

Do Host Country Institutional Context Matter?
Impact of Institutional Quality and Institutional Distance
on Subsidiary Performance

ABSTRACT

We examine the impact of quality of market supporting institutions (institutional quality) in host country and the similarities and differences of institutional quality between the home and host country (institutional distance) on subsidiary performance. Based on the conceptualization of new institutional economics, we divide quality of host country institutions into factor markets; product, capital, labor market and sociopolitical dimensions. The empirical analysis based on 1129 observations including 318 subsidiaries of 146 Korean listed manufacturing firms operating in 28 host countries between 2001-2006 shows that institutional distance explains a significant variance in the subsidiary performance. In particular, the difference in quality of institutions in product, capital and labor market has negative impact on subsidiary performance. However, except for quality of regulation in labor market, host country institutional qualities do not significantly explain the variation in subsidiary performance. Our evidence suggests that host country institutions matter substantially when considered with their relative similarity and difference with home country institutions.

Keywords: Emerging Markets; Institutional Distance; Institutional Quality; Subsidiary Performance

INTRODUCTION

Host country institutional context provide opportunities and challenges for Multinational Corporations (MNCs) (Meyer and Peng, 2005; Mudambi and Navarra, 2002; Peng et al., 2008). Studies based on new institutional economics (North, 1990) suggest that institutions directly impacts firm strategy (Ingram and Silverman, 2002; Peng, 2006) determining its performance. Premised on this perspective, existing studies have emphasized the lack of market supporting institutions in emerging and transition economies and their impact on strategy and performance of MNCs from advanced economies (Khanna, et al., 2005; Meyer and Peng, 2005; Peng and Health, 1996; Wright et al., 2005;). While host country institutional context certainly impacts MNC strategy and performance, recent research have suggested integrating with resource based view of the firm to enrich our understanding of MNC strategy and performance (Meyer and Peng, 2005; Wright et al., 2005).

In this study we compare and reconcile the institution based view based on new institutional economics and resource-based view of firm to examine impact of constraints posed by institutions on subsidiary performance. According to new institutional economics, institutions provide frameworks or set the ‘rule of the game’ for efficient (or inefficient) functioning of markets through formal (rules and regulations) and informal (codes, norms and culture) constraints in an economy (North, 1990). Based on this, one set of studies focus on transactional difficulties faced by MNCs in emerging and transition economies due to lack of formal set of rules and regulations, enforcement mechanism and market intermediaries (known as ‘institutional void’). Researchers have implicitly assumed that weak institutional environments in host countries lead to detrimental effects on MNCs’ performance (Khanna et al., 2005; North,

1990; Prahalad and Lieberthal, 1998; Williamson, 1985). These studies focus on the way MNCs can overcome the institutional voids by designing and implementing appropriate strategies in these economies to succeed (Khanna et al., 2005; Meyer and Peng, 2005). However, this prevailing perspective on the relationship between host country institutions and MNC performance has not been subject to a sufficient empirical scrutiny. Another stream of studies based on resource-based and knowledge-based theory suggests that a firm's organizational capabilities are developed incrementally in a path dependent manner and are context-specific (Teece et al., 1997; Grant, 1996). Capabilities which generate competitive advantage in one context may not create value in another. Therefore, difference between home and host country institutional context creates impediments for MNCs to exploit their context specific resources and capabilities and transfer resources and routines to subsidiaries (Brouthers et al., 2008; Kostova and Roth, 2002; Oliver, 1997). This perspective suggests that compared to the level of development in institutions, the difference in institutional context determines the competitive advantage of MNCs. MNCs which enter advanced countries with relative high level of institutional development may face similar challenges as in emerging economies to exploit and transfer their resources and capabilities (Wright et al., 2005).

We integrate the above two approaches to investigate the impact of institutional context on MNC subsidiary performance in a large number of host countries. In particular, we examine two interrelated yet different questions. 1. Does quality of host country institutions determine the subsidiary performance? Or 2. The differences and similarities between the quality of institutions between home and host country determines the subsidiary performance. Our first rationale is that, MNCs face

opportunities and constraints provided by local institutions in host countries. The level of development in host country institutions will impact their strategy and performance. Stated differently, MNC subsidiaries have better performance in host countries where the quality of market supporting institutions to organize their economic activities compared to host countries with lower level of institutional development. Second, we posit that, compared to level of development of institutions in the host country, the similarity and difference in quality of institutions between home and host country institutional quality will impact the MNC subsidiary performance. Our rationale is that MNCs develop resources and competencies which are context specific (Brouthers et al., 2008; Erramilli et al., 1997; Oliver, 1997). Differences in institutional context will create impediments for MNCs to acquire knowledge about institutions, exploit firm specific capabilities and transfer resources, knowledge and competencies to institutionally different host countries impacting the subsidiary performance.

Based on the above rationales, in this study, we define the *institutional quality* in host country in terms of the efficient functioning of factor markets i.e product, labor and capital market together with political and social systems that impacts basic business operations (Amable, 2003; Khanna and Palepu, 1997; Ricart et al., 2004). The *institutional distance* is defined as the relative difference in the quality of home and host country institutions. In the conceptualization of institutional distance, we particularly focus on the difference of three factor markets and political and social institutions representing the institutional quality. The empirical setting of the study is based on 318 foreign subsidiaries of 146 MNCs headquartered in South Korea (Korea hereafter) operating in 28 countries during 2001-2006. As one of the most successful Newly Emerging Economies (NIEs), Korea has a relatively large number of MNCs that have

undertaken foreign direct investments in many countries around the globe. A study of Korean MNCs allows us to consider a wide variety of institutional characteristics in different host countries. Furthermore, Korea is located in the middle between advanced and developing economies, in terms of institutional development (Erramilli et al., 1997; Khanna and Palepu, 1997). This provides a unique opportunity to examine the different influence of host country institutions both from developing and advanced economies.

The organization of the paper is as follows. The following section presents the theory and hypotheses. Subsequent methodology section explains our methods followed by study results. Finally we present the discussion, limitation and conclusion of the study.

THEORY AND HYPOTHESES

Institutional theory based on new institutional economics conceptualizes institutions as humanely devised constraints that provides framework to facilitate economic transactions (North, 1990). North (1990) divides institutions into formal (constitutions, laws, property rights and their enforcements) and informal constraint (sanction, taboos, customs traditions and code of conduct) which provides ground rules that establishes the basis of production and economic exchange. North (1990) argues that production cost consist of transforming inputs into physical attributes of a good and cost of transaction. In essence, efficient institutions help firms to reduce transaction costs in organizing their economic activities by reducing the ‘costliness of information’ of what is being transacted and guaranteeing ‘contract enforcement’ in transactions. Based on this conception, countries differ in their institutional environment in terms of availability of information determining the search and measurement costs of goods to be exchanged and enforcement mechanisms constraining opportunistic behavior and

monitoring costs in a transaction (North, 1990; Swaan, 1997). This view argues that countries with efficient institutions provides better institutional environment for firms to organize their business leading to superior performance (North, 1990). Based on this approach, previous studies have implicitly assumed that imperfections in institutions in the host country constrain the activities of MNCs resulting in detrimental effects on their performance (Khanna et al., 2005).

While institutional theory emphasizes on the role of institutions in reducing transaction costs, resource based theory focuses on the value firms create through their valuable, rare, hard to imitate and non-substitutable resources in a particular institutional context (Barney, 1991; Madhok, 1997; 2002; Oliver, 1997). Based on this conception, studies examining the superiority of resources in the MNC context argue that resources are context specific and resources that are valuable, rare, inimitable and non-substitutable in one institutional context may not have the same quality in another (Brouthers et al., 2008; Oliver, 1997; Priem and Butler, 2001). Moreover, different institutional context creates impediments for MNCs to effectively transfer their resources and capabilities to countries with dissimilar institutions (Kostova, 1999; Kostova and Zaheer, 1999). Finally, difference in institutional context increases the liability of foreignness increasing the difficulty in doing business (Zaheer, 1995). These studies suggest that difference in institutions between home and host countries needs to be considered as an important determinant of MNC strategy and performance.

We develop our hypotheses based on the above two theoretical approaches to examine whether the quality of institution i.e the absolute level of institutional development or quality of institutions in the host country impacts MNC subsidiary performance or the relative difference between the home and host countries in the

institutional development or institutional distance creates impediments for doing business and transfer resources impacting the subsidiary performance negatively.

Host Country Institutional Quality

Institutions are a “set of fundamental political, social and legal ground rules that establishes the basis for production, exchange and distribution” (Davis and North, 1991). The political, social and legal framework of a country facilitates firms to interact in a market that determines the transaction costs and coordination costs of production (North, 1990; Mudambi and Navarra, 2002; Wan and Hoskisson, 2003). North (1990) argues that production costs consist of transforming inputs into physical attributes of a good and cost of transaction. The political and legal systems consisting of type of government, structure of policy making and regulation to protect property rights, disclosure of credible information and judicial contract enforcement mechanism together with societal institutions of norms and conduct provide the foundation of business transaction (Mudambi and Navarra, 2002; Wan and Hoskisson, 2003). The economic system like structure of national factor markets ensures the supply of quality inputs for production in the product, capital and labor markets (Wan and Hoskisson, 2003). In essence, institutions support the effective functioning of markets by reducing uncertainty for firms to engage in transactions without costs and risks (North, 1990) allowing for the productivity gains (Mudambi and Navarra, 2002).

In this regard, the inefficiency or absence of essential institutions in the host country has negative influence on the business of MNCs operating in the local market. In instances of factor markets in a country, lack of adequate mechanism to disseminate information or lack of transparency, increases the cost of identifying and evaluating credible business partners. Moreover, from a sociopolitical dimension, protection of

property rights regulations are important for firms to create, appropriate and sustain value of resources (Foss and Foss, 2005). In countries with lack of intellectual property rights protection regulations, MNCs cannot protect their valuable firms-specific technologies and brands from imitation which are crucial for resource owners (Oxley, 1999; Luo, 2001). Without the contract enforcement safeguards provided by the political and judicial institutions, MNCs cannot safely and efficiently source the necessary components, parts and other services from the local suppliers through formal market based exchange contracts or distribute their products and services in the market. If the market for labor is inefficient in the host country, the MNCs may experience difficulties in hiring competent human resources either due to lack of skilled manpower or importantly, lack of availability of information about them. Especially in the emerging markets the absence of information intermediaries like head hunting firms makes it difficult for MNCs to evaluate and hire competent managers (Khanna and Palepu, 1997). Rigid labor laws or business norms may work as subtle barrier in retrenching excessive employees. In the capital market lack of corporate governance rules can exacerbate the information problem as firms are not required to produce audited financial statement creating impediments for MNC subsidiaries to evaluate the creditworthiness of their potential business partners.

Advanced economies have developed several institutional solutions to mitigate these costs. Stringent regulations on information disclosure availability of information intermediaries like securities analysts, product rating agencies and executive search firms provide credible information reducing the information asymmetry between buyer and seller. Also, the government and judicial systems efficiently protect property rights and enforce contracts. These institutions provide adequate safeguards to firms to invest

in research and development and innovation to compete in the market. Consequently, we present the following hypothesis.

Hypothesis 1: Subsidiary performance will be positively associated with the quality of institutions in the host country.

Institutional distance between the home and host countries

Cross national differences in the factor markets and socio-political institutions can facilitate or constrain economic exchange in the market through formal and informal constraints impacting the transaction costs in the market. The formal constraints are akin to regulatory institutional pillars in the taxonomy of the new institutional theory and the informal constraints with normative and cognitive pillars (Scott, 1995; Brouthers et al., 2008). We focus on impediments MNCs face in devising and implementing competitive strategies in institutionally dissimilar countries that impacts subsidiary performance.

Most multinationals possess superior resources and capabilities they can exploit in international markets (Caves, 1996). Dissimilar institutions create impediments to exploit organizational capabilities as capabilities are context specific (Teece et al., 1997). Organizations learn by “encoding inferences from history into routines that guide behavior” (Levitt and March, 1988, p. 319). Therefore, “an organization’s capabilities consist of its stock of solutions to the problem of producing collective action in a specific environment” (Hannan, 1998, p. 132). In this regard, North (1990) found that firms with their historical experience develop capabilities that can best take advantage of the given institutional environment in the home country. Consequently, MNCs’ existing capabilities becomes less useful in building competitive advantage in the host

market with dissimilar institutions (Oliver, 1997; Brouthers et al., 2008). In addition, the transfer of knowledge requires the transfer of whole routines and procedures to the recipient's units (Nelson and Winter, 1982; Teece, 1977; Szulanski, 1996). But, the replication of original routines will be more difficult in a foreign affiliate that operates in a different institutional environment (Kostova and Zaheer, 1999). In order to be successful in international markets MNCs also need to acquire knowledge about the local institutions (i.e., knowledge about laws, norms, values, languages and standard business practices) which is an important component of experiential knowledge and can be acquired only through the direct experience with the host country (Johanson and Vahlne, 1977; Eriksson *et al.* 1997). Lack of such knowledge about the local institutions in the host country result in committing errors and incur significant costs due to greater liabilities of foreignness (Hymer, 1976; Zaheer, 1995; Mezias, 2002). Institutionally dissimilar countries exacerbate the problem of acquiring institutional knowledge crucial for the success of MNCs.

Existing studies are supportive of this view for advanced country MNCs in emerging and transition economies (Khanna et al., 2005; Peng, 2003) as well as among advanced countries due to unfamiliarity with local institutions (Abo, 1994; Mezias, 2002). For instance, Abo (1994) reported the problems Japanese electronics and auto part firms experienced in transferring their superior management practices to their plants in U.S, due to large differences in industrial practices and norms between Japan and the U.S. Similarly, Mezias (2002) found that foreign subsidiaries operating in the U.S. were at disadvantage with the respect of labor law judgments, probably due to the lack the experience about the local labor laws and practices as well as local

embeddedness. Thus, we propose that a large institutional distance between the home and host countries will lead to decline in performance at the subsidiary level.

Hypothesis 2: Subsidiary performance will be negatively associated with institutional distance between the home and host countries.

METHODS

Sample

Our sample consists of the foreign subsidiaries of manufacturing firms listed in the Korean Stock Exchange (KRX) from year 2001-2006. We first collected information about 1019 parent firms' foreign subsidiaries from a commercial database KISLINE database compiled by Korea Information Service (Chang and Hong, 2002). Based on company annual reports and audited reports, this database provided detailed information of a company's financial condition and business activities, including the company's domestic and foreign affiliates. Considering the fact that we measure performance of foreign affiliates, we only selected foreign subsidiaries with not less than two years of overseas operations as newly established subsidiaries may not have fully established their business in the host country markets yet. Based on this criterion, we could identify 150 firms and their 343 foreign subsidiaries operating in 31 countries. This sample generated the total of 1631 firm-year observations during the study period. However, due to the lack of data on some foreign subsidiaries' financial performance and host country institutional environment, the total number of observations reduced to 1129 consisting of 318 subsidiaries of 146 companies in 28 foreign countries. Our sample consists of 251 manufacturing subsidiaries with 898 firm-year observations

(79.5%) and 67 non-manufacturing subsidiaries with 231 firm-year observations (20.5%).

Dependent Variable

Our dependent variable for foreign subsidiary performance is the return on assets (ROA) from 2001 to 2006, calculated as net income over assets of a foreign subsidiary as per previous studies in comparing performance across countries (Click, 2005; Chacar and Vissa, 2005; Wan and Hoskisson, 2003) and industries (Wernerfelt and Montgomery, 1986; Russo and Fouts, 1997) as it represents return on all employed resources.

Independent Variables

Our conceptualization of institutional profile of a country is based on new institutional economics and transaction cost theory (North, 1990; Williamson, 1985). Previous studies are suggestive of this approach in international business strategy (Khanna and Palepu, 1997; Khanna et al., 2005; Meyer and Peng, 2005; Ricart *et al.*, 2004)) and comparative capitalism literature (Amable, 2003). Khanna and Palepu (1997) argued that transactions can be costly in emerging economies compared to the advanced economies, due to the lack of effective institutions for trade, contract enforcement, communication and information disclosure mechanisms known as ‘institutional voids’. Khanna et al., (2005) formalized these institutional voids and proposed a comprehensive framework relevant for MNCs in emerging and transition economies that incorporate six institutional dimensions: product market, capital market, labor market, political and social system, and openness. We adopted this framework due to its conceptual grounding in new institutional economics. For instance, information asymmetry between transacting parties exacerbate the bounded rationality of decision

makers in product, capital and labor market and lack of institutional safeguards to enforce contracts increases the risk of opportunism two major assumptions of transaction cost theory (Akerlof, 1970; North, 1990; Williamson, 1985). In addition, host country governments play an important role through various policy instruments like tax incentives, tariff structure, and ownership rules for foreign investors and ensuring judicial protection of property rights which can facilitate or erect barriers doing business in a host country (North, 1990; Henisz, 2003; Gastanaga et al., 1998; Meyer and Peng, 2005). Similar classification is proposed in comparative capitalism literature based on new institutional economics (Amable, 2003, pp93-102) and recent cross national comparative studies on firm performance (Chacar and Vissa, 2005; Khanna and Rivkin, 2001). We present the detailed description on measures of these dimensions in the following section.

Institutional Context

To make the above framework empirically testable, we developed quantitative measures for the host country institutional dimensions using the Global Competitiveness Yearbook of World Economic Forum from 2000-2005 with one year lag from the dependent variable (Wan and Hoskisson, 2003).

To develop the measures, we thoroughly checked the survey questions in these databases to select responses that matched appropriately with the description of corresponding institutional environment in Khanna and Palepu (1997) and Khanna *et al.*, (2005). We also considered other studies that addressed the issue (Meyer and Peng, 2005; Peng et al., 2008; Hoskisson et al., 2000; Amable, 2003). We initially derived 8-10 relevant responses for each dimensions and conducted a factor analysis to check the reliability and validity of the measures chosen for specific category for each year

between 2000-2005. The factor analysis showed that the selected items, after removing one or few items that had low factor loadings, can be grouped into one factor in each category. But, in case of the labor market, the analysis discovered two factors that had an eigen value higher than 1. The first factor largely represented the quality of the labor market, and the second represented the rigidities or flexibility of labor regulations and practices (Table 1 demonstrates the results of factor analysis for 2005). We found identical factors for each year during 2000-2005. Hence, we divided this category into two dimension; labor market quality (LMQUAL), labor market regulatory quality (LMREGQUAL). The smallest value of Cronbach's value was 0.615 (labor market quality for 2000) which exceeds the minimum required value. Except this, all other values exceeded 0.7.

Then, we averaged the chosen items to obtain an index for each dimension and developed five major dimensions for each year: *product market quality* (PMQUAL) *capital market quality* (CMQUAL), *labor market quality* (LMQUAL), *labor market regulatory quality* (LMREGQUAL) and *political and social quality* (PSQUAL). A list of criteria and responses used in the study are shown in Appendix 1.

 INSERT TABLE 1 ABOUT HERE

Next, the institutional distances corresponding to above five quality dimensions (PMQUAL, CMQUAL, LMQUAL, LMREGQUAL and PSQUAL) are calculated by taking the absolute value of the difference between Korea (i.e., home country) and host county in each of five dimensions (PMDIST, CMDIST, LMDIST, LMREGDIST and PSDIST).

Finally, we calculated the *composite institutional quality* (INSTQUAL) for each year that measures the overall level of development of institutions in the host country by averaging the values of above indices (PMQUAL, CMQUAL, LMQUAL, LMREGQUAL and PSQUAL) for a host country. Besides, two different variables were created to measure the overall institutional distance. One is the *composite index for institutional distance as the average of distance between the home and host country* in each of this five dimension (INSTDIST). To obtain the index for each country, we calculated the distance (i.e., the absolute value of the difference between the home and host countries) in each dimension, and average them. Another is the *composite index for institutional distance as the square root of the sum of the square of the distance of each of the five institutional dimensions* (INSTDISTALT). We adopted this formula from Morosini *et al.* [1998] following their calculation of cultural distance between countries. The formulas for obtaining these three composite indices are expressed as below.

$$INSTQUAL = \frac{\sum_{i=1}^6 HOST_i}{6}$$

$$INSTDIST = \frac{\sum_{i=1}^6 |HOST_i - HOME_i|}{6}$$

$$INSTDISTALT = \sqrt{\sum_{i=1}^6 (HOST_i - HOME_i)^2}$$

Where i =each of the six dimensions of institutional quality

Control Variables

We used relevant firm and country level measures that have direct bearing on subsidiary performance based on previous studies. We controlled two most robust firm specific intangible assets; R & D intensity and advertising intensity (Caves, 1996). Subsidiary R & D intensity (RND) is the ratio of R&D expenditure over total sales with two years average prior to the dependent variable, and subsidiary advertising intensity (ADV) is advertising expenditure over total sales during the same period. we also used controls for subsidiary size (SIZE), measured as the log of total sales of the subsidiary, subsidiary age (AGE) proxied by the number of years the subsidiary has done business in a host country, parent international experience (INTEXP), measured by counting the number of countries entered as of the year of dependent variable, and parent's ownership in the subsidiary (MAJDUM) as a dummy variable that has a value of '1' if the ownership of parent in the subsidiary exceeds 50% and '0' otherwise. In addition, country's economic growth rate (GDP) is calculated as two years average GDP growth rate from the Worldbank's WDI database. Considering our sample includes both manufacturing and non-manufacturing firms, we included a manufacturing dummy and two industry dummies for electronics and chemicals, since the firms in each of these industries accounted for more than 10% of the sample. We also included five year dummies.

Empirical Analysis

We performed the econometric analysis using OLS linear regression in which the dependent variable is ROA. Considering two sets of explanatory variables, we tested

our model once with impact of institutional quality and its five components and again with institutional distance and its five components.

RESULTS

The descriptive statistics for variables used in the study are provided in Table 2 and correlations are presented in Table 3. As shown in Table 3, the correlation coefficients between composite institutional quality (INSTQUAL) and institutional distance (INSTDIST and INSTDISTALT) are considerably high. Correlation coefficients among each component of five dimensions and institutional quality are high and significant due to the fact that the individual market institutions in a country are intertwined with each other (Khanna and Palepu, 1997; 2005; Amable, 2003). However, the correlation between the control variables and explanatory variables are within acceptable ranges.¹

INSERT TABLE 2 ABOUT HERE

INSERT TABLE 3 ABOUT HERE

To avoid the multicollinearity problem, we tested our hypotheses in different models employing multiple regression analysis. Table 4 shows the results for the impact of composite and five dimensions of institutional quality of host country on subsidiary performance.² We divided our test to six independent models including one explanatory variable at a time together with the control variables. Model 1 shows that composite institutional quality (INSTQUAL) does not have any impact on the subsidiary

performance. However, the quality of regulation in labor market (LMREGQUAL, Model 5) has negative and significant impact on subsidiary performance. Other four components of institutional quality (PMQUAL, Model 2), (CMQUAL, Model 3) (LMQUAL, Model 4) and (PSQUAL, Model 5) didn't show any impact on the subsidiary performance contrary to our hypothesis 1.

INSERT TABLE 4 ABOUT HERE

Table 5 shows the results of the impact of institutional distance (i.e, similarity and difference of quality of institutions between home and the host country) on subsidiary performance. Model 7 shows that the composite institutional distance (INSTDIST) has negative and significant effect on subsidiary performance. Model 8 shows the impact of the alternative institutional distance measure (INSTDISTALT) also has negative and significant impact. Subsequent models presenting the impact of components of institutional distance reveal interesting results. The institutional distances in quality of product market (PMDIST, Model 9), capital market (CMDIST, Model 10), labor market (LMDIST, Model 11) and political and social system (PSDIST, Model 13) demonstrate negative and significant impact on subsidiary performance supporting hypothesis 2 of the study. Among the control variables, while subsidiary size and parent international experience have positive impact positive and significant impact, R&D and advertising intensity together with majority ownership dummy have negative and significant impact on subsidiary performance.

INSERT TABLE 5 ABOUT HERE

Robustness Test

In order to check the robustness of our results, we performed number of additional analyses. First, intrigued by the lack of support on hypothesis 1, we performed robustness tests by dividing the sample firms into two groups based on home country (Korea)'s composite institutional quality (INSTQUAL). The first group of countries represents institutional quality above Korea and the second one below Korea. The results of the impact of institutional quality (INSTQUAL) on subsidiary performance for the two groups of countries are presented in Table 6 and 7. As shown in Table 6, better quality of institutions in host country compared to Korea (INSTQUAL, Model 14) has negative and significant impact on subsidiary performance. Similarly, product market quality (PMQUAL, Model 15), capital market quality (CMQUAL, Model 16), labor market quality (LMQUAL, Model 17) and political and social institutions (PSQUAL, Model 19), have negative and significant impact on subsidiary performance. In case of host countries below Korea, Table 7 shows that overall the quality of institutions (INSTQUAL, Model 20) together with product market quality (PMQUAL, Model 21) and labor market quality (LMQUAL Model 22) have positive and significant on subsidiary performance, whereas quality of labor market regulation (LMREGQUAL, Model 24) has negative and significant impact. Taken together these findings provide stronger evidence for hypothesis 2. The results indicate that in host countries above Korea, despite the high quality of institutions, their distance from home country (Korea) leads to negative performance. In case of host countries below Korea,

better quality of institutions indicates similarity to the home country and leads to positive performance.

INSERT TABLE 6 ABOUT HERE

INSERT TABLE 7 ABOUT HERE

Second, since the results on impact of host countries below Korea on subsidiary performance were not highly significant, we conducted some additional analysis by excluding subsidiaries operating in China as 43.1% of our sample of subsidiaries operates in China. As shown in Table 8, 9, we found stronger evidence for our hypothesis 2. Table 8 suggests similar results with our original sample reported in Table 4. However, as shown in Table 9, we found negative and highly significant results for overall institutional distance (INSTDIST, Model 32) and (INSTDIST, Model 33), and product market distance(PMDIST, Model 34), capital market distance(CMDIST, Model 35) and labor market distance(LMDIST, Model 36) on subsidiary performance.

INSERT TABLE 8 ABOUT HERE

INSERT TABLE 9 ABOUT HERE

We also conducted additional regression by dividing the sample excluding China into host countries below Korea (as the institutional quality of China is below Korea). Our results suggested much stronger evidence for positive impact of host country below Korea. As shown in Table 10, institutional quality (INSTQUAL, Model 39), product market (PMQUAL, Model 40), capital market (CMQUAL, Model 41) have positive impact on subsidiary performance whereas labor market regulatory quality (LMREGQUAL, Model 43) has negative impact on subsidiary performance. The results for host countries above Korea are the same as those in Table 6, due to China's institutional indices were all smaller than their corresponding indices of Korea. These findings are consistent with the main results with more significant effects. Thus, it seems that the large number of firms in China in our sample is in fact a disturbing factor to our analysis.³ Finally, we performed all the analysis only with sample consisting of manufacturing firms. We find identical results for all the models shown above. Therefore the inclusion of non-manufacturing firms doesn't impact our results.

 INSERT TABLE 10 ABOUT HERE

DISCUSSIONS

This study provides important extension and insight on the role of host country institutions on MNC performance. We examined the impact of quality of market supporting institutions in a host country and the distances in quality of institution between home and host country on subsidiary performance based on five dimensions of quality of institutions. One of the major findings of this study is the negative impact of distance in quality of institutions on foreign affiliate performance. Study findings

suggest that compared to the level of development of host country institutions, similarities and differences of quality of institutions compared to home country poses challenges for MNCs in host countries. This finding is further reinforced in our results on the impact of quality of host country institutions below and above the home country (i.e Korea) on subsidiary performance. We found that better quality institutions above the home country i.e *distant to the home country* leads to lower performance whereas better quality institutions below the home country i.e *closer to home county* leads to better performance. Consistent with the resource-based and knowledge-based theory of the firm these results suggest that dissimilar institutional contexts increase the complexity of doing business due to lack of knowledge about local institutions, exploit firm specific resources as resources and capabilities are context specific and create impediments to transfer of strategic resources and routines from home to host countries (Eriksson *et al.*, 1997; Oliver, 1997; Kostova and Roth, 2002; Brothers et al., 2008).

Of particular interest are our results on the negative impact of the distances in institutional quality in three dimensions on factor markets i. e product, capital and labor market on subsidiary performance. Importantly, results suggest negative impact of product and capital market on host countries above Korea and positive impact on host countries below Korea. While previous studies assumed the inefficiency of the factor markets in emerging markets due to lack of market supporting institutions or institutional voids (Khanna et al., 2005), this study shows that efficient factor markets do not necessarily improve subsidiary performance. For instance, MNCs from the advanced economies face challenges in emerging and transition economies to take advantage of market intermediaries like product/service rating agencies, advertising agencies in product market, accounting firms, auditors and stock analysts in capital

market and executive search firms in managerial labor market. But efficiency of these intermediaries or market supporting institutions in advanced economies may work as subtle barriers to firms from other advanced economies as well as emerging markets (Wright et al., 2005). For instance, due to lack of familiarity of using intermediaries in home countries firms from emerging markets may not know how to take advantage of them. Availability of competent suppliers and distributors can have strong bargaining powers due to their high competitiveness and MNCs from the countries where part suppliers and distributors are relatively weak and dependent may have to learn how to manage the new relationship with strong and independent suppliers and distributors in the host country (Abo, 1994). Similarly, in capital market and difference sophisticated legal rules on property rights and corporate governance in accounting standards, disclosure rules differences may put constrain on MNCs from less developed countries due to their unfamiliarity with such laws and lack of knowledge on the way to abide by such strict and complicated legal requirements make it difficult to for MNCs to use the host country financial institutions (Mezias, 2002; Wright et al., 2005).

The exceptions to our finding are the negative impact of labor market regulation institutional quality on subsidiary performance and weak of support of distance in political and social dimension. We presume that Korean MNCs in general can not make use of flexible labor market regulations in foreign markets due to their management style rooted in long term employment (Rowley and Bae, 2002). The low impact of political and social system may be due to the fact that most Korean companies have relatively rich experience working with the intervening government in the home country (Chang and Hong, 2002). With prior home country experience they can better manage the government relationship in less advanced countries, while they do not face much

problem with local governments in advanced countries. Our result show negative impact of R&D and advertising intensity on subsidiary performance which is intriguing. With closer look at the sample, we find that relatively smaller entrepreneurial Korean firms actively undertook foreign investment during the observation period and recorded poor performance. Their investment was highly concentrated in China probably due to geographical and social proximity. The non-China sample of the study shows that R&D has no impact on performance.

Limitations and Future Research Direction

Our study suggests promising avenues for future research, but also has some inevitable limitations. First, we found evidence that the institutional difference has negative effects on subsidiary performance without precise investigation on how the distance in quality of institutions in general and factor markets in particular impact subsidiary performance. To better understand the issue, future research needs to examine the mechanisms and processes in which institutional distance operate as barriers, especially host countries with efficient institutions. Second, we found comparatively higher significant effects of some dimensions of institutional features than others. Researchers need to investigate the effects of important individual dimensions in a greater depth, to better understand the relationship between host country institutions and performance. Third, although we developed our main argument based on the resource-based and knowledge-based theory of them, we did not examine the interaction between institutional factors and firm-specific factors (e.g., investing firm's strategy and capability) due to the explorative nature of this study. Future research on this aspect will produce constructive implications on which types of

resources and capabilities helps MNCs to overcome liabilities of foreignness in different institutional settings. Finally, our findings are confined to MNCs headquartered in a single country lacking generalizations into other institutional contexts. Future research should examine MNCs from multi country settings to improve generalizeability.

Conclusion

This study provides evidence that the institutional distance between the home and host countries is a more important determinant of subsidiary performance than the absolute quality of host country institutions. Based on a comprehensive framework of five dimensions for host country institutions, we discovered that difference in factor markets—such as product, capital and labor market have significant effects on subsidiary performance. These findings advance our understanding of the relationship between host country institutions and subsidiary performance in two major ways.

First, the results of this study promote us to reexamine the conventional view that the low level of institutions will have negative effects on MNCs performance. This view is especially salient in the studies of MNCs' strategy and performance in emerging market (Arnold and Quelch, 1998; Khanna *et al.*, 2005; Prahallad and Lieberthal, 1998). From the perspective of MNCs in advanced countries, this view may appear to be universally acceptable; since most host countries will have institutions whose level of development cannot match the home country institutions. But, our unique dataset consisting subsidiaries of MNCs headquarter in a newly industrialized economy (i.e., Korea) enables us to reexamine this view showing that relative difference in institutions between home and host countries matters more than the absolute quality of institutions in the host country. In this respect, our evidence highlights the difficulty of adapting to

different host country institutions and of transferring firm-specific advantages to the different institutional environment in the process of internationalization. The findings in this study calls for a new theoretical explanation on the impact of host country institutions and MNCs' behavior and performance that is more universally applicable to MNCs both in advanced and less advanced countries.

Second, this is one of the few studies examining the direct impact of host country institutions on subsidiary performance based on a comprehensive framework that is theoretically grounded and empirically testable. We objectively evaluated overall impact of host country institutions on subsidiary performance and identified individual dimensions of institutions that are more important for MNCs. For researchers, therefore, our analysis demonstrate that studies on host country institutions can be fruitfully integrated by developing a comprehensive framework for institutions which is similar to the cultural distance index (Kogut and Singh, 1988; Morosini *et al.*, 1998). Such a framework like one presented in this study will help researchers to overcome fragmented treatment of institutions and provide opportunity to conduct a fine-grained analysis on how the different characteristics of the host country institutions affects MNCs' strategy and performance. For practitioners, this study also shows which dimensions of host country institutions are potentially more important when doing business in a foreign market. Thus, MNCs can develop more successful strategies by focusing on the important dimensions suggested in this study.

NOTES

1. To evaluate the problem of multicollinearity in our analysis, we calculated variance inflation factors (VIF) for all regressions presented in the paper, and found that they remained within acceptable ranges (the maximum value was 4.215). Also, the effect of the relatively high correlation between institutional quality indices and GDP growth rate was checked by running the same regressions after removing the second variable from the model. These additional analyses did not change the main findings in the empirical analysis.

2. All result tables in this paper reports the standardized coefficients of independent variables.

3. This is probably because Korean MNCs know the Chinese market relatively well due to the geographical and social proximity between two countries. So, the different institutional environment in China may pose less trouble to Korean firms operating in China.

4. Due to space constraints we provide abridged version of questions provided in the database. In that pursuit, we have standardized the questions by including additional explanation (in italics) to make them compatible with the very weak to very strong scale. The number in the parenthesis is Chronbach's alpha value for each of the five dimensions.

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Appendix 1 Selected items from Global Competitiveness Yearbook⁴

1. Product market

- 1.a Regulatory standards for products, energy, safety and environment are?
- 1.b Firms *perception towards customer satisfaction* is?
- 1.c General infrastructure quality is?
- 1.d Buyers' *level of sophistications* is?
- 1.e *The quantities of* local suppliers are?
- 1.f *The efficiency of* local suppliers are?
- 1.g The *sophistication of* extent of marketing is?

2. Capital Market

- 2.a Regulations and supervision of financial institutions are?
- 2.b The level of financial market sophistication is?
- 2.c *The health of* banks in your country is?
- 2.d *The convenience* to obtain a loan with only a good business plan and no collateral is?
- 2.e *The Environment for* entrepreneurs to find venture capital is?
- 2.f Corporate boards in your country are?

3. Labor market quality

- 3.a *Availability of* Scientists and Engineers are?
- 3.b The *quality of* schools are ?

3.c. *The quality of management schools are?*

4. Labor market regulations

4.a. *Regulations for hiring and firing of workers is?*

4.b. Extra costs Companies can cut back workers' hours or get overtime labor without too much extra cost in your country (1=No, 7=Yes)?

4.c. *Pay in relation to productivity is?*

5. Political and Social System

5.a. Judicial independence is?

5.b. *Laws to protect financial assets and wealth are?*

5.c. Intellectual property protection is?

5.d. Favoritism decision of government officials *towards well connected firms and individuals* is?

5.e. *Costs to firm* on unfair or corrupt activities are? (1=impose large costs, 7=impose no costs/not relevant)

Table 1 Results of Factor Analysis (Labor Market) for Year 2005

	Factors	
	1	2
Availability of scientists and engineers	0.21	0.86
The quality of public schools	0.31	0.82
The quality of management schools	-0.16	0.86
Regulations for hiring and firing of workers	0.96	-0.01
Employer's flexibility of wage determination	0.89	0.06
Pay in relation to productivity	0.88	0.35

Table 2 Descriptive Statistics (n=1129)

	Mean	Std. Dev	Minimum	Maximum
ROA(%)	2.29	10.10	-39.90	47.78
INSTQUAL	4.45	0.78	3.24	5.94
INSTDIST	1.66	0.32	0.88	2.53
INSTDISTALT	1.80	0.68	0.21	3.76
PMQUAL	4.71	0.94	3.37	6.37
PMDIST	0.99	0.35	0.01	1.94
CMQUAL	4.10	1.08	2.82	6.20
CMDIST	0.97	0.55	0.00	2.48
LMQUAL	4.42	0.83	3.33	6.17
LMDIST	0.80	0.34	0.00	1.83
LMREGQUAL	4.68	0.74	2.50	6.23
LMREGDIST	0.61	0.49	0.00	1.90
PSQUAL	4.32	0.93	2.68	6.12
PSDIST	0.84	0.42	0.00	1.94
RND(%)	2.33	3.03	0.00	28.49
ADV(%)	0.71	1.39	0.00	11.82
SIZE(Log)	9.10	1.55	3.14	15.16
AGE	7.86	5.73	2.00	44.00
INTEXP	6.87	12.13	0.00	153.00
MAJDUM(%)	0.86	0.34	0.00	1.00
GDP	6.51	3.39	-0.33	10.55

Table 3 Correlation Coefficients

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	INSTQUAL																			
2	INSTDIST	0.49																		
3	INSTDISTALT	0.52	0.87																	
4	PMQUAL	0.96	0.37	0.48																
5	PMDIST	-0.35	0.42	0.43	-0.37															
6	CMQUAL	0.96	0.43	0.54	0.92	-0.34														
7	CMDIST	0.65	0.86	0.89	0.58	0.16	0.64													
8	LMQUAL	0.93	0.36	0.48	0.93	-0.34	0.90	0.56												
9	LMDIST	0.08	0.63	0.61	0.07	0.43	0.05	0.51	0.13											
10	LMREGQUAL	0.43	0.65	0.24	0.24	-0.01	0.30	0.41	0.19	0.10										
11	LMREGDIST	0.61	0.26	0.47	0.62	-0.29	0.65	0.45	0.53	-0.04	0.10									
12	PSQUAL	0.96	0.36	0.48	0.95	-0.38	0.93	0.57	0.90	0.02	0.25	0.64								
13	PSDIST	0.51	0.71	0.89	0.51	0.25	0.54	0.75	0.49	0.42	0.12	0.52	0.50							
14	RND	0.11	0.06	0.02	0.09	-0.06	0.08	0.07	0.09	0.00	0.12	0.01	0.08	-0.01						
15	ADV	0.06	0.06	0.04	0.06	0.01	0.03	0.04	0.06	0.04	0.05	0.03	0.05	0.03	-0.04					
16	SIZE	0.03	-0.01	-0.01	0.03	-0.02	0.04	0.01	0.00	-0.05	0.01	0.03	0.02	-0.02	-0.17	0.10				
17	AGE	0.17	0.11	0.12	0.19	0.01	0.16	0.10	0.17	0.07	0.05	0.08	0.13	0.11	-0.13	0.21	0.25			
18	INTEXP	0.09	0.04	0.06	0.09	-0.01	0.10	0.04	0.07	-0.03	0.02	0.07	0.09	0.08	-0.05	0.06	0.28	0.15		
19	MAJDUM	0.12	0.21	0.13	0.11	0.08	0.08	0.13	0.07	0.10	0.21	0.02	0.09	0.11	0.04	0.06	0.08	0.05	-0.06	
20	GDP	-0.65	-0.11	-0.37	-0.73	0.31	-0.66	-0.35	-0.75	-0.03	0.16	-0.53	-0.69	-0.48	-0.03	-0.04	0.01	-0.21	-0.06	0.05

The numbers in bold are significant at $p < 0.05$ or higher

Table 4 Impact of Institutional Quality on Subsidiary Performance

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
INSTQUAL	-0.065					
PMQUAL		-0.030				
CMQUAL			-0.054			
LMQUAL				-0.031		
LMREGQUAL					-0.085***	
PSQUAL						-0.038
RND	-0.055*	-0.059*	-0.058*	-0.050*	-0.059*	-0.059*
ADV	-0.164****	-0.165****	-0.166****	-0.163****	-0.165****	-0.165****
SIZE	0.074**	0.074**	0.074**	0.074**	0.073**	0.074**
AGE	0.027	-0.032	-0.034	-0.026	-0.032	-0.034
INTEXP	0.062**	0.061*	0.062**	0.063**	0.061*	0.062**
MAJDUM	-0.154****	-0.158****	-0.157****	-0.147****	-0.159****	-0.158****
GDP	-0.002	0.018	0.002	0.061*	0.017	0.014
R Square	0.085	0.084	0.085	0.084	0.090	0.084
Adjusted R Squar	0.072	0.071	0.072	0.071	0.077	0.071
F	6.486***	6.357***	6.434***	6.362***	6.87***	6.382***

*: p<0.1 **: p<0.05 ***: p<0.01 ****: p<0.001

Table 5 Impact of Institutional Distance on Subsidiary Performance

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13
INSTDIST	-0.122****						
INSTDISTALT		-0.105***					
PMDIST			-0.075**				
CMDIST				-0.113***			
LMDIST					-0.079***		
LMREGDIST						0.010	
PSDIST							-0.062*
RND	-0.052*	-0.058*	-0.063**	-0.052*	-0.061**	-0.061**	-0.062**
ADV	-0.165****	-0.166****	-0.168****	-0.166****	-0.165****	-0.166****	-0.166****
SIZE	0.07**	0.07**	0.069**	0.076**	0.069**	0.073**	0.07**
AGE	-0.026	-0.032	-0.025	-0.034	-0.027	-0.030	-0.033
INTEXP	0.064**	0.063**	0.061*	0.061*	0.059*	0.061*	0.065**
MAJDUM	-0.138****	-0.147****	-0.155****	-0.147****	-0.154****	-0.161****	-0.153****
GDP	0.040	0.009	0.067*	0.009	0.043	0.044	0.013
R square	0.096	0.092	0.088	0.094	0.089	0.084	0.086
Adjusted R squar	0.083	0.079	0.075	0.081	0.076	0.070	0.073
F	7.416***	7.062***	6.746***	7.18***	6.806***	6.341***	6.562***

*: p<0.1 **: p<0.05 ***: p<0.01 ****: p<0.001

Table 6 Impact of Host Countries Above Korea

N=	387	367	446	386	278	405
	Model14	Model 15	Model 16	Model 17	Model 18	Model 19
INSTQUAL	-0.171 ^{***}					
PMQUAL		-0.207 ^{***}				
CMQUAL			-0.167 ^{***}			
LMQUAL				-0.170 ^{***}		
LMREGQUAL					-0.035	
PSQUAL						-0.099 [*]
RND	-0.018	-0.031	-0.016	0.019	-0.066 [*]	-0.037
ADV	-0.199 ^{****}	-0.206 ^{****}	-0.187 ^{****}	-0.181 ^{***}	-0.195 ^{****}	-0.189 ^{****}
SIZE	-0.028	-0.009	0.012	0.021	0.119 ^{***}	-0.020
AGE	0.004	0.015	0.000	-0.007	-0.045	-0.010
INTEXP	-0.008	0.002	0.007	-0.018	0.050	0.022
MAJDUM	0.016	-0.032	-0.12 ^{**}	-0.075	-0.106 ^{***}	-0.103 [*]
GDP	0.072	-0.068	0.080	0.023	0.065	0.028
R square	0.084	0.102	0.130	0.114	0.086	0.102
Adjusted R squar	0.044	0.061	0.097	0.075	0.069	0.065
F	2.114 ^{***}	2.487 ^{***}	4.003 ^{***}	2.954 ^{***}	4.931 ^{***}	2.746 ^{***}

*: p<0.1 ** : p<0.05 ***: p<0.01 ****: p<0.001

Table 7 Impact of Host Countries Below Korea

N=	742	762	683	743	851	724
	Model 20	Model 21	Model 22	Model 23	Model 24	Model 25
INSTQUAL	0.065 [*]					
PMQUAL		0.081 ^{**}				
CMQUAL			0.090 [*]			
LMQUAL				0.026		
LMREGQUAL					-0.139 [*]	
PSQUAL						0.019
RND	-0.084 ^{**}	-0.084 ^{**}	-0.095 ^{**}	-0.103 ^{***}	-0.030	-0.076 ^{**}
ADV	-0.156 ^{****}	-0.151 ^{****}	-0.151 ^{****}	-0.161 ^{****}	-0.026	-0.157 ^{****}
SIZE	0.118 ^{**}	0.111 ^{***}	0.125 ^{***}	0.094 ^{**}	-0.123 [*]	0.131 ^{***}
AGE	-0.045	-0.044	-0.061	-0.042	0.014	-0.049
INTEXP	0.083 ^{**}	0.085 ^{**}	0.085 ^{**}	0.083 ^{**}	0.11 [*]	0.077 ^{**}
MAJDUM	-0.196 ^{****}	-0.181 ^{****}	-0.151 ^{****}	-0.185 ^{****}	-0.234 ^{****}	-0.171 ^{****}
GDP	-0.002	0.035	0.009	0.026	0.024	0.003
R square	0.117	0.106	0.098	0.101	0.154	0.096
Adjusted R squar	0.097	0.087	0.076	0.081	0.102	0.076
F	5.975 ^{***}	5.522 ^{***}	4.498 ^{***}	5.083 ^{***}	2.974 ^{***}	4.712 ^{***}

*: p<0.1 ** : p<0.05 ***: p<0.01 ****: p<0.001

Table 8 Impact of Host Country Institutional Quality Excluding China

N=642	Model 26	Model 27	Model 28	Model 29	Model 30	Model 31
INSTQUAL	-0.071					
PMQUAL		-0.037				
CMQUAL			-0.053			
LMQUAL				-0.037		
LMREGQUAL					-0.114***	
PSQUAL						-0.039
RND	-0.009	-0.015	-0.013	-0.014	-0.002	-0.015
ADV	-0.112***	-0.114***	-0.114***	-0.114***	-0.11***	-0.114***
SIZE	0.007	0.006	0.007	0.005	0.006	0.007
AGE	-0.010	-0.007	-0.010	-0.008	0.001	-0.010
INTEXP	0.065	0.064	0.065	0.063	0.066	0.065
MAJDUM	-0.17***	-0.177***	-0.174***	-0.177***	-0.158***	-0.177***
GDP	0.012	0.018	0.018	0.020	0.072	0.018
R square	0.102	0.099	0.100	0.099	0.109	0.099
Adjusted R squar	0.079	0.076	0.077	0.076	0.087	0.076
F	4.422***	4.302***	4.362***	4.31***	4.797***	4.314***

*: p<0.1 **: p<0.05 ***: p<0.01 ****: p<0.001

Table 9 Impact of Host Country Institutional Distance Excluding China

N=642	Model 32	Model 33	Model 34	Model 35	Model 36	Model 37	Model 38
INSTDIST	-0.161****						
INSTDISTALT		-0.136***					
PMDIST			-0.104***				
CMDIST				-0.141***			
LMDIST					-0.097**		
LMREGDIST						0.010	
PSDIST							0.075*
RND	-0.005	-0.015	-0.022	-0.006	-0.018	-0.019	-0.020
ADV	-0.113***	-0.116*	-0.119***	-0.114***	-0.117***	-0.116***	-0.116***
SIZE	-0.004	-0.004	-0.004	0.006	-0.005	0.005	-0.001
AGE	0.001	-0.008	0.004	-0.010	0.002	-0.004	-0.009
INTEXP	0.07*	0.069*	0.066	0.065	0.063	0.063	0.07*
MAJDUM	-0.141***	-0.155***	-0.17***	-0.156***	-0.172***	-0.182***	-0.166***
GDP	0.045	0.017	0.054	0.019	0.020	0.041	0.024
R square	0.120	0.113	0.109	0.114	0.107	0.099	0.103
Adjusted R squar	0.098	0.091	0.086	0.092	0.084	0.076	0.080
F	5.338***	4.994***	4.763***	5.049***	4.668***	4.278***	4.492***

*: p<0.1 **: p<0.05 ***: p<0.01 ****: p<0.001

**Table 10 Impact of Host Countries Below Korea
(Excluding Chinese Samples)**

	Model 39	Model 40	Model 41	Model 42	Model 43	Model 44
N=	255	275	196	256	278	237
INSTQUAL	0.172**					
PMQUAL		0.178***				
CMQUAL			0.283**			
LMQUAL				0.063		
LMREGQUAL					-0.139**	
PSQUAL						0.072
(The coefficient of control variables are not shown)						
R square	0.215	0.172	0.185	0.138	0.154	0.147
Adjusted R squar	0.162	0.121	0.112	0.081	0.102	0.085
F	4.064****	3.354****	2.536***	2.396***	2.974****	2.37***

*: p<0.1 **: p<0.05 ***: p<0.01 ****: p<0.001