

# Host Country's Non-economic Factors, Local Managers, and Foreign Affiliate Performance\*

JKT 23(2)

Received 5 September 2018  
Revised 26 November 2018  
Accepted 20 March 2019

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## Abstract

**Purpose** – This paper examines the effects of host country's non-economic factors on foreign affiliate's financial and operational performance.

**Design/Methodology** - Using Korean-owned foreign affiliate-level data, we employ various measures that represent host country's non-economic factors and examine their effects on foreign affiliate's performance. We further investigate the effects of local top managers and local middle managers on the impact of country's non-economic factors on foreign affiliate's performance.

**Findings** - We find that local top managers are effective in increasing foreign affiliate's financial performance by dealing with institutional and cultural factors, particularly in high-income countries, while local middle managers are effective in increasing affiliate's operational performance by responding to the changes in doing business factors, particularly in low-income countries.

**Originality/value** - Considering that most of previous FDI studies focus on examining host country's economic factors on firm's FDI decision, our findings suggest that country's non-economic factors are strongly associated with actual business performance of foreign affiliates.

**Keywords:** Foreign Affiliate Performance, Local Managers, Non-economic Factors

**JEL Classifications:** F21, F23

## 1. Introduction

Over the past few decades, multinational firm activities became influential on global economy by accounting for almost two-thirds of world trade by the year 2010. While firms used to produce goods at home and export to destination countries in the past, their patterns of trade have now changed. By establishing their own affiliates in the destination countries, firms today directly produce and operate business in foreign markets, referred to as foreign direct investment (FDI). In particular, an advance in transportation and communication technologies has revolutionized the organization of foreign production. That is, firms now operate different types of foreign affiliates across borders that are designed for the specific business purposes. For instance, some foreign affiliates produce intermediate inputs and supply to their parents' production, while others replicate parents' domestic production abroad and focus on sales. While these foreign affiliates perform different tasks, they are all designed to maximize firm's profit. For instance, production-oriented foreign affiliates concentrate on their operational performance which in turn accelerates parent's production by increasing the production efficiency, while sales-oriented foreign affiliates focus on their financial performance that increases parent's

\*This work was supported by the Hankuk University of Foreign Studies Research Fund of 2018.

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financial returns by increasing the repatriation of earnings.

Hence, a success of multinational firm's FDI depends on the performance of its foreign affiliates that is largely affected by the host country characteristics. For instance, sales-oriented foreign affiliates would gain more profits as they are located in countries with larger market size, while production-oriented foreign affiliates would achieve production efficiency by producing in countries that incur low factor prices. These characteristics are associated with country's economic factors and their effects on FDI have been studied by a large number of international trade literatures. However, as foreign affiliates evolve from simple production platform to complex business companies that consist of different divisions, their business operations are becoming more influential on national economy, and also largely affected by host country's non-economic factors. In practice, we observe that a large number of countries are implementing various policies and regulations to stimulate or restrain the attraction of FDI. In response to these policies, foreign affiliates are employing local managers who can perform non-production tasks in response to the changes local business environment.

In this paper, we focus on non-economic factors of host countries and examine their effects on foreign affiliate's financial and operational performance. To identify country's non-economic factors, we follow prior trade and FDI studies to use indicators that represent institutional factors, doing business factors, and cultural factors. For instance, we use indicators of political stability and efficiency of legal systems to measure country's institutional factors, indicators of the degree of business deregulation, ease of obtaining policy information on business activities, and strength of financial auditing to measure doing business factors, and cultural distance between home and host countries that is computed by Hofstede (1980) composite index to measure cultural factors. Also, to capture how different types of local managers can handle the effects of country's non-economic factors on foreign affiliate's performance, we classify local managers into top and middle managers and then construct interaction variables between local managers and non-economic factors. For the empirical specification, we use foreign affiliate-level data of Korean firms between 2006 and 2013, which provides detailed information on individual foreign affiliates that operate business abroad and allow us to compute foreign affiliate's financial and operational performance. In particular, using information on the composition of employment inside the foreign affiliates, we identify local top and middle managers and estimate their effects on mediating the relations between foreign affiliate's performance and host country's non-economic factors.

Using foreign affiliate's return on asset (ROA) and total factor productivity (TFP) to measure its financial and operational performance, respectively, we find that host country's non-economic factors have significant impact on foreign affiliate's performance. Among country's non-economic factors, in particular, those related to doing business such as business deregulation, enforcement of financial auditing, and policy transparency of obtaining information on business activities are strongly associated with foreign affiliate's both financial and operational performance. Examining the effects of local managers, we find that local top managers are effective in mediating the effects of institutional and cultural factors on foreign affiliate's financial performance, while local middle managers are more effective in mediating the effects of doing business factors on foreign affiliate's operational performance. Also, considering that host countries exhibit different non-economic features based on their income-level, we further examine the mediating effects of local managers in high-income countries and in low-income countries separately. We find that local top managers are more effective in responding to political and legal issues in high-income countries to increase foreign affiliate's financial performance, while local middle managers are more effective in dealing with issues of doing business in low-income countries to increase foreign affiliate's both financial and operational performance.

Our findings provide important implications to FDI literatures and firms. First, while a large number of previous studies have focused on examining the effects of host country's

economic factors on firm's FDI decision, our results suggest that host country's non-economic factors are strongly associated with actual performance of foreign affiliates that operate business in the host country. Specifically, our results that major economic factors of host countries, such as market size and factor prices, have insignificant or negligible impact on foreign affiliate's performance imply that while country's economic factors may be considered to be a main determinant of firms' choices on production locations and investment patterns, non-economic factors are closely associated with business operations in the host country.

Second, our findings that different types of local managers have strong impact on the relations between specific non-economic factors and foreign affiliate's performance imply that foreign affiliates can respond to external business problems that arise from institutional, cultural, or doing business factors in the host country by exploiting specific type of local managers. Especially, our results that local top managers are more effective in high-income countries, while local middle managers are more effective in low-income countries, to increase foreign affiliate's performance in response to non-economic factors suggest that multinational firms would be better off to appoint local top managers for operating business in developed countries and assign local middle managers to deal with external business issues in developing countries.

The remainder of paper is organized as follows. Section 2 provides literature review on the relation between FDI and host country's economic and non-economic factors. Section 3 explains the estimation strategies and the dataset for the empirical specification. Section 4 presents the estimation results and Section 5 concludes.

## 2. Literature Review

To investigate how multinational firms choose production locations and perform different operations, a large number of trade studies have focused on economic factors of host countries as main determinants. For instance, Scaperlanda and Mauer (1969) built market-size hypothesis which predicts that firms make more foreign investment to achieve plant-level economies of scale in the context of market-seeking as a country has larger market size. Subsequently, numbers of empirical studies such as Lee Chang-Soo and Shin Sang-Hyup (2009), Lunn (1980) and Root and Ahmed (1978) used country's GDP, as a proxy for country's market size, to find that it has positive impact on FDI inflows from abroad. Other than country's market size, there also exist numbers of empirical studies that examine the effects of host country's factor prices on FDI, particularly focusing on the wage-level. Unlike aforementioned studies that mostly find a positive relation between country's market size and FDI inflows, country's wage-level tends to have different effects. For instance, Caves (1974) and Swedenborg (1979) find that an increase in real wage of host countries increases FDI inflows, while Culem (1988), Flamm (1984), Saunders (1982) and Schneider and Frey (1985) provide evidence of a strong negative relation between country's wage-level and FDI inflows. On the other hand, Gupta (1983), Owen (1982), Sader (1993) and Tsai (1994) find that the effects of country's wage-level on FDI inflows are different based on the time period and across industry sectors.

Contrary to economic factors, however, non-economic factors of host countries have received less attention in trade literatures.<sup>1</sup> Among those studies that examine the effects of

<sup>1</sup> Various economic factors of host countries have been studied as a determinant of FDI inflows: For instance, exchange rates between home and host countries (Blonigen (1995); Caves (1989); Froot and Stein (1991); Kogut and Chang (1991)), tariff rates on imports (Beaudreau (1987); Blonigen (1995); Lee Jaeho and Jang Yong-Joon (2016); Schmitz and Bieri (1972)), trade balance (Hein (1992); Shamsuddin (1994); Torrisi (1985)), economic growth (Billington (1999); Culem (1988); Lee Seung-Rae and Park Jae-Hong (2015)), and corporate tax rates (Hartman (1984); Hines and Rice (1994); Kemsley (1998)).

country's non-economic factors on FDI, most of them focus on institutional factors. For instance, Brunetti and Weder (1998) find that country's institutional instability reduces FDI inflows and Wei (2000) find that higher corruption level strongly reduces FDI inflows. Jun and Singh (1996) provide evidence of a negative relations between social and political instabilities and FDI inflows across 31 developing countries. Gastanaga et al. (1998) also use 22 developing countries to find that low corruption level and strong legislation have positive impact on FDI inflows. On the other hand, studying for multinational firms' correspondence strategies to political risk of host countries, Delios and Henisz (2003) and Henisz (2000) find that foreign firms consider country's political stability as a priority in making investment decision and they tend to make a strategic alliance with state-owned enterprises in countries where politically instable. Drabek and Payne (2002) find that less credibility in government policies induce bureaucratic inefficiency and have a negative influence on firm's foreign investment decision.<sup>2</sup> These studies provide new insights into trade and FDI literatures by developing the importance of host country's non-economic factors on firm's FDI decision. Due to the limited data, however, most of works are limited to examine the effects of institutional factors on aggregate FDI inflows. In this paper, we consider the findings of aforementioned studies to use indicators that reflect different types of non-economic factors and examine the extent to which these indicators affect performance of foreign affiliates that actually operate business in host countries. Especially, we investigate how local managers inside the foreign affiliates can mediate the impact of country's non-economic factors on company's performance.

Similar to our study, there exist a number of international business and management literatures that study the role of local managers in foreign operations of multinational firms. For instance, Franko (1971) and Stopford and Wells (1972) provide evidence that local managers of U.S.-owned foreign affiliates are more effective for handling local production workers inside the foreign affiliates and having the relationships with local buyers and suppliers. On the other hand, studies like Barlett and Ghoshal (1988), Harzing (2001) and Rosenzweig and Singh (1991) show that local managers are not effective than expatriate managers for delivering the decision of corporate headquarters on local operations due to their unfamiliarity with corporate culture and organizational specificities.<sup>3</sup>

Investigating the role of specific type of local managers, Geletkanycz and Hambrick (1997), Li et al. (2008), Luo (2007), North (2005) and Peng and Luo (2000) find that local top managers act as brokers who possess useful ties and contacts with government officials. For instance, Peng and Luo (2000) find that local top managers are capable of dealing with uncertainties that foreign affiliates experience in host countries by receiving more institutional support, such as settling negotiations and interpreting regulations. Luo (2007) also provide evidence of the effectiveness of local top managers as they are more suitable to obtain scarce resources which specifically influence firm business in China where local government has the power to allocate scarce resources and grant projects.<sup>4</sup> In contrast to these studies that rely on survey data to examine the effects of local top managers on developing

<sup>2</sup> Other than institutional factors, social overhead capital (Barrell and Pain (1999)), labor market restriction (Palokangas, 2003), education level (Borensztein et al., 1998; Lipsey, 1999), and degree of democracy (Busse, 2004; Jaspersen et al., 2000; Li and Resnick, 2003) have also been studied as a determinant of FDI inflows.

<sup>3</sup> Contrary to a small number of studies that examine the role of local managers inside the foreign affiliates, there exist a large number of studies that emphasize the role of expatriate managers inside the foreign affiliates by focusing on their advantage of having better understandings of overall corporate priorities. See, for example, Doz and Prahalad (1986), Kobrin (1988) and Tung (1993) for more details.

<sup>4</sup> By conducting interviews with Chinese executives, Xin and Pearce (1996) find that executives in private companies make more government connections by providing unreciprocated gifts, referred to as *guanxi*. In particular, they find that executives become more dependent on *guanxi* as they operate business in regions with underdeveloped legal framework.

the trust with local governments for doing business, we focus on the role of different types of local managers, namely top and middle managers. In particular, by considering country's cultural and doing business factors, in addition to institutional factors, we further analyze how different types of local managers can deal with non-economic problems that arise from various circumstances and mediate their effects on foreign affiliate's financial and operational performance.

### 3. Estimation Strategy and Data Description

#### 3.1. Estimation Strategy

To empirically test how host country's non-economic factors affect foreign affiliate's performance, we estimate the following baseline equation;

$$\begin{aligned} Performance_{it} = & \alpha_0 + \alpha_1 stability_{it} + \alpha_2 legal\ system_{it} + \alpha_3 transparent_{it} \\ & + \alpha_4 deregulation_{it} + \alpha_5 auditing_{it} + \alpha_6 culture_{it} + \alpha_7 GDP_{it} \\ & + \alpha_8 capital\ price_{it} + \alpha_9 wage_{it} + \alpha_{10} age_{it} \\ & + \alpha_{11} financial\ leverage_{it} + \gamma_i + \delta_t + \omega_{it} \end{aligned} \quad (1)$$

where  $i$  denotes a foreign affiliate and  $t$  denotes a year. Hence,  $\gamma_i$  and  $\delta_t$  denote foreign affiliate fixed effects and year fixed effects, respectively, and  $\omega_{it}$  is an error term.  $Performance_{it}$  indicates foreign affiliate  $i$ 's performance at year  $t$  of which we use foreign affiliate's ROA and TFP as proxies for financial and operational performances, respectively. ROA is widely used in business and economics literatures to measure a company's financial performance (e.g. Ahn Se-Hwa, 2017; Hartarska, 2005; Jacobs et al., 2016). Here, we compute ROA by dividing foreign affiliate's net profit to its total asset.<sup>5</sup> On the other hand, to derive foreign affiliate's TFP, we first estimate the following logarithmic transformation of production function;

$$y_{it} = \beta_0 + \beta_1 k_{it} + \beta_2 l_{it} + \beta_3 m_{it} + \varepsilon_{it} \quad (2)$$

where  $y_{it}$  represents foreign affiliate  $i$ 's real output at year  $t$  that is measured by deflating its total sales revenue with host country's producer price index.  $k_{it}$  is foreign affiliate  $i$ 's real capital at year  $t$  that is measured by deflating its fixed tangible assets with host country's capital equipment price index,  $l_{it}$  is foreign affiliate  $i$ 's labor at year  $t$  that is measured by its total number of employees, and  $m_{it}$  is foreign affiliate  $i$ 's intermediate inputs at year  $t$  that is measured by its expenditures on the intermediate material inputs deflated by the foreign intermediate input deflators.  $\varepsilon_{it}$  is an error term that is composed of transmitted productivity component and i.i.d. component.

Considering that OLS estimates may produce biased input coefficients that arise from the simultaneity bias from the endogeneity of input choices and the selection bias from the unobserved productivity shock, we employ Levinsohn and Petrin (2003) method to estimate Equation (2). Using foreign affiliate's intermediate inputs as a proxy for unobserved productivity shock, Levinsohn and Petrin (2003) technique is known to estimate production function coefficients more consistently and it is widely used in business and economics

<sup>5</sup> To capture a firm's financial performance, there exist a large number of finance studies that use Tobin's Q ratio or Return on Equity (ROE). However, since our foreign affiliate-level data do not provide information on market value of foreign affiliate's equity or liability that is required to compute Tobin's Q ratio or ROE, we use available information to measure foreign affiliate's financial performance by ROA, and also Return on Sales (ROS) as an alternative indicator.

literatures (Blalock and Gertler, 2009; Okafor et al., 2017; Serpa and Krishnan, 2017). After obtaining input coefficient estimates from Equation (2), we then compute the log of TFP as a residual of the production function as follows:

$$TFP_{it} = y_{it} - \widehat{\beta}_1 k_{it} - \widehat{\beta}_2 l_{it} - \widehat{\beta}_3 m_{it}$$

To capture host country's various non-economic factors, we use six indicators. First, we consider prior studies that examine the effects of country's institutional environment on FDI inflows to include host country's political stability (*stability*) and efficiency of legal systems (*legal system*). Country's political stability is known to have an impact on investor's cost and protection of their interests, while legal system is associated with additional adaption costs of FDI, such as taxation and capital repatriation, all of which affect the foreign affiliate's performance from operating business in the host country (Du and Tao, 2012; Hyun Hea-Jung, 2018; Riedl, 2010; Siegel and Schwartz, 2013). Here, *stability* is an aggregate indicator that measures the perceptions of likelihood of political stability or political-motivated violence, which ranges from -2.5 to 2.5 where a high number indicates that host country is perceived to be politically stable. *Legal system* is the efficiency of the legal and judicial systems for companies in settling disputes, which ranges from 1 to 7 where a high number indicates that host country's legal systems are efficient for companies to settle disputes.

We then consider other non-economic factors that are related to doing business (Arbatli, 2011; Holmes et al., 2013). Here, we include an indicator that measures the ease of companies obtaining information about changes in government policies that affect their business activities (*transparent*), the host country's strength of financial auditing and reporting standards (*auditing*), and the ease of companies complying with public administration's regulations on business activities (*deregulation*). All indicators range from 1 to 7 where a high number indicates that host country is transparent for obtaining policy information on business activities, have strong financial protection, and free from business regulations. Finally, we also include a cultural distance (*culture*) from home to host countries (Dow and Ferencikova, 2010; Lee et al., 2008). Here, we use Hofstede (1980) composite index on the deviation between home and host countries along the four cultural dimensions; in particular, power distance, uncertainty avoidance, masculinity/femininity, and individualism.

More specifically, Hofstede index is computed by  $\sum_{i=1}^4 \left\{ \frac{(I_{ij} - I_{ih})^2}{V_i} \right\} / 4$  where  $I_{ij}$  denotes the index for the  $i$ th cultural dimension of  $j$ th host country,  $V_i$  is the variance of the index of the  $i$ th dimension, and  $h$  represents a home country.

To control for other variables that may affect foreign affiliate's performance, we add host country's economic factors and foreign affiliate-specific variables. To capture country's economic factors, we include country's market size that is measured by the country's real GDP (*gdp*). Country's GDP is expected to have an impact on performance of foreign affiliates that are established by 'horizontal' multinational firms that seek to gain access to local markets by FDI (Brainard, 1993; Markusen, 1984). We also consider country's capital and labor costs that are measured by investment goods price (*capital price*) and wage (*wage*), respectively. Contrary to foreign affiliates that belong to 'horizontal' multinational firms, those that are established by 'vertical' multinational firms that seek to exploit factor price differences across countries are likely to have their performance affected by country's factor prices (Helpman, 1984; Markusen and Zhang, 1997). For the foreign affiliate-specific variables, we follow previous international business literature to include foreign affiliate's age and financial leverage (Han et al., 2013; Serpa and Krishnan, 2017). Foreign affiliate's age (*age*) is measured by the years since the first year of investment in the foreign affiliate. Foreign affiliate's financial leverage (*financial leverage*) is measured by the ratio of its total debts to assets.

To further examine the extent to which different types of local managers affect the relations

between host country's non-economic factors and foreign affiliate's performance, we additionally construct interaction variables between non-economic factors and local managers. Specifically, we consider two types of local managers who may be capable of dealing with country's non-economic issues that affect foreign affiliate's performance; namely, top managers and middle managers. Here, we first construct local manager variables, *local top managers* and *local middle managers*, which are measured by the number of local top managers and middle managers inside the foreign affiliates, and create interaction variables between different types of local managers and non-economic factors in Equation (1) to obtain the following equation:

$$\begin{aligned}
 Performance_{it} = & \alpha_0 + \alpha_1 stability_{it} + \alpha_2 legal\ system_{it} + \alpha_3 transparent_{it} \\
 & + \alpha_4 deregulation_{it} + \alpha_5 auditing_{it} + \alpha_6 culture_{it} \\
 & + \alpha_7 stability_{it} \times local\ managers_{it} + \alpha_8 legal\ system_{it} \times local\ managers_{it} \\
 & + \alpha_9 transparent_{it} \times local\ managers_{it} + \alpha_{10} deregulation_{it} \times local\ managers_{it} \\
 & + \alpha_{11} auditing_{it} \times local\ managers_{it} + \alpha_{12} culture_{it} \times local\ managers_{it} \\
 & + \alpha_{13} GDP_{it} + \alpha_{14} capital\ price_{it} + \alpha_{15} wage_{it} + \alpha_{16} age_{it} + \\
 & \alpha_{17} financial\ leverage_{it} + \gamma_i + \delta_t + \omega_{it}
 \end{aligned} \tag{3}$$

where *local managers<sub>it</sub>* represent numbers of different types of local managers, namely top and middle managers, inside the foreign affiliate *i* at time *t*. Other variables are consistent with those in Equation (1). By interacting different types of local managers with different non-economic factors, we aim to estimate the effects of local managers on mediating the impact of country's non-economic factors on foreign affiliate's performance. For instance, coefficients of interaction variables between different types of local managers and country's political stability or efficiency of legal systems show which type of local manager is more effective in affecting foreign affiliate's performance by dealing with issues related to institutional factors. Alternatively, coefficients of interaction variables among different types of local managers, transparency in obtaining policy information, strength of financial auditing, and degree of deregulation provide information on the specific type of local managers who can affect foreign affiliate's performance by responding to the issues related to doing business factors.

### 3.2. Data Description

Our empirical specifications rely on the foreign affiliate-level data of Korean firms that is obtained from the Export-Import Bank of Korea. This data contains information on Korean-owned foreign affiliates that operate business across 118 countries between 2006 and 2013. Information on individual foreign affiliates includes its location, assets, debts, sales and purchases, employment, and industry sectors which are classified by the Korean Standard Industrial Classification (KSIC) codes that are similar to International Standard Industrial Classification (ISIC) codes. To our interest, in particular, foreign affiliate's employment is divided by top managers, middle managers, s managers, and production workers, each of which is composed of local employees and expatriates from headquarters located in Korea.<sup>6</sup> Hence, these information allow us to compute foreign affiliate-level ROA and TFP, and

<sup>6</sup> According to the business literatures like Liang et al. (2007) and Wooldridge et al. (2008), top managers are defined as executives of organization who are responsible for setting the overall direction of a company. They are known to have wide range of expertise on translating external social and political environments on organizational behavior. Alternatively, middle managers are defined as second layer of management who are responsible for developing and implementing strategic action plans needed to achieve the organizational goal. They are known to have specific expertise on internal business process such as production process, logistics, and services.

examine how different types of local managers mediate the effects of host country's non-economic factors on foreign affiliate's financial and operational performance. To limit the heterogeneity of the sample, we include foreign affiliates that operate in manufacturing industry sectors for the analysis.

To capture host country's economic and non-economic factors, we obtain information from the various data source. Among country's non-economic factors, political stability indicators are obtained from the Worldwide Governance Indicators produced by Kaufmann et al. (2010). Other factors that represent country's efficiency of legal systems, transparency of policy information on business activities, strength of financial auditing, and degree of business deregulations are obtained from the Global Competitiveness Index Dataset produced by the World Economic Forum. With regards to country's economic factors, we obtain information on real GDP and investment goods price from the Penn World Table and wage-level from the International Labour Organization (ILO).<sup>7</sup> Information on aggregate price indices is obtained from the International Financial Statistics of IMF and UNCTAD statistics.

Table 1 reports the summary statistics of variables used in the empirical specifications. In particular, we divide host countries into high-income and low-income groups and compare how country-specific variables and foreign affiliate-specific variables differ between income groups. To differentiate host countries into high-income and low-income groups, we employ the classification of the World Bank that assigns all the economies in the world into four income groups; namely, high, upper-middle, lower-middle, and low. Considering that Korea is assigned to the high-income countries, we include high-income group with host countries that are assigned to high-income countries and include low-income group with host countries that are assigned to either upper-middle, lower-middle, or low income countries.

**Table 1.** Descriptive Statistics of Host Country and Foreign Affiliate Variables

Variables	Full sample		High-income group		Low-income group	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
<i>Host country variables</i>						
stability	-0.13	0.71	0.72	0.34	-0.51	0.45
legal system	4.23	0.93	5.24	0.92	3.76	0.44
transparent	4.48	0.56	4.85	0.62	4.31	0.44
deregulation	3.64	0.61	3.66	0.71	3.60	0.55
auditing	4.76	0.68	5.49	0.43	4.42	0.49
culture	3.02	1.20	3.55	1.50	2.77	0.92
gdp	28.15	1.99	28.54	1.97	27.98	1.97
capital price	0.95	0.11	0.99	0.05	0.92	0.12
wage	5.20	1.58	6.74	1.01	4.62	1.36
<i>Foreign affiliate variables</i>						
ROA	-0.07	0.35	-0.14	0.47	-0.04	0.27
TFP	1.99	0.61	2.19	0.65	1.91	0.57
age	1.63	0.86	1.68	0.96	1.61	0.82
financial leverage	1.05	1.58	0.97	1.86	1.08	1.44

**Note:** Host country's real GDP and wage, and foreign affiliate's age and financial leverage are computed in natural logarithm terms.

<sup>7</sup> In contrast to investment goods prices that are reported at the country-level, ILO provides information on country's wage at the industry-level that is classified by ISIC codes and computed in local currency. For the empirical specifications, we match KSIC codes of foreign affiliates to ISIC codes by using information from the Korea International Trade Association and convert local currency to U.S. dollars by using the IMF exchange rates for each fiscal year.



Overall statistics indicate that foreign affiliates and host countries exhibit different characteristics between income groups. For instance, foreign affiliates located in high-income countries tend to have higher operational performance, while those located in low-income countries have higher financial performance. Comparing factor prices between different income groups, statistics show that high-income group incurs higher capital prices than low-income group, yet their difference is not very large. However, the difference in wage between different income groups is quite large, such that average wage of high-income group is about 6.74, while that of low-income group is about 4.62. Along with the fact that foreign affiliates in low-income group have lower capital-labor ratio, yet have more than double size of employment, than those in high-income group, these statistics provide evidence that most of Korean-owned foreign affiliates in low-income group operate labor-intensive production, while most of Korean-owned foreign affiliates in high-income group operate capital-intensive production.<sup>8</sup> With regards to host country's non-economic factors, high-income group is likely to be politically stable, efficient in legal systems, strong in financial protection, and less restrictive on business activities than low-income group. Also, high-income group tends to be culturally distant from Korea than low-income group, which may be explained by the fact that a large proportion of high-income countries include European countries, while most of low-income countries involve Asian countries.<sup>9</sup>

## 4. Empirical Results

### 4.1. Main Analysis

In prior to estimate the effects of country's non-economic factors on foreign affiliate's performance, we compute the correlation matrix among independent variables that are used in the regression, which is reported in Table A in the Appendix. The absolute maximum value is 0.47 between *stability* and *legal system*, suggesting that our regressions are free from multicollinearity problems.<sup>10</sup>

Table 2 reports the estimation results. All specifications include foreign affiliate fixed effects and year fixed effects. Robust standard errors are clustered for host countries to account for the possible correlated shocks that might affect all foreign affiliates in the same host country. Columns (1)-(3) present the results of regressing foreign affiliate's financial performance (ROA) and columns (4)-(6) present the results of regressing its operational performance (TFP). Overall results show that country's non-economic factors have strong influence on foreign affiliate's financial and operational performance. Specifically, coefficient estimates of *transparent*, *deregulation*, and *auditing* are all positive and statistically significant in columns (1) and (4). These results imply that country's non-economic factors that are particularly related to companies' doing business are strongly associated with foreign affiliate's performance such that its financial and operational performance increase as host country is more transparent and easy to obtain policy information on business activities, loosening business regulations, or strengthening financial protection on companies.

<sup>8</sup> Average capital-labor ratio of Korean-owned foreign affiliates, computed by using fixed tangible assets in million USD and total number of employment, that are located in low-income countries is about 0.491, while that of foreign affiliates in high-income countries is about 0.778. On the other hand, average number of employees of foreign affiliates in low-income countries is about 459, while that of foreign affiliates in high-income countries is about 97.

<sup>9</sup> In our sample, European countries account for about 58% of high-income countries, while Asian countries account for about 47% of low-income countries.

<sup>10</sup> When computing the variance inflation factor (VIF) for each explanatory variable, we find that all variables have VIF less than 10 and a tolerance value greater than 0.1 for all specifications, suggesting that variables used in the regressions are free from multicollinearity problems.

**Table 2.** Effects of Country's Non-economic Factors on Foreign Affiliate's Performance

Variables	ROA			TFP		
	(1)	(2)	(3)	(4)	(5)	(6)
stability	-0.015 (0.009)	0.003 (0.009)	-0.012 (0.010)	0.058*** (0.015)	0.059*** (0.014)	0.059*** (0.014)
legal system	-0.009 (0.012)	0.006 (0.012)	-0.005 (0.012)	0.055** (0.021)	0.057** (0.020)	0.063*** (0.021)
transparent	0.040*** (0.011)	0.034*** (0.011)	0.044*** (0.012)	0.101*** (0.029)	0.094*** (0.026)	0.084* (0.047)
deregulation	0.046*** (0.011)	0.040*** (0.011)	0.041*** (0.012)	0.035** (0.017)	0.034** (0.017)	0.015 (0.015)
auditing	0.038*** (0.007)	0.033*** (0.007)	0.021* (0.012)	0.061*** (0.019)	0.058** (0.019)	0.060*** (0.019)
culture	-0.002 (0.003)	0.004 (0.003)	-0.001 (0.003)	0.005 (0.005)	0.009 (0.005)	0.004 (0.005)
stability × local top manager		-0.011*** (0.003)			0.003 (0.010)	
legal system × local top managers		-0.003** (0.001)			-0.014 (0.009)	
transparent × local top managers		0.011 (0.007)			-0.015 (0.011)	
deregulation × local top managers		0.008 (0.005)			0.004 (0.004)	
auditing × local top managers		-0.012 (0.008)			-0.004 (0.003)	
culture × local top managers		0.008*** (0.003)			0.031*** (0.011)	
stability × local middle managers			0.005 (0.004)			0.001 (0.001)
legal system × local middle managers			0.001 (0.002)			0.003 (0.002)
transparent × local middle managers			-0.001 (0.001)			-0.007 ** (0.003)
deregulation × local middle managers			-0.001 (0.001)			-0.009 *** (0.003)
auditing × local middle managers			-0.005 ** (0.002)			0.002 (0.002)
culture × local middle managers			0.002 (0.004)			0.004 (0.003)
gdp	0.003 (0.003)	0.003 (0.003)	0.003 (0.002)	0.042 (0.027)	0.044 (0.027)	0.041 (0.027)
capital price	-0.064 * (0.035)	-0.063 * (0.035)	-0.063 * (0.034)	-0.344 (0.481)	-0.337 (0.481)	-0.323 (0.480)
wage	-0.017 * (0.009)	-0.017 * (0.009)	-0.016 * (0.009)	-0.014 (0.048)	-0.012 (0.048)	-0.017 (0.048)
age	0.058 *** (0.003)	0.058 *** (0.003)	0.053 *** (0.003)	0.103 *** (0.027)	0.107 *** (0.027)	0.098 *** (0.027)
financial leverage	-0.003 *** (0.001)	-0.003 *** (0.001)	-0.003 *** (0.001)	0.003 (0.003)	0.001 (0.003)	0.001 (0.003)
Adj R <sup>2</sup>	0.148	0.151	0.154	0.260	0.261	0.267
Observations	18867	18867	18867	12102	12102	12102

**Notes:** 1. All specifications include foreign affiliate and year specific fixed effects.

2. Robust standard errors clustered at the host country level are reported in parentheses.

3. *gdp*, *wage*, *age*, and *financial leverage* are computed in natural logarithm terms.

4. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.001$ .

Comparing the magnitude of coefficients, an increase in transparency of obtaining policy information on business activities and enforcement of financial protection appears to be more effective in increasing foreign affiliate's operational performance than financial performance. For instance, coefficient value of these variables in column (4) suggest that 10 percent increase in transparency of obtaining policy information on business activities is associated with about 10 percent increase in foreign affiliate's TFP, while 10 percent increase in strength of financial auditing is associated with about 6.1 percent increase in foreign affiliate's TFP, holding other variables constant. Alternatively, an increase in business deregulation is more effective in increasing foreign affiliate's financial performance than operational performance. For instance, its coefficient value in column (1) indicates that 10 percent increase in business deregulation is associated with about 4.6 percent increase in foreign affiliate's ROA.

To further examine the role of different types of local managers inside the foreign affiliates in mediating the effects of country's non-economic factors on foreign affiliate's performance, columns (2) and (5) report the estimation results of adding interaction variables between non-economic factors and local top managers, while columns (3) and (6) report the results of including interaction variables between non-economic factors and local middle managers. Investigating the effects of local top managers on the relations between foreign affiliate's performance and non-economic factors, coefficient estimates of *stability*×*local top managers* and *legal system*×*local top managers* are both statistically significant in column (2), while they are both insignificant in column (5), implying that local top managers are effective in mediating the effects of institutional factors on foreign affiliate's financial performance. Considering that top managers are responsible for making decisions on overall business activities that could achieve higher financial returns to stockholders by translating external political and social environments, they are more likely to use their expertise in having institutional ties to obtain more information on government policies and legal systems, and affect foreign affiliate's financial performance rather than operational performance that is closely linked to specific production process. However, negative coefficients of interaction variables between local top managers and institutional factors further imply that in countries where politically stable or efficient in legal systems, an increase in local top managers may lower down foreign affiliate's financial performance. That is, having a large number of local top managers in countries with developed institutional framework would rather hurt foreign affiliate's financial performance as these managers may collide in making final decisions. Instead, these top managers would contribute to increase foreign affiliate's financial performance in countries with underdeveloped institutional framework by using their political resources.

Alternatively, coefficients of *culture*×*local top managers* are positive and statistically significant in columns (2) and (5), suggesting that an increase in local top managers is strongly associated with an improvement of foreign affiliate's both financial and operational performance as host country is culturally distant to home. These results imply that local top managers also serve as internal problem solvers that may arise from cultural conflict between corporate headquarters and foreign affiliates and increase affiliate's performance. However, they do not seem to have an influence on mediating the effects of other non-economic factors that are related to doing business on foreign affiliate's performance.

For local middle managers, coefficients of interaction variables reported in columns (3) and (6) show that they are effective in mediating the effects of doing business factors on foreign affiliate's performance. Specifically, the coefficient of *auditing*×*local middle managers* is negative and statistically significant in column (3), implying that local middle managers have significant impact on increasing foreign affiliate's financial performance as host country is becoming weak in enforcing financial auditing. On the other hand, coefficients of

*transparent*×*local middle managers* and *deregulation*×*local middle managers* are both negative and statistically significant in column (6), indicating that an increase in local middle managers increases foreign affiliate's operational performance as the host country is becoming uncertain for obtaining policy information on business activities or tightening business regulations. Contrary to local top managers, these results provide evidence that local middle managers are capable of handling internal business and production processes to increase foreign affiliate's operational performance more effectively as the country is becoming more restrictive on doing business. However, they are not suitable to deal with issues that arise from cultural difference between countries or institutional problems.

For country's economic factors, coefficients of *gdp* are positive yet statistically insignificant in all regressions, implying that country's market size is not associated with foreign affiliate's performance. On the other hand, coefficients of *capital price* and *wage* are negative and marginally significant in columns (1)-(3), implying that foreign affiliate's financial performance increases as capital or labor input price decreases. However, they are not statistically significant in columns (4)-(6). Despite of their marginal significance and small magnitudes, our results that factor prices are particularly associated with foreign affiliate's financial performance may be explained by the FDI pattern of Korean multinational firms. Specifically, the fact that about 67.7% of total foreign affiliates are located in low-income countries and that 39% of total foreign affiliates have more than half of their total sales made from exports provide evidence that most of Korean-owned foreign affiliates are designed to conduct vertical FDI by producing in low-income countries that incur low factor costs and export products to other locations. Considering these facts, our results suggest that most of production-oriented foreign affiliates are less likely to be affected by country's market size but instead, by factor prices. Also, since these foreign affiliates are mainly designed to conduct specific production under any circumstances, changes in factor prices are more likely to be associated with financial performance than operational performance. With regards to foreign affiliate-specific characteristics, coefficients of foreign affiliate's age are positive and statistically significant in all regressions, while coefficients of its financial leverage are negative and statistically significant only in columns (1)-(3). These results suggest that more experienced foreign affiliates tend to have higher financial and operational performance, while those with lower debt status have higher financial performance.

In the following, we re-estimate Equations (1) and (3) by using alternative measures of financial and operational performance as a robustness check. Following previous economics and business literatures that use various measures to capture firm performance, we use foreign affiliate's ROS and labor productivity as an alternative measure of financial and operational performance, respectively. Specifically, foreign affiliate's ROS is computed by dividing foreign affiliate's net profit to its net sales, while labor productivity is computed by the value-added per worker.

Table 3 reports the results of regressing these alternative measures on country's economic and non-economic factors. Column (1)-(3) report the results of using foreign affiliate's ROS, while columns (4)-(6) report the results of using labor productivity. Overall, the estimation results are consistent with those of using ROA and TFP. We find that most of non-economic factors are strongly associated with foreign affiliate's both financial and operational performance. Comparing the magnitude of coefficients to the previous results, country's non-economic factors appear to have larger effects on foreign affiliate's ROS and labor productivity than ROA and TFP. For instance, coefficient values of *transparent* and *deregulation* reported in column (4) indicate that 10 percent increase in transparency of obtaining policy information on business activities and the business deregulation are associated with about 58 percent and 33 percent increase in foreign affiliate's labor productivity, respectively.

**Table 3.** Effects of Country's Non-economic Factors on Foreign Affiliate's Performance: Alternative Measures

Variables	ROA			TFP		
	(1)	(2)	(3)	(4)	(5)	(6)
Stability	-0.019 (0.085)	-0.097 (0.086)	-0.018 (0.091)	0.344 *** (0.079)	0.341 *** (0.080)	0.363 *** (0.080)
legal system	-0.011 (0.109)	-0.149 (0.111)	-0.028 (0.111)	0.060 ** (0.027)	0.044 * (0.023)	0.039 * (0.023)
Transparent	0.214 ** (0.095)	0.218 ** (0.096)	0.183 * (0.096)	0.582 *** (0.077)	0.563 *** (0.078)	0.288 * (0.149)
Deregulation	0.266 *** (0.068)	0.260 *** (0.096)	0.225 *** (0.070)	0.333 *** (0.041)	0.320 *** (0.041)	0.211 ** (0.113)
Auditing	0.041 (0.082)	0.038 (0.082)	0.040 (0.088)	0.550 *** (0.089)	0.538 *** (0.090)	0.586 *** (0.090)
Culture	0.024 (0.022)	0.044 (0.022)	0.033 (0.025)	0.027 (0.021)	0.038 * (0.021)	0.029 (0.022)
stability ×		-0.104 *			0.006	
local top manager		(0.061)			(0.025)	
legal system ×		-0.069 **			-0.013	
local top managers		(0.030)			(0.018)	
transparent ×		-0.050			-0.006	
local top managers		(0.052)			(0.038)	
deregulation ×		-0.099			0.042	
local top managers		(0.056)			(0.030)	
auditing ×		-0.006			-0.037	
local top managers		(0.010)			(0.038)	
culture ×		0.047 **			0.053 **	
local top managers		(0.020)			(0.024)	
stability ×			0.001			0.004
local middle managers			(0.001)			(0.007)
legal system ×			0.001			0.003
local middle managers			(0.001)			(0.004)
transparent ×			-0.005			-0.008 **
local middle managers			(0.005)			(0.004)
deregulation ×			0.002			-0.011 **
local middle managers			(0.003)			(0.005)
auditing ×			-0.009			-0.008 *
local middle managers			(0.010)			(0.004)
culture ×			0.001			-0.001
local middle managers			(0.003)			(0.001)
gdp	0.039 (0.027)	0.040 (0.027)	0.038 (0.027)	0.006 (0.008)	0.008 (0.008)	0.007 (0.008)
capital price	-0.026 * (0.013)	-0.025 * (0.013)	-0.025 * (0.014)	-0.072 (0.105)	-0.086 (0.104)	-0.104 (0.102)
wage	-0.011 * (0.006)	-0.014 * (0.007)	-0.010 * (0.006)	-0.014 (0.011)	-0.010 (0.010)	-0.015 (0.011)
age	0.078 *** (0.029)	0.080 *** (0.029)	0.072 *** (0.029)	0.107 *** (0.010)	0.105 *** (0.009)	0.087 *** (0.009)
financial leverage	-0.005 ** (0.002)	-0.005 ** (0.002)	-0.004 ** (0.002)	-0.001 (0.001)	-0.001 (0.001)	-0.002 (0.002)
Adj R <sup>2</sup>	0.169	0.170	0.170	0.272	0.276	0.309
Observations	18861	18861	18861	12297	12297	12297

**Notes:** 1. All specifications include foreign affiliate and year specific fixed effects.

2. Robust standard errors clustered at the host country level are reported in parentheses.

3. *gdp*, *wage*, *age*, and *financial leverage* are computed in natural logarithm terms.

4. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.001$ .

Examining the effects of local top managers and middle managers on the relations between foreign affiliate's performance and non-economic factors, we still find that local top managers are strongly associated with increasing foreign affiliate's both financial and operational performance as they operate business in culturally distant countries from home. Coefficients of interaction variables between local top managers and political stability and efficiency of legal systems in column (2) also indicate that local top managers are effective in increasing foreign affiliate's financial performance as the country is becoming weaker in its institutional framework. For local middle managers, consistent with the previous results, we still find that they are more effective in increasing foreign affiliate's operational performance as the country is becoming uncertain to obtain policy information on business activities, restrictive on business activities, or weak in enforcing financial auditing. In addition, coefficients of economic factor variables show that country's factor prices have marginal effects on foreign affiliate's financial performance such that its ROS decreases as country's capital or labor input price increases. However, country's market size is still irrelevant to foreign affiliate's ROS and labor productivity.

All of these results are consistent with the previous estimation results and confirm that country's non-economic factors have significant impact on foreign affiliate's business performance. In response to the changes in country's non-economic issues, different types of local managers can be used to mediate the effects of non-economic issues on foreign affiliate's performance. Specifically, local top managers are more effective in increasing foreign affiliate's financial performance as they operate business in countries where institutional framework becomes weaker, while they are effective in increasing foreign affiliate's both financial and operational performance in culturally distant countries. On the other hand, local middle managers are more effective in increasing foreign affiliate's operational performance as local business environment becomes unfavorable to companies.

#### 4.2. Further Analysis

Considering that host countries exhibit different non-economic features on the basis of their development status, as shown in Table 1, we next divide a sample into high-income group and low-income group to compare the effects of non-economic factors on foreign affiliate's performance and examine the role of local managers between income groups.

First, we explore the effects of non-economic factors on foreign affiliate's performance for those that operate business in high-income group, in which results are reported in Table 4. Columns (1)-(3) report the results of regressing foreign affiliate's ROA and columns (4)-(6) report the results of regressing its TFP on economic and non-economic factors of high-income countries. Coefficients reported in columns (1) and (4) show that high-income countries' political stability and business deregulations have significant impact on foreign affiliate's both ROA and TFP. Specifically, coefficient value of these variables are all positive, implying that foreign affiliate's performance increases as the host country is becoming more politically stable or less restrictive on business activities. Also, the coefficient of cultural distance is positive and statistically significant in column (1). It indicates that across high-income countries, foreign affiliate's financial performance is higher as it is located in countries where culturally distant from home.

Considering the role of local top managers, coefficients of *stability*×*local top managers* and *legal system*×*local top managers* are all statistically significant in column (2). Their signs imply that as the host country is becoming politically stable or efficient in legal systems among high-income group, an increase in local top managers may lower down foreign affiliate's financial performance. On the other hand, interaction variables between local top managers and non-economic factors are all statistically insignificant in column (5), implying that local top managers in high-income countries are not effective in mediating the effects of non-economic

**Table 4.** Effects of Country's Non-economic Factors on Foreign Affiliate's Performance in High-income Group

Variables	ROA			TFP		
	(1)	(2)	(3)	(4)	(5)	(6)
Stability	0.062 *** (0.018)	0.033 ** (0.019)	0.058 *** (0.019)	0.079 *** (0.030)	0.074 ** (0.030)	0.070 ** (0.031)
legal system	0.011 (0.029)	0.003 (0.028)	0.016 (0.027)	-0.009 (0.044)	-0.021 (0.046)	-0.011 (0.045)
Transparent	-0.045 (0.036)	-0.061 (0.038)	-0.037 (0.038)	-0.006 (0.025)	-0.003 (0.024)	0.008 (0.024)
Deregulation	0.033 ** (0.013)	0.027 * (0.013)	0.030 ** (0.014)	0.076 ** (0.033)	0.077 ** (0.033)	0.080 ** (0.034)
Auditing	-0.040 (0.033)	-0.026 (0.036)	-0.041 (0.036)	-0.060 (0.059)	-0.053 (0.059)	-0.081 (0.061)
Culture	0.011 ** (0.005)	0.015 ** (0.006)	0.013 ** (0.006)	0.005 (0.007)	0.005 (0.007)	0.003 (0.006)
stability × local top manager		-0.006 ** (0.003)			0.003 (0.017)	
legal system × local top managers		-0.004 ** (0.002)			0.004 (0.011)	
transparent × local top managers		0.019 (0.022)			-0.016 (0.022)	
deregulation × local top managers		0.002 (0.006)			-0.006 (0.015)	
auditing × local top managers		0.009 (0.041)			0.001 (0.029)	
culture × local top managers		-0.013 (0.009)			-0.001 (0.006)	
stability × local middle managers			0.001 (0.001)			0.001 (0.002)
legal system × local middle managers			-0.001 (0.002)			0.001 (0.003)
transparent × local middle managers			-0.001 (0.001)			-0.005 (0.011)
deregulation × local middle managers			-0.002 (0.004)			-0.002 (0.006)
auditing × local middle managers			0.001 (0.002)			0.018 (0.044)
culture × local middle managers			-0.001 (0.001)			0.005 (0.007)
gdp	0.058 * (0.031)	0.057 * (0.031)	0.057 * (0.031)	0.010 * (0.006)	0.012 * (0.007)	0.012 * (0.007)
capital price	0.261 (0.259)	0.250 (0.258)	0.255 (0.259)	-0.039 (0.267)	-0.032 (0.261)	-0.037 (0.260)
wage	0.007 (0.017)	0.009 (0.017)	0.008 (0.017)	0.013 (0.015)	0.012 (0.014)	0.016 (0.014)
age	0.109 *** (0.012)	0.109 *** (0.012)	0.102 *** (0.013)	0.081 *** (0.015)	0.077 *** (0.015)	0.063 *** (0.014)
financial leverage	-0.002 ** (0.001)	-0.002 ** (0.001)	-0.002 ** (0.001)	-0.006 * (0.003)	-0.006 *** (0.002)	-0.006 *** (0.002)
Adj R <sup>2</sup>	0.199	0.200	0.200	0.376	0.377	0.378
Observations	5569	5569	5569	3427	3427	3427

**Notes:** 1. All specifications include foreign affiliate and year specific fixed effects.

2. Robust standard errors clustered at the host country level are reported in parentheses.

3. *gdp*, *wage*, *age*, and *financial leverage* are computed in natural logarithm terms.

4. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.001$ .

issues on foreign affiliate's operational performance. Also, interaction variables between local middle managers and non-economic factors are all statistically insignificant in columns (3) and (6), suggesting that local middle managers in high-income countries are not effective in dealing with non-economic issues that affect foreign affiliate's performance.

With regards to country's economic factors among high-income countries, contrary to the previous results of using full sample, coefficients of *gdp* are positive and marginally significant, while coefficients of factor prices that include capital and labor input prices are statistically insignificant, in all regressions. These results provide evidence that most of Korean-owned foreign affiliates in high-income countries are mainly designed to serve local markets and, thus, their financial and operational performance are closely associated with country's market size than factor prices. On the other hand, foreign affiliate's performance still tends to increase as it is more experienced or has low debt status.

Table 5 reports the results of using foreign affiliates that are located in low-income countries. Columns (1)-(3) present the results of regressing foreign affiliate's ROA and columns (4)-(6) present the results of regressing its TFP. In contrast to high-income countries, overall results suggest that variables that are related to doing business factors tend to have strong impact on foreign affiliate's performance. For instance, coefficients of *transparent*, *deregulation*, and *auditing* are all positive and statistically significant, while coefficients of *stability* and *legal system* are all insignificant in columns (1) and (4). These results imply that foreign affiliate's performance in low-income countries are irrelevant to the changes in political or legal factors, while they are more likely to increase as the country is more transparent of obtaining policy information on business activities, less restrictive on business activities, or strengthening financial protection.

Examining the role of local top managers, coefficients of interaction variables between local top managers and non-economic factors are all insignificant in columns (2) and (5), suggesting that local top managers in low-income countries are not effective in affecting foreign affiliate's performance with regards to the changes in country's non-economic factors. Alternatively, coefficients of interaction variables between local middle managers and non-economic factors are mostly significant in columns (3) and (6). Specifically, coefficients of interaction variables reported in column (3) show that an increase in local middle managers is strongly associated with increasing foreign affiliate's financial performance as country's legal system is becoming inefficient or it is culturally distant from home. Alternatively, coefficients of interaction variables reported in column (6) show that local middle managers have significant impact on the relations between foreign affiliate's TFP and doing business factors such that local middle managers are more effective in increasing foreign affiliate's operational performance as the country is tightening business regulations, weakening financial protection, or uncertain to obtain policy information on business activities.

In contrast to high-income countries, low-income countries' factor prices are closely associated with foreign affiliate's financial performance, while market sizes have negligible impact. Specifically, negative coefficients of factor prices in columns (1)-(3) imply that foreign affiliate's financial performance decreases as country's capital or labor input price becomes higher. These results may be explained by the fact that most of Korean-owned foreign affiliates in low-income countries are mainly designed to perform the specific production task. Since these foreign affiliates operate production under any circumstances, their operational performance is not likely to be sensitive to the changes in factor prices. Instead, their financial returns are affected by the factor prices and irrelevant to market sizes.

Our findings from using foreign affiliates that are located in different income groups suggest that the effectiveness of local top managers and middle managers on foreign affiliate's performance in response to non-economic factors is dependent on development status of host countries. For instance, our findings that local top managers are effective in increasing foreign affiliate's financial performance by responding to non-economic issues that are



**Table 5.** Effects of Country's Non-economic Factors on Foreign Affiliate's Performance in Low-income Group

Variables	ROA			TFP		
	(1)	(2)	(3)	(4)	(5)	(6)
Stability	0.046 (0.035)	0.046 (0.035)	0.043 (0.036)	-0.005 (0.024)	-0.008 (0.024)	-0.012 (0.026)
legal system	0.011 (0.018)	0.012 (0.018)	-0.003 (0.005)	-0.022 (0.042)	-0.019 (0.043)	-0.021 (0.043)
Transparent	0.020 ** (0.009)	0.020 ** (0.009)	0.016 * (0.009)	0.084 *** (0.030)	0.063 *** (0.031)	0.059 * (0.031)
Deregulation	0.018 * (0.010)	0.018 * (0.010)	0.024 ** (0.012)	0.071 *** (0.026)	0.069 *** (0.026)	0.043 * (0.024)
Auditing	0.068 *** (0.021)	0.063 *** (0.021)	0.048 ** (0.022)	0.049 * (0.019)	0.048 * (0.019)	0.043 ** (0.017)
Culture	-0.018 (0.014)	-0.015 (0.014)	-0.006 (0.012)	0.021 (0.027)	0.018 (0.027)	-0.011 (0.020)
stability × local top manager		-0.001 (0.004)			0.005 (0.016)	
legal system × local top managers		-0.007 (0.010)			-0.010 (0.021)	
transparent × local top managers		-0.005 (0.009)			-0.081 (0.077)	
deregulation × local top managers		0.001 (0.003)			-0.005 (0.010)	
auditing × local top managers		0.012 (0.038)			0.007 (0.005)	
culture × local top managers		0.004 (0.003)			-0.003 (0.005)	
stability × local middle managers			0.004 (0.006)			0.002 (0.002)
legal system × local middle managers			-0.016 ** (0.007)			0.001 (0.001)
transparent × local middle managers			-0.002 (0.005)			-0.025 *** (0.006)
deregulation × local middle managers			0.012 (0.017)			-0.010 ** (0.005)
auditing × local middle managers			-0.005 (0.004)			-0.004 * (0.002)
culture × local middle managers			0.006 ** (0.003)			0.002 (0.004)
gdp	0.002 (0.003)	0.002 (0.003)	0.001 (0.003)	0.010 (0.016)	0.010 (0.015)	0.008 (0.015)
capital price	-0.086 * (0.044)	-0.086 * (0.044)	-0.008 * (0.046)	-0.030 (0.176)	-0.036 (0.177)	-0.005 (0.170)
wage	-0.009 * (0.005)	-0.010 * (0.005)	-0.009 * (0.005)	-0.003 (0.020)	-0.010 (0.021)	-0.002 (0.021)
age	0.039 *** (0.003)	0.039 *** (0.003)	0.034 *** (0.003)	0.124 *** (0.011)	0.122 *** (0.011)	0.101 *** (0.011)
financial leverage	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.008 *** (0.002)	-0.008 *** (0.002)	-0.007 *** (0.002)
Adj R <sup>2</sup>	0.189	0.190	0.200	0.362	0.374	0.484
Observations	13035	13035	13035	8411	8411	8411

**Notes:** 1. All specifications include foreign affiliate and year specific fixed effects.

2. Robust standard errors clustered at the host country level are reported in parentheses.

3. *gdp*, *wage*, *age*, and *financial leverage* are computed in natural logarithm terms.

4. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.001$ .

particularly related to institutional factors, while local middle managers are irrelevant, imply that top managers use their knowledge and institutional ties to perform external business tasks that are related to laws and government policies and increase foreign affiliate's financial returns. However, considering that a large proportion of Korean-owned foreign affiliates in high-income countries are established by 'horizontal' multinational firms that seek to gain access to local markets than to achieve efficient production, local middle managers who have expertise in internal business and production processes are less suitable to handle non-economic issues and less influential on foreign affiliate's financial performance and also, operational performance.

On the other hand, considering that most of Korean-owned foreign affiliates in low-income countries are established by 'vertical' multinational firms who seek to exploit factor price differentials for the production than to serve local markets, local middle managers who have expertise in internal business and production processes are more influential on foreign affiliate's performance. Since these foreign affiliates are mainly designed to perform specific production tasks, they are more likely to rely on local middle managers who can deal with practical issues related to doing business than top managers who are better off to deal with macro issues related to the institutional framework. The fact that numbers of foreign affiliates in low-income countries have expatriate top managers, rather than local top managers, also provide evidence that these production-oriented foreign affiliates heavily rely on local middle managers to respond to wide range of local issues that hamper the production.<sup>11</sup>

## 5. Conclusion

Along with the acceleration of globalization, increasing numbers of multinational firms are operating foreign business by directly investing in their own affiliates in the destination countries. As foreign affiliates' business operations become more sophisticated, they not only hire workers for production, but also employ various types of local managers who can deal with other non-production tasks related to local business environment and increase a company's operational and financial performance. In this study, we focus on non-production tasks that are performed by various types of local managers to investigate the effects of host country's non-economic factors on foreign affiliate's financial and operational performance.

By differentiating host country's non-economic factors into political and legal factors, doing business factors, and cultural distance between home and host countries, we find that non-economic factors related to doing business activities are strongly associated with foreign affiliate's financial and operational performance. When different types of local managers are considered in the relations between foreign affiliate's performance and various non-economic factors, we find that local top managers are effective in increasing foreign affiliate's financial performance by responding to political, legal, and cultural factors, while local middle managers are more effective in increasing operational performance by responding to doing business factors.

Specifically, the effectiveness of local managers on increasing foreign affiliate's performance by handling non-economic issues appear to be different on the basis of host country's development status. Among foreign affiliates that operate business in high-income countries, we find that local top managers are more effective than middle managers in increasing foreign affiliate's financial performance as host country becomes politically unstable or inefficient in legal systems or in countries where culturally distant from home. Among foreign affiliates

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<sup>11</sup> In our sample, about 42% of foreign affiliates in low-income countries have expatriate top managers and no local top managers. In high-income countries, about 13% of foreign affiliates have expatriate top managers and no local top managers.

that operate business in low-income countries, on the other hand, local middle managers are more effective than top managers in increasing both financial and operational performance in countries where local business environment becomes unfavorable to companies.

Considering that there exist numbers of other indicators that also represent country's non-economic factors, our results are based on restrictive numbers of non-economic factors of host countries. Nevertheless, our findings provide implications that foreign affiliate's financial and operational performance from actual business activities are largely affected by country's non-economic factors and that different types of local managers are suitable to deal with non-economic issues. Particularly, our findings from using a sample of foreign affiliates located in low-income countries suggest that production-oriented foreign affiliates can increase its business performance by appointing local middle managers who have expertise in internal production process to handle the problems that are related to doing business in the country.

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## Appendix

**Table A.** Correlation Matrix

Variables	Stability	Legal System	Transparent	Deregulation	Auditing	Culture	Gdp	Capital Price	Wage	Age	Financial Leverage
stability	1										
legal system	0.47	1									
transparent	0.42	0.41	1								
deregulation	-0.09	0.19	0.40	1							
auditing	0.39	0.40	0.39	0.21	1						
culture	0.34	0.29	0.36	0.23	0.25	1					
gdp	-0.09	0.23	0.19	0.27	0.16	0.43	1				
capital price	0.22	0.26	0.14	0.09	0.27	0.06	0.05	1			
wage	0.33	-0.28	0.35	-0.20	0.19	0.36	0.41	0.39	1		
age	0.01	0.07	0.04	0.09	0.06	0.03	0.07	0.13	0.08	1	
financial leverage	0.02	0.01	-0.01	-0.01	0.02	0.01	-0.02	0.01	0.01	-0.02	1