casson, 1997). Therefore weak institutional frameworks magnify information asymmetries so firms face higher risks (Meyer, 2001) Institutional strength interferes with the costs of business (Estrin, 2002) and influences investor's mode decisions by moderating the costs of acquisition or greenfield operations (Williamson, 1985). In consequence, the relative costs, especially transaction cost and information cost of entry modes are influenced by the institutional framework (Henisz, 2000; Meyer, 2001). For instance, JVs makes it possible for the entrants to access networks that correspond to institutional weakness (Delios, 1999). Not only cost, but also to hedge 'risk' of underdeveloped institutional context, joint venture is preferred as a strategy to transfer the risk to the local partner._Consequently, the necessity of a partner may fall short as the institutional framework is developed (Meyer, 2001; Peng, 2003; Steensma et al., 2005). For example, an elimination of restrictions on FDI may make JV partner unnecessary for interface with local authorities or local businesses (Peng, 2006). Acquisition is also sensitive to the efficiency of financial markets (Peng, 2009).

Combining these arguments, investors need access to local resources to counteract absence of efficiency in weak institutions. However, weak institutional development brings obstacles to access these resources via greenfield entry and raises the costs of

acquisitions. On the other hand, JV function as a tool to gain resources while drastically reducing the risk and cost involved by a partner. Therefore, in accordance with Meyer’ s paper hypothesis 1 is as follows:

Hypothesis1: if the institutional strength is firm enough, companies would not prefer JV, when choosing an entry mode.

2.3 CEO Characteristics and Entry Mode

Considerable research has focused on CEO characteristics, such as functional background experience, tenure, and educational level and its relationship with firm strategies; CEO characteristics that are considered valid proxies for the orientation of the firm. (Finkelstein and Hambrick, 1996). Since entry-mode choices are included in key strategic decisions, the influence CEO characteristics exert on entry mode decisions should be examined in this manner as well, for Entry mode choice bas been a "very important, if not critical, strategic decision"(Agarwal and Karnaswami, 1992, p. 2). Research on entry mode selection has been based on several theoretical perspectives, including transactions cost economics, industrial organization, and strategic behavior, using various antecedent factors to explain entry-mode decisions.(Herrmann and Datta, 2002) However, the role of CEO was neglected in research, and, although CEOs play key roles in the choice of entry modes (Conference Board, 1995), research on how their characteristics influence entry mode choices is noticeably ignored. (Herrmann and Datta, 2002)

The empirical literature on CEO's characteristics, strategic choices, and firm performance has been based largely on the upper echelons theory which argue that managers' cognitive orientation influence the perceptual process behind strategic decision making (Herrmann and Datta, 2002) CEO’ s attitude towards risk, in this

manner, would play a big role regarding change of strategies, including situations regarding FDI entry mode.

All in all, differences in managers' cognitive perspectives and underlying psychological orientation affect decision-making process, regarding entry mode as well. Empirical support comes from studies that have found top management characteristics to be related to firms' strategic orientations (Herrmann and Datta, 2002) For instance, Miller(1982) found that companies with aggressive CEOs adopted risky and innovative strategies, whereas those timid CEOs formulated conservative strategies, suggesting how CEO' s characteristics influence their own choice of strategies. Each entry mode choices allow different degree of ownership and control, and Firms can choose full control and ownership by greenfieid or acquisitions, or shared control by joint ventures. (Herrmann and Datta, 2002) The decision on the extent of control and ownership is often directly related to manager' s attitude towards risk. Among three entry modes to choose from, there are differences in risk exposure (Agarwal and Ramaswami, 1992). Although the concept of risk itself is quite abstract and ambiguous, it is widely acknowledged that Full-control entry modes are typically more susceptible to environmental uncertainties and involve greater exposure to political risks.

Literature on managerial risk taking (Knight 1921, von Neuman and Morgenstern 1947, and Arrow 1965) has provided some insight in process of CEO' s decision making (Bloom & Milkovich, 1998; Wiseman & Gomez-Mejia, 1998). However, the literature itself cannot solve the problem of endogenous 'ambiguity' the notion deals with. What would be the essential elements of risk? Definition by Bloom and Milkovich (1998: 285) as "uncertainty about outcomes or events." cannot be helpful in that there are uncertainties virtually everywhere regarding managerial decisions. Hambrick' s paper, however, deals with the notion of risk. In this paper, we will follow Hambrick' s definition of risk-taking and follow his analysis of risk' s components. He defined risk as the degree to which potential outcomes associated with a decision are

consequential, vary widely, and include the possibility of extreme loss(Hambrick, 2007) risk of a managerial decision can be classified into three categories: the size, the variation, and the possibility of failure. First of all, bigger the investment is, the bigger the exposure and risk. The second factor in risk taking is the variance of the outcome, while the third element is maximum loss the firm might face. Agency theory states that CEOs without proper compensations will be risk-averse. Since shareholders are more diversified in terms of their possession, they want CEOs to be more risk-taking, and to fill the gap design incentive system such as stock options.

All in all, according to three dimensions of risk, we can certify that full-control entry modes are more risky, since it is more vulnerable to environmental uncertainties and external contingencies Also resource commitments are usually greater in full control operations often involving deployment of assets that cannot be redeployed without considerable sunk costs(Hill, 1990) Such assets also constitute exit barriers limiting strategic flexibility and thereby increasing venture risks. (Herrmann and Datta, 2002) Overall, higher control leads to higher risk modes, given the resource commitment, switching costs and exposures (Anderson and Gatignon, 1986) Consequently making greenfield a high risk/return alternative in contrast to joint venture allowing lower amount of investment. The choice of entry mode can be viewed as a strategic decision in which firms make trade-offs between resource commitment and degree of risk. In managing risk greenfield requires entrants to develop own knowledge base and competencies, a burden to be offset by expected performance.

The above concept suggests that risk-aversive CEOs are likely to favor modes that involve lower resource commitments thereby joint ventures. However, Risk-seeking CEOs are likely to become more comfortable going with more control even though it requires higher resource commitments and investment risks. Thus hypothesis 2 is as follows:

Hypothesis 2: The stronger the risk-aversive behaviors of the CEO, the less likely foreign entrants are to choose fully-controlled Greenfield operation.

However, the likelihood of facing malfunctioning markets varies with the characteristics of the CEO, especially regarding the risk-management. Some managers are more risk-averse than shareholders' expectations (Eisenhardt, 1989). CEOs have so much of their economic factors and reputations tied to their companies left as "underdiversified" and cannot help but lose a lot if companies suffer (Mil grom & Roberts, 1992). Thus, to avoid extreme sufferings, managers would avoid taking risky actions. Shareholders, in contrast, are widely diversified, left as risk-neutral and allowed to pursuit maximize returns. In this respect, agency theory suggests concept of correlation of risk & return (Fama, 1976) Prescriptions about how to "promote managerial risk taking" include diverse incentive systems to motivate CEOs. By aligning the incentive system, CEO characteristics can change, from risk-aversive to risk-seeking, allowing diverse spectrum regarding the acquired attitude towards the risk. CEO tenure, education level, age, functional background, and many other factors could influence CEO's attitude towards the risk as well.

Prospect theory (Kahneman & Tversky, 1979) may provide an explanation for how individuals actually make decisions regarding a bundle of financial resources. That is, "losses loom larger than gains" for decision makers (Einhorn and Hogarth 1981; Kahneman and Tversky 1979). Managers exhibit loss aversion and prospect theory is used to explain why loss has a stronger influence on decision than positive gains, and its asymmetric effect (Anderson and Sullivan, 1993) However, if the assumption that people tend to avoid risk is not qualified, the proposition that the amount of loss is more magnified than amount of the gain cannot be qualified. Instead, if the assumption is not met, CEOs can presume that the amount of loss is not that great to consider, and rather choose risky options as greenfield, expecting more gain. Therefore, the effect of H2a will

be stronger as the need for risk−aversion is relatively high.

2.4 Institutions+ CEO characteristics

To examine how dimensions of institutions and CEO characteristics interact, consider two extreme cases. If institutions are very weak and cannot ensure efficient mechanism, foreign entrants cannot expect the proper role of the market (cells 1−3). Entrants cannot choose the option of acquisition as may be too costly due to financial markets' inefficiency. Moreover, it is likely that the CEO's decisions could not be properly evaluated and their rational decision−making could be challenging. Therefore, foreign entrants seeking local resources would prefer the partnership with a local firm, with both side's contribution and shared control. This would apply to both risk aversive and risk neutral CEOs, as long as they are assumed to be rational decision−makers considering circumstances (cells 2 and 3) In rare cases, acquisitions are suitable for cell2 as well, as suggested by Meyer.

In the opposite extreme case with strong institutional power, companies can fully rely on market to arrange transactions (cells 4−6), greenfield entry arising as a possible option. Greenfield would not posit substantial challenges for risk−neutral CEOs (cell 5). However, the risk of market failure would still affect transactions for risk−aversive CEOs. No matter how much the institution is developed, one cannot get rid of the risk in 'starting from scratch.' Greenfield operation is distinct from Acquisition in that it does not allow exploiting previous organizations' resources or capabilities. For risk−aversive CEOs, the market related risk defers them from choosing Greenfield but relatively developed institutional context allows them to choose acquisition, which will benefit from the degree of the institutional development. (cell 6) This is done by comparing the relative risk among entry modes.

That is, choosing acquisition rather than joint venture in developed institutional context is rational in that it is balancing advantages such as access to local knowledge, more control, speedy operation and disadvantage about difficulty in assessing value; exploiting the opportunities for investors.

Therefore, under strong institutions, the market is relatively efficient and enables firms to engage in Greenfield operations (cell 4,5). But this is only when considering solely institutional effect. If CEO, the ultimate decision maker's attitude towards risk is considered as influential enough, companies cannot easily risk the burden of full-ownership, avoiding Greenfield operations. (cell 6) Therefore, hypothesis is as follows:

Hypothesis3: Even considering for the institutional effect(H1), the greater the tendency of CEOs for risk-aversion, the more likely they are to use acquisition or JV rather than Greenfield.

One thing to note also is that under conditions of strong institutions, neglectable need of CEOs for risk-aversion will not influence the choice of entry mode.

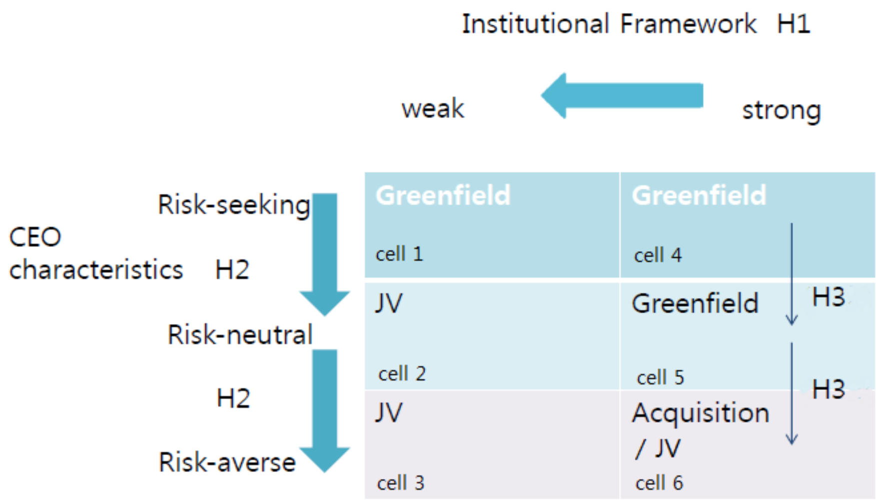

Figure 1. CEO Characteristics, Institution and Entry Mode

3. DATA AND METHODS

3.1 Data

3.1.1.Manufacturing companies

Selected samples for this paper were initially based on 157 manufacturers listed on the Korea Exchange. In order to select firms that are adequately executing overseas expansion strategy, companies above certain size (determined by total asset-over 200 billion won) were chosen. Considering the fact that more than 50% of the total Investment in Korea accounts for the manufacturing companies and also, to control for the difference among industries, samples were confined to manufacturing companies.

The period was set in 2015, after the global financial crisis in 2008.The global economic downturn since 2008 has been evident, referred to as the era of low-growth. In this new normal era, many Korean companies were struggling with overseas expansion in entering foreign markets and this paper aims to focus on this aspect. Among total of 157 listed manufacturing companies, only those which went public and engaged in foreign direct investment in 2015 more than once were screened to be 126 companies. As a result total 531 observations were made during 5 years. In order to find a cross-country sample which has a wide range in the independent variable, yet, confined range difference in other factors, this paper confined the context in Korean companies entering Asian markets. Although selected countries share similar culture, they prominently differ in the institutional context.

At first, the paper aimed to focus on '4 dragons' in Asia, which is a term used to refer to the rapidly-developing economies of South Korea, Hong Kong, Taiwan and Singapore. This was to control for the interference companies might face if confronted with dramatic cultural or economic difference. Since the paper focuses

on Korean companies, it seemed reasonable to confine the market to Asian countries, especially to include Taiwan, Singapore and Hong Kong which have all long been argued to share commonalities with South Korea. In addition, these countries were noticeable for high growth rates and rapid industrialization from 60s to 90s, sharing a lot of common features like emphasis on education and Asian values. But if confined to these countries, the difference of institutional development would not be wide enough, so more countries had to be added to the sample. But still, they all share similarities which can be attributed to being located in Asia. By adding four more countries— Vietnam, Thailand, Turkey, and Japan—this paper aims to focus more on the influence the institutional development exert on the choice of entry mode. When looking at information, one can see that annual GDP growth rate differs slightly but not in a drastic way. To be specific, GDP growth rate was 6% in Vietnam, 1% in Thailand, 3% in Turkey, 4% in Taiwan, 0% in Japan, 3% in Singapore, and 2% in Hong Kong, ranging from 0% to 6%. After some consideration, China was deleted from the sample market in that it showed more than 8% of growth rate and in so many ways possessed features of outliers, such as in size and different political values, regarding the overall institutional development. All seven countries have shown steady FDI inflows, compared with other countries, such as underdeveloped Africa or Europe which recently went through economic crisis.

Variations in the degree of the institutional development is evident in that Hong Kong shows highly developed financial market while Vietnam and Thailand fails to do so. However, the institutional environment has been developing each in its own ways in 7 countries— evolving particularly prominently in Vietnam (Meyer and Nguyen, 2005), also shown in its highest GDP growth rate of 6% among other countries. All in all, the difference among countries explicates that data from these Asian economies can show how institutional development influence company's entry modes of FDI.

Collecting the data for the paper was not without trouble,

especially considering the fact that cross-border M&As were rare for Korean companies, although the other way around- Foreign companies merging Korean companies happened occasionally. With some help from SDC platinum and mostly from Kotra, data from 7 countries were collected without additional interviews or surveys. Initial samples were based on 157 manufacturers listed on the Korea Exchange. However, after getting rid of many companies that do not suffice these conditions and several check-ups, not many companies were left to be measured to support hypotheses. It was necessary to confine the Industry to a more confined sector, in which degree of the institutional development actually plays a big role.

3.1.2. Biotechnology Industry

Thereby, the paper acquired the data on Kotra with additional restraint on the industry and underwent in-depth analysis in Biotechnology sector. Again, it was confined to Korean companies only and the data was acquired from online source. (http://www.koreanbiotech.com) The samples included not only big-sized companies but small-sized companies as well.

Why Biotechnology Industry, then? This paper tried to provide some insight with respect to near future. Today, development of Biotechnology industry is referred to as another revolution, after what became known as IT revolution. What is more, Biotechnology is predicted to exert much bigger influence in the global market than Information technology as an economic engine to create subsequent value. That's why Korean Government has been promoting FDI in the industry. Korea is relatively small in land size and is not abundant in other natural resources other than human resource, which makes knowledge-intensive Biotechnology industry suitable for the country.

This industry is assessed to be not only knowledge-intensive but also infrastructure-intensive(Shan,1997). And its infrastructure-intensive characteristic is related to important role of the

government and the development of the institution. With the industry's dependence on institution such as property rights, patent, anti-trust laws, and laws regarding not only technologies but also health and fundamental rights to secure quality of life, this industry is highly influenced by the development of the institution, relevant to other industry sectors. (Pereira, 2006) That is, institutional framework is critical for biotechnology firms to survive. Unnecessary regulations prevent biotechnology and pharmaceutical companies from investing, considering the heavy dependence on patents and intellectual rights with reliance on R&D, it is no surprising that United states, the most developed institution, account for the disproportionately large size of the market sector in Biotechnology (Rugman, 2005, p.118). Pharmaceutical companies are more directly discouraged from investing when drugs or other related products are controlled by governments in approval processes and regulated in setting the price with the market mechanism, because the scale of the investment and degree of the government regulation tend to be stronger than in other industry sectors. (Chase-Dunn, Lara-Millan and Niedmeyer, 2004)

The confinement of the industry made it easier to classify CEO's attitude towards risk as well, since the investment in Biotechnology is bigger in scale, meaning more risk-involved decisions to be taken. The additional trouble, however, was concerning how to measure CEO' s perceptions of the risk, or namely, their attitude towards risk. This was achieved by conducting content analysis.

3.2 Measure

3.2.1.Main Variables and Models

Dependent Variables

Dependent variable for the paper is a categorical factor, as the

figure of 1 is for greenfiled, 2 is for acquisition and 3 is for JV. Therefore, Multinomial Regression had to be conducted measuring their marginal effects. These entry modes were distinguished by information on Kotra. By using M-Logit regression model to measure the effect of the independent variables on the odds among each entry modes will be chosen, two models were necessary to account for the moderating effect of the CEO' s willingness to take the risk.

Independent Variables

Institutions. According to previous literature, the power of institutions to enhance market-mechanism can be measured by five figures in the economic freedom index from the Heritage foundation (Kane et al, 2007), which implies relevant data of the country' s institutions. It emphasizes on the liberty the market allows to foreign entrants or local firms in business. Originally the information is allocated to ten different factors; property rights, freedom from corruption, fiscal freedom, government spending, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom, and financial freedom. However, previous literature focuses on only variables of five categories, which are business freedom, trade freedom, property rights, investment freedom and financial freedom. This was to directly measure the effectiveness of mechanism regarding the mechanism. While Meyer used the information available back in 2007, this paper updated the index from the most recent data, published in 2016. That is, the new 5-index was calculated based on ten categories from 2016 publication, selecting five categories in accordance with previous literature, summing and making an average figure, measuring the new 5-index to reflect the development of the institution. This new index showed considerable variation; 44.3(Vietnam), 60.8(Thailand), 65(Turkey), 76.9(Taiwan), 75(Japan), 88(Singapore), and 91.5(Hong Kong).

CEO' s attitude towards risk. Since it is hard to directly measure CEO' s attitude towards risk, which incorporates very subjective characteristics of mindset in managers, it seemed reasonable to survey and interview CEOs or make questionnaires. But this was not only time-consuming but also posed the danger of being interpreted more subjectively and being distorted. Therefore, as a way to capture the CEO' s attitude towards risk in a more objective manner, reflected in the outward source, content analysis was held to measure this CEO characteristics. According to the result from the content analysis, this paper defined the index to define CEO' s attitude towards risk, classified as risk-aversive, risk-neutral, or risk-seeking.

However, relying solely on content analysis might be risky in that it poses a possibility of leading to a biased result. Other figures that reflect CEO's attitude towards risk are as follows. CEO innovativeness can be defined as an opposite notion of CEO CSQ, which refers to *the degree of strength in executive' s belief about firm' s current strategies or profiles*. (Mcclelland et al, 2010)

*CEO Innovativeness

CEO innovativeness will be measured as a reverse index from CEO CSQ

CEO innovativeness= 1/CEO CSQ

CEO CSQ = ((ln No. of dictionary words in CEO' s letter to shareholders + 2)) × -1).

Logging the data(natural logarithm) would reduce the size of this tail and create a more normal distribution.

**Dictionary words for CEO Innovativeness:*

(a) risk, (b) take (c) initiate, (d) innovate, (e) introduce, (f) launch, (g) reposition, (h) transform (i) change (j) create

Given that none of the firms were included in the final sample for the study and coders read through more than 50 letters according to the article, this word-list from 「CEO Commitment to the Status Quo: Replication and Extension Using Content Analysis」 seems reliable. Other words that I came up with are as follows:

(i) transition (j) shift (k) lead
These additional words will be used as a subsidiary measure when necessary

Control Variables

Three factors to control for mentioned in the previous literature, in examining the hypotheses are as follows; Parent companies, the country of origin and the host economy. By focusing on Korean companies investing in Asian markets, the influence or interference by variance from parent companies, the country of origin or the host economy is mitigated, That is, although it cannot be controlled perfectly, it is relatively minimized as the variance is narrowed both for nationality of the parent companies (Korea), and market to be enter (Asian countries with commonalities).

Parent company. Prior research suggests that parent firms are major interfering factors for subsidiaries in making a key decision. For instance, firms producing unique product lines or firms based on secret know-hows are bound to prefer Greenfield operation rather than Joint venture, since it would not want key intangible resources in maintaining competitive advantage to be revealed to competitors. Therefore, this research includes a dummy variable to take the figure of 1 when parent is a conglomerate MNE and 0 when it is not.

Local context. Although local markets all share the commonality of being located in Asia, GDP varies from $397.5 billion to $4750.8. GDP shows the market size of the local economy to be controlled for. Also, by confining the industry sector to manufacturing companies, the influence exerted by the characteristics of the industry in the local economy can be alleviated. In addition, this research aims to control for the influence depending on time which for instance, includes overall fluctuation of the local economy. By focusing on the year 2015 the influence from changes in business climate is minimized.

Country of origin. As the nationality of the entering companies could interfere with the decision in entry modes, (Hennart and Larimo, 1998) as explained above, only Korean companies were selected as samples. This way the tendency in choosing certain entry mode, arising from the country of origin will be minimized. The research in the field of cooperative actions among companies emphasizes the role of the country of origin of the company. This paper minimizes the country-of-the-origin effect by concentrating only on Korean companies, and confining the market to Asian countries. By focusing on Korean companies in Asian market and comparing within the group (Hagedoorn, 1994) we can control for the possible interference.

Environmental change. Past research shows that when environment gets turbulent, firms tend to engage in competitive behavior. Year 2015 was chosen not only because it was most recent year but also as it seemed to be less fluctuating and less contingent to environmental factors since economic crisis in 2008. Minor changes in the market environment or firm-level changes, such as change of CEO and BOD will be considered and controlled for while conducting studies.

4. RESULTS

The results of examining hypotheses are shown as follows. As this paper used multinomial regression model, Two models are made. Model 1 only reflects the direct influence from both institutions and CEO ' s attitude towards risk while model 2 incorporates the moderating effect as well. Model 2 presents higher Wald and R^2 statistics, reflecting the existence of moderating effect of CEO' s characteristics. This model ' s prediction shows higher rate of accuracy as well.(Table1)

The results are mixed, varying in each entry mode of Joint venture, M&A, and Greenfield. As for Hypothesis 1, the statement that if the institutional strength is firm enough companies would not prefer JV was supported in case of Joint venture. In case of M&As, largely due to lack of samples, especially outward cross-border M&As, the results did not support Hypothesis 1, and 2 as well. As for Greenfield, the results were different using the models with (model 2) or without interaction models.(model 1)

In case of Hypothesis 2, the regression results strongly supported the case of Greenfield and weakly supported the case of JV. The figures in JV were correctly signed in model 1, without interaction effects but were not significant enough in model 2, with the interaction effects.

With respect to Hypothesis 3, it showed support except for M&As, which leads us this paper to conclude that institutional effect and CEO's attitude towards risk do interact. Development of the institutional framework encourages acquisitions and Greenfield operations while discouraging Joint Ventures. However, even when institutional power is strong, foreign investments will still choose Joint venture depending on the characteristics of the ultimate decision maker, CEO and subsequently firm's attitude towards risk. The tendency to choose JV even in the strong institutional framework seem to be more prominent in the Biotechnology

industry, since the knowledge or intangible assets tend to be shared among top managers confidentially, including important information that crucially influences the decision-making process. The fact that the decision in Biotechnology industry involves more risky investment also accounts for this result

5. DISCUSSION

5.1 Contributions

Previous research focused on the integration of institution-based view and Resource-based view, especially in entry strategies of developing countries. This paper makes different contributions in both theoretical perspective and practical perspective.

Theoretically, this paper argue that (1) if the institutional strength is firm enough, companies would not prefer JV, when choosing an entry mode, (2) The stronger the risk-aversive behaviors of the CEO, the less likely foreign entrants are to choose Greenfield operation and that (3) Even considering for the institutional effect (H1), the greater the tendency of CEOs for risk-aversion, the more likely they are to use JV (or in rare case Acquisition) rather than Greenfield. This integration of analysis could enrich not only Institution Theory but also Upper Echelons Theory as well, by focusing on the relationship between two frames. This integration also has its meaning in that it considers both internal mindset of the decision-maker and the external environment, the institution. This perspective calling for simultaneous analysis of both internal and external environment of the decision-making process additionally has meaning in that it combines both subjective and objective analysis. In this respect,

this paper makes contribution in specifying the notion of 'Risk.' Previous research of Entry strategies tended to focus on 'Cost' in decision making process of the entry modes. This paper focuses on 'Risk' instead, but this notion of risk can include the concept of cost as well, since bigger risk is normally intertwined with bigger cost. While cost is solely represented in an objective figure, risk could incorporate both cost side and perceptional side, reflecting the variance of the meaning the same cost conveys towards different companies.

Another contribution of this research is related to its practical implication in the field of Biotechnology Industry. It is now a global trend for many countries and their governments to promote the development of Biotechnology by encouraging biotechnology-related industrial or economic policies. Biotechnology is important in future not only in that it is predicted as post-IT engine to promote revolutionary profit and cut down unemployment rate but for social reasons. Except for few countries leading the up-to-date Biotechnology, many countries lack proper resources to support domestic biotech companies. (Khoury,2011)Therefore, attracting foreign direct investments to transfer expertise and intangible assets to local firms is crucial in a long-term perspective for industrial growth, indicating why many governments rely on FDI-oriented biotech policies (Pownall, 2000). This transfer is usually formed by joint-ventures, but in accordance with the suggested hypotheses, varies depending upon the entering country's institutional strength and entrants' (more specifically CEO's)attitude towards risk. Even if it is convenient for entrants to choose joint venture, companies tend to avoid JV in developed institution and at the same time prefer JV when CEO is risk-aversive.

5.2 Limitations and Future Research Directions

5.2.1. Limitations

Main limitation of this paper is that China was excluded as the entering market in the samples, even though China accounts for large amount of investment in the industry. However, the 5-index to represent the development of the institution was 44.3 in case of China, lower than that of Vietnam(60.8)If China is included the positive relationship of institution with Greenfield operation is refuted due to its high rate of inward Greenfield flow. This is mainly due to the country's economic scale, since China is still an attractive market especially in its scale even considering for its underdeveloped institutional framework. This trait of China led the paper to set China as an outlier, but if included the results might have showed totally different figures.

Second limitation is that the samples were confined to Korean companies. Although this could be a way to control for country-of-origin effects, or other possible bias, if other country's information was used, there might have been more implications as well. In addition, there were few data regarding the acquisitions. There were not enough samples of outward cross-border M&As and this might have influenced the results.

5.2.2. Future Research

Existing studies suggest that older managers are more risk- averse than younger executives. Less aged CEOs can take more risk even if they are likely to fail, because they have a far more career to develop. They are allowed to make few mistakes since they expect enough time to recover from the after-mess. But older executives avoid taking risk because shorter spans of career await them. They just have too much to let go since they gained a lot from their previous career, relatively to young CEOs (MacCrimmon, 1986). Also, research results show that as people get older, they are likely to become more stiff, stubborn, and unfriendly to change. (Wiersema and Bantel, 1992) Even common sense tells us how older people stick to the prejudice. Aged executives, as well,

possess a rigid cluster of problem-solving schema, in which they have full trust of 'experience'. Therefore, older executives would often refuse to jeopardize financial security with risky decisions and thus avoid innovation. However, after conducting content analysis from websites of the companies, this argument was not fully supported and in fact, aged CEOs tended to make riskier decisions in Biotechnology industry. This question and also many other questions to contradict previous literature await future research

In addition, for instance, increased tenure is known to increase CEO' s stake involved in maintaining status quo (Finkelstein and Hambrick, 1996). The success record of long-tenured CEOs may produce overconfidence leading to critical mistakes or missing out new opportunities (Hambrick & Fukutomi, 1991; Miller, 1991; Musteen, Barker, & Baeten, 2006). In addition, CEO power increases with tenure and they recruit second-tier managers with similar tendency. (Mintzberg, 1983). Lower level managers have no choice but to make a decision that suits CEO' s point of view. This hinders CEOs from seeing the need for change. In other words, CEOs often fail to take risk in innovation and to make new investments, with increasing tenure. However, this was not the case for rapidly developing industries. Thereby future research could concentrate on how technology-oriented industry, namely Biotech nology changes CEO's behavior especially in their risk-taking tendencies and focus on CEO's other characteristics such as tenure and age to represent these behaviors.

6. TABLES

[Table 1] Results of Multinomial Regression Model: Interaction Effects

Multinomial Regression

Variables	Model 1			Model 2		
	Greenfield	Acquisition	JV	Greenfield	Acquisition	JV
Regressors:						
Institutions	0.19	0.01	−0.29*	0.67**	0.03	−0.89***
	(0.03)	(0.03)	(0.18)	(0.29)	(0.01)	(0.47)
CEO's avoidance of risk	−0.31***	0.009	0.32***	−0.22*	0.00	0.19
	(0.08)	(0.03)	(0.05)	(0.03)	(0.03)	(0.03)
Institutions x CEO's avoidance of risk	-	-	-	−0.72*	0.00	1.13**
				(0.3)	(0.01)	(0.56)
Controls:						
Firm Size	0.03	0.01	−0.08	0.01	0.00	0.02
	(0.03)	(0.13)	(0.02)	(0.01)	(0.00)	(0.01)
Globalization	0.19	0.19	0.19	0.19	0.19	0.19
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
ROS	0.19	0.19	0.19	0.19	0.19	0.19
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
D/E	0.29**	0.00	0.01	0.21*	0.01	0.08
	(0.1)	(0.00)	(0.02)	(0.09)	(0.00)	(0.09)
R&D	0.22*	0.01	0.02	0.31**	0.00	0.02
	(0.09)	(0.00)	(0.03)	(0.1)	(0.00)	(0.06)
Pseudo R-square			13.8%			17.2%

7. REFERENCES

Amason, A. C. 1996. Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. Academy of Management Journal, 39: 123-148.

Anderson E, Gatignon H. 1986. Modes of foreign entry:a transaction cost analysis and propositions. Journal of International Business Studies 17(4): 1–30

Casson MC. 1997. Information and Organization: A New Perspective on the Theory of the Firm. Clarendon: Oxford, UK.

Delios A, Beamish PW. 1999. Ownership strategy of Japanese firms: transactional, institutional, and experience influences. Strategic Management Journal 20(10): 916–940.

Estrin S. 2002. Competition and corporate governance in transition. Journal of Economic Perspectives 16: 102–125.

Patrick L. McClelland, Xin Liang, Vincent L. Barker III 2003 CEO Commitment to the Status Quo: Replication and Extension Using Content Analysis Econometric analysis

Barney, J. B. 1991. Firm resources and sustained competitive advantage. Journal of Management, 17: 99- 120.

Bloom M, Milkovich GT. 1998 Relationships among risk, incentive pay, and organizational performance. Academy of Management journal

Chen, M.-J., & MacMillan, I. C. 1992. Nonresponse and delayed response to competitive moves: The roles of competitor dependence and action irreversibility. Academy of Management Journal, 35: 539-570.

Chen, M.-J., & Miller, D. 1994. Competitive attack, retaliation and performance: An expectancy-valence framework. Strategic Management Journal, 15: 85- 102.

Driffield N, Love JH 2007. Linking FDI motivation and host economy productivity effects: conceptual and empirical analysis. Journal of international business

Eisenhardt KM 1989 Making fast strategic decisions in high-velocity environments. Academy of Management journal,

Finkelstein, S., & Hambrick, D. 1996. Strategic leadership: Top executives and their effects on organizations. St.Paul, MN: West.

O Gassmann, MM Keupp, 2007 The competitive advantage of early and rapidly internationalising SMEs in the biotechnology industry: A knowledge-based view. Journal of World Business,
Hambrick DC, PA Mason. 1984 Upper echelons: The organization as a reflection of its top managers Academy of Management Review

M Grinblatt, B Han. 2005 Prospect theory, mental accounting, and momentum. Journal of financial economics,

Hambrick, D. C. 2007. Upper echelons theory: An update. Academy of Management Review, 32: 334-343.

Henisz WJ. 2000. The institutional environment for multinational investment. Journal of Law, Economics and Organization 16:335–365.
Henisz WJ. 2003. The power of the Buckley and Casson thesis: the ability to manage institutional idiosyncrasies. Journal of International Business Studies 34: 175–189.

Hennart JF. 1988. Upstream vertical integration in the aluminium and tin industries: a comparative study of market and intrafirm coordination. Journal of Economic Behavior and Organization 9(1): 281–299.

Hennart JF, Larimo J. 1998. The impact of culture on the strategy of multinational enterprises: does national origin affect the ownership decisions? Journal of International Business Studies 29(3): 515–540.

Hill CWL, Hwang P, Kim WC 1990. An eclectic theory of the choice of international entry mode. Strategic management journal

Hymer S. 1976, The international operations of national firms: a

study of direct foreign investment. Cambridge, MA’ MIT Press.

Kotabe M, Srinivasan SS, Aulakh PS, 2002, Multinationality and firm performance: The moderating role of R&D and marketing capabilities. Journal of International Business Studies, 33(1):79−97.

D Kahneman, A Tversky 1979. Prospect theory: An analysis of decision under risk. Econometrica: Journal of the econometric society,

MacCrimmon KR, Wehrung DA 1990. Characteristics of risk taking executives. Management science

JS McMullen, DA Shepherd, 2006. Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. Academy of Management review

Meyer KE, S Estrin, SK Bhaumik, 2009 Institutions, resources, and entry strategies in emerging economies, Strategic Management Journal

Meyer KE, Peng MW. 2005. Probing theoretically into Central and Eastern Europe: transactions, resources, and institutions. Journal of International Business Studies 36(6): 600–621.

Michalisin, M. D., Karau, S. J., & Tangpang, C. 2004. Top management team cohesion and superior industry returns: An empirical study of the resource−based view. Group & Organization Management, 29: 125−140.

Miller JC, Pras B. 1980, The effects of multinational and export diversification on the profit stability of US Corporations. South Economic Journal;46(3):792–805.

Miller, D., & Droge, C. 1986. Psychological and traditional determinants of structure. Administrative Science Quarterly, 31: 539−560.

Offstein, E. H., & Gnyawali, D. R. 2005. CEO compensation and firm competitive behavior: Empirical evidence from the US pharmaceutical industry. Journal of Engineering and Technology Management, 22: 200−230.

H Mintzberg, JA Waters 1985. Of strategies, deliberate and emergent. Strategic management journal,

North D. 1990. Institutions, Institutional Change, and Economic Performance. Norton: New York.

Oliver C. 1997. Sustainable competitive advantage: combining institutional and resource based views. Strategic Management Journal 18(9): 697–713.

Pereira NS, Danzon PM, Nicholson S, Productivity in pharmaceutical–biotechnology R&D: the role of experience and alliances. Journal of health economics, 2005

Pownall IE, 2000 An international political economic view of the biotechnology industry. Electronic Journal of Biotechnology

Qian G. 1997, Assessing product–market diversification of US firms. Management International Review;37(2):127 –9.

Ramaswamy, K., Kroeck, KG. & Renthforth, W. 1996, Measuring the degree of internationalization of a firm: A comment, Journal of International Business Studies, 27(1): 167−177.

Ruigrok W, Wagner H, 2003, Internationalization and performance: an organizational learning perspective. Management International Review;43(1):63–83.

Sanders WG, Hambrick DC 2007. Swinging for the fences: The effects of CEO stock options on company risk taking and performance. Academy of Management Journal,

Shan W, Walker G, Kogut B 1994. Interfirm cooperation and startup innovation in the biotechnology industry. Strategic management journal,

Shan W, Song J, 1997 Foreign direct investment and the sourcing of technological advantage: evidence from the biotechnology industry. Journal of International Business Studies

Sullivan D, 1994, Measuring the degree of internationalization of a firm. J International Business Study;25(2):325 –2.

Tallman, S, J.T. Li, 1996, Measuring the degree of internationalization of a firm, Journal of International Business Studies, 25(2):325-342.

Teece DJ, 1986, Profiting from technological innovation, Research Policy, 15: 285-306.

Thomas DE, 2006, International diversification and firm performance in Mexican firms: A curvilinear relationship?, Journal of Business Research 59: 501-507.

Williamson OE. 1985. The Economic Institutions of Capitalism. Free Press: New York.

Wiersema MF, Bantel KA 1992 Top management team demography and corporate strategic change. Academy of Management journal,

Wright P, Kroll M, Krug JA 2007 Influences of top management team incentives on firm risk taking. Strategic Management

Wright P, Ferris SP, A Sarin, V Awasthi 1996. Impact of corporate insider, blockholder, and institutional equity ownership on firm risk taking Academy of Management

Zaheer S, 1995, Overcoming the liability of foreignness. Academic Management Journal; 38(2):341

Abstract

지난 연구들은 기업이 추구하는 자원의 특성과 제도의 상호작용에 초점을 맞추어 왔다. 그러나 이는 자원이 유형, 무형 자원 중 하나로 구분된다는 것 뿐만 아니라 제도의 발전 정도와 추구되는 자원의 경향성은 무관하다는 전제를 내포하고 있다. 유, 무형을 막론하고 다양한 자원을 추구하는 기업의 경향성과 발전된 제도 하에서의 무형 자원 추구 성향을 감안한다면 지난 연구의 실질적인 의의는 반감된다. 이에 따라 본 논문은 기업의 진입 전략에 결정적인 새로운 축을 재고하여 기업의 최종 결정권자인 CEO의 특성 중 위험에 대한 태도가 이를 반영함을 보인다. 비용과 같은 맥락에서 위험이 기업의 해외 직접 투자 전략에 미치는 영향을 고려할 때, 투자 전략의 선택에 있어서 제도의 발전 정도에 따라 달라지는 위험은 해외신설투자, 기업인수합병, 합작투자의 선택에 있어 CEO의 태도를 통한 조절효과를 반영함을 제시하고자 한다. CEO의 위기관리와 제도의 영향력이 극대화 될 수 있는 한국의 바이오 산업을 중심으로 이를 검증한다.

주요어 : CEO, 위험인지, 제도, FDI 진입전략, 바이오산업

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