Indigenous Capability and Effects of Foreign Capital Flows and Repatriated Profits on Economic Growth: A Cross-country Empirical Study

Jun-ki Park

This study investigates the effects of various foreign capital flows, including repatriated profits on economic growth. I attempt to prove the hypothesis that developing countries tend to face slow economic growth because of their consistent encounters with more outbound capital flows in the form of interest payments and dividends than new inbound capital flows. The effect of these capital flows depends on the indigenous capability of each nation, such as the level of human capital and technology. Empirical analyses verify the above hypothesis. This study finds although hosting additional foreign capital improves economic growth, the accompanying repatriated profit tends to be related negatively to economic growth. Moreover, foreign capital inflow and repatriated profit have different effects on economic growth based on the development level of countries, with certain threshold values identified in terms of advanced human capital or the number of patents per million people. This study further determines this threshold is higher than that of foreign direct investments from which the host developing countries obtain positive effect. This result implies reverse financial flow out of developing countries in the form of repatriated profit, not financial flow itself, is one of the important causes of growth problems in the South.

Keywords: Economic growth, Foreign capital, Income level, Repatriated profits, Middle-income trap, Indigenous capability

JEL Classification: F21, F43, O40

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I. Introduction

Despite initiatives of opening up the domestic economy for international integration and adopting foreign capital employed by several developing countries to usher development, a question arises on why this rapid growth is not sustainable except for a few countries (Rodrik 2008). Many developing countries, especially middle-income countries, have demonstrated growth spurts over limited periods. Only a few countries, such as Korea and Taiwan, have managed to sustain the growth over a long period. The condition in which middle-income countries face stunted growth is called the "middle-income country trap" (Yusuf and Nabeshima 2009; World Bank 2010, 2012; ADB 2011; Lin 2012; Lee 2013). Several studies (Reinert 2007; Spence 2011) explain the mechanism in which developing countries fail to sustain long-term economic growth in the global export market. As the Washington Consensus (Williamson 1990) suggests, market-based liberalization policies, such as an economic opening in trade and investment, can initiate economic development among poor countries through the exploitation of their comparative advantages of low wage and abundant labor supply. However, when these countries rise to middle-income status, most of their development slows down in the trade market as they become stuck between low-wage manufacturers and high-technology innovators. This situation eradicates their comparative advantages because wage rates become too high to compete with global low-manufacturing product market latecomers, while their technological capabilities are still not as advanced to compete with forerunners in the global high value-added product market (Lee 2013). The present study aims to investigate this phenomenon in the global capital market by raising the following question: Does the mechanism of foreign capital flows place any downward pressure on the economic growth of developing countries?

The effects of foreign capital on host countries continue for a long time. Adopting foreign capital can initially benefit economic growth. However, this practice poses the possibility of repatriated profit, which negatively affects the host country in the long run. Thus, evaluating foreign capital through fragmented foreign capital inflows is inappropriate. In terms of absolute net amount of money, whether the host developing countries are net investees remains doubtful. If a country repays a return on foreign investment with an amount higher

than the amount of investment newly received, then this country is not a genuine host of global capital in terms of net amount. Furthermore, foreign capital affects the host and the investor country. Although a developing country hosting foreign capital can positively increase its GDP per capita at the beginning, growth can stagnate once the country fails to develop because of repatriated profit. The middle-income country trap can be explained by the logic of economic growth slowdown in relative terms. This study examines the different long-term effects on economic growth of the host country surrounding foreign capital. Further, the study presents how crossing the binding constraint for a middle-income country from the perspective of the global financial market becomes the host country's effort in fostering indigenous capabilities, as Lee and Kim (2009) demonstrate in their empirical study.

This paper is organized as follows. Section II presents literature review on foreign capital and its growth effects on the host country and the hypotheses of this paper. Section III discusses methodologies and data descriptions. Section IV presents estimation results. Section V concludes with a summary of the key findings.

II. Literature Review and Hypothesis: Foreign Capital and Economic Growth

Capital accumulation is one of the two crucial and major production factors. Raising and maintaining capital investment are essential in initiating economic take-off, especially for least-developed countries where capital is insufficient compared to the abundance of low-wage labor. Therefore, economics naturally advocates that least-developed countries open their domestic markets and adopt foreign capital. However, realizing the positive consequences of hosting foreign capital is not as simple in practice. Numerous studies examine the effects of foreign investment on the economic growth of a host country. Various theoretical possibilities account for the effects of foreign investment, especially foreign direct investment (FDI), in contributing to the economic growth of the host country through several channels (OECD 2002; Ram and Zhang 2002). Foreign investment can accelerate the host countries' economic growth by (1) facilitating integration into the global market, (2) transferring advanced technology and knowledge, (3) enhancing human capital formation, (4) increasing competition in the

host country, (5) augmenting domestic savings and investment, and (6) restructuring domestic firms. However, foreign capital can also hamper the host countries' growth through similar channels simultaneously through (1) intense competition, (2) repatriating more profits than what new foreign capital brings in, (3) not promoting the export of the host country but taking its domestic market, (4) causing distortions in policies and social structures, and (5) increasing foreign dependency. Given the diverse channels in theoretical studies, the effects of foreign investment on the host country should be assessed through empirical studies.

On the one hand, some studies empirically indicate that foreign investment accelerates the economic growth of the host country. On the other hand, other studies state that the impact of foreign investment on economic growth can be negative, insignificant, or mixed according to the level of development. Several studies (Ozturk 2007; Forte and Moura 2013) that have conducted literature review explain this ambiguity in empirical results as a lack of consideration for the host country's domestic conditions, such as indigenous capabilities, financial institution, openness degree, and regulatory environments for investments (Mohnen 2001; OECD 2002; Asheghian 2004). Therefore, recent consensus moves to an analysis relative to domestic conditions of the host country, an approach that appears to be persuasive.

However, several limitations still remain. The following should be considered to comprehend the effects of foreign capital inflow to the host country. First, each type of foreign investment is analyzed separately in the literature. FDI is examined in the majority of foreign-capital-related studies because long-term investment is generally regarded as a good investment, whereas other types of investment, such as portfolio investment (PI) and bank liabilities (BL), are denigrated as poor investments. Contrary to the predominantly negative view on the other types of foreign investments, few studies have examined the effects of foreign PI and BLs on the host country's growth (Durham 2003, 2004). FDI and other investments can benefit or harm the host country, depending on the appropriate policy (Evans 2002; Roy and Mandal 2012). Moreover, the conceptual difference between FDI and PI is the investor's control, or lack of thereof, over the investment, whereas the practical classification criterion merely determines whether the investor has over 10% voting power (IMF 2009). Therefore, no clear dividing criterion among types of foreign investments is available, such

that simultaneously analyzing several types of foreign capital inflows remains ideal in examining closely the effects of foreign capital.

Most studies focus on the short-term perspective of new foreign investment inflows, but few consider the long-term effects of existing foreign capital stock. The effect of foreign capital is not confined to a single year during the initial investment or the following years. Instead, accumulated stocks affect the host country's economy for a considerable period. The adoption of foreign capital naturally entails repatriated profit for a prolonged period. Economic performance can result in various consequences depending on the profit distribution across related nations. Although the host country obtains immense foreign investment and achieves economic growth, if the repayment to investors, who are mostly from advanced countries, is relatively larger than the return, then the economy of the host country can crumble compared with that of the investor country.

Singer (1950) points out the possibility of this unfavorable consequence in the primary industry of underdeveloped countries. In this sense, the conclusions in many studies that foreign investment, notably FDI, is beneficial for a host country's economic growth will be nullified because of repatriated profit. The negative effects of repatriated profit can also harm developing countries. Weak domestic conditions and low absorptive capabilities can result in host countries gaining nothing or obtaining low benefits from foreign investments (Borensztein *et al.* 1998). Hence, adopting foreign capital during economic take-off of least-developed countries can backfire in the future when they reach the middle-income level.

A developing country acquiring foreign capital for economic growth faces two options to overcome the unavoidable and negative profit outflow. One option is to induce more foreign capital than repaid profit and the other is to enhance the benefits from foreign capital flows and stocks. However, this study finds these options are not easy for most developing countries, making the middle-income country trap prevalent despite the successful initiation of economic take-off.

Figures 1–8 show the time series of foreign capital inflow, FDI inflow, and repatriated profit in selected host countries. The first four figures indicate developed countries (the United States and Ireland) or countries that overcame the middle-income country trap (Korea) or appear to overcome it (China). The other four countries have been in the middle-income country trap for a long time. The considerable fluctuation in
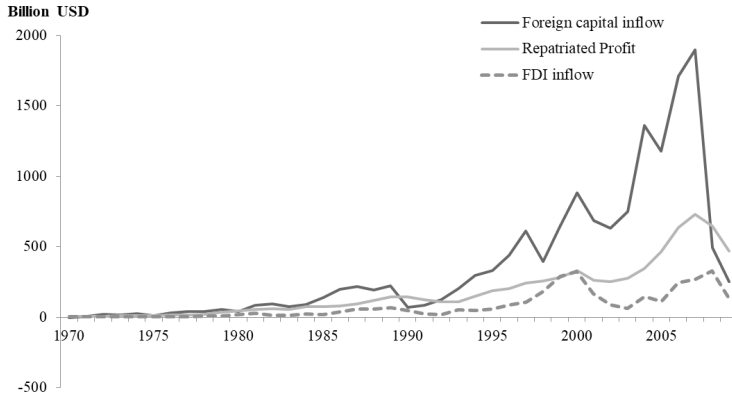
Billion USD

FIGURE 1
USA – Developed Country and the World's Largest Investor
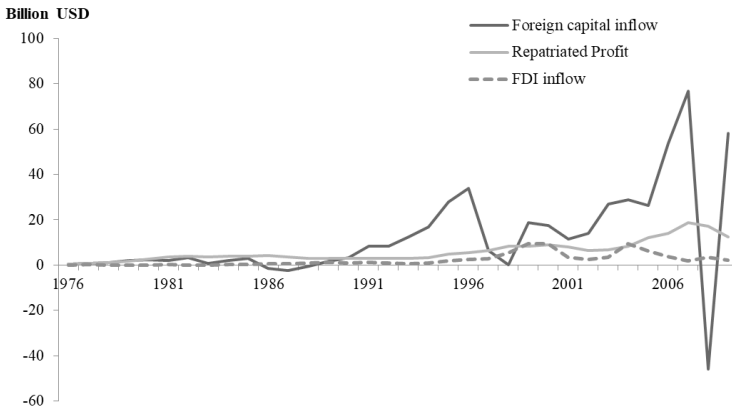
Billion USD

FIGURE 2
Korea – Successfully Overcame Middle-Income Country Trap

foreign capital inflow regardless of country income level is a common pattern among the eight countries, while repatriated profit increases along a gradual and steady trend. Meanwhile, a distinct pattern between the two groups is that successful countries generally induce more foreign capital inflow than repatriated profit, and their inducing capital tends to increase with volatility. By contrast, countries in the middle-income country trap generally repay profits more than inducing money, except during certain short boom periods, and no clear upward trend can be observed in foreign capital inflow. Brazil and South Africa,
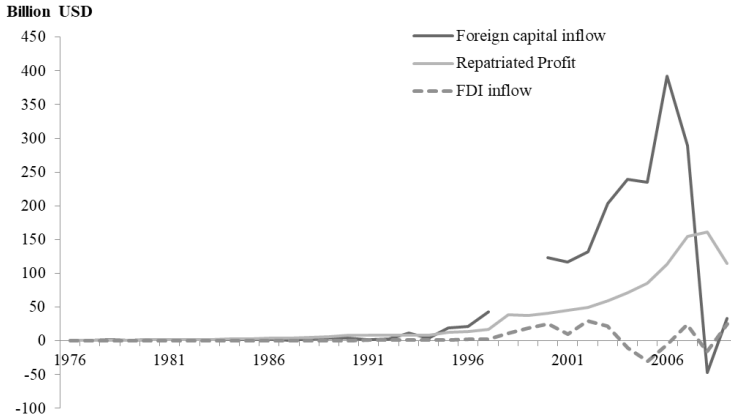
FIGURE 3

IRELAND – DEVELOPED COUNTRY BUT RELIED HEAVILY ON FOREIGN CAPITAL

FIGURE 4

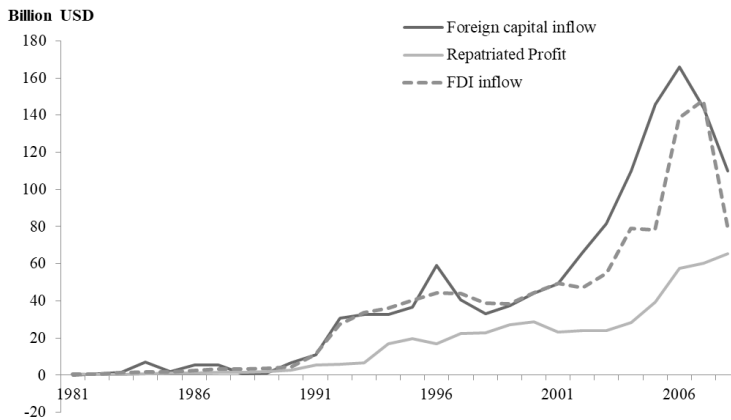CHINA – WILL IT OVERCOME THE MIDDLE-INCOME COUNTRY TRAP?

who are members of Brazil, Russia, India, China, and South Africa (BRICS), host a considerable amount of foreign capital over repatriated profit and their recent patterns resemble the situation of developed countries in the new millennium. However, their sustainability remains unguaranteed, and these patterns can be a mere extension of the up-and-downs in the past.
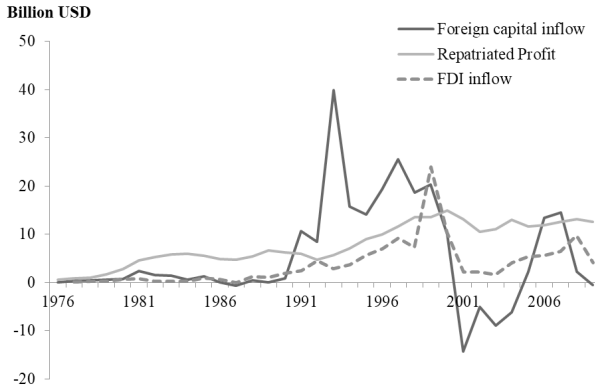
FIGURE 5

ARGENTINA – MIDDLE-INCOME COUNTRY TRAP
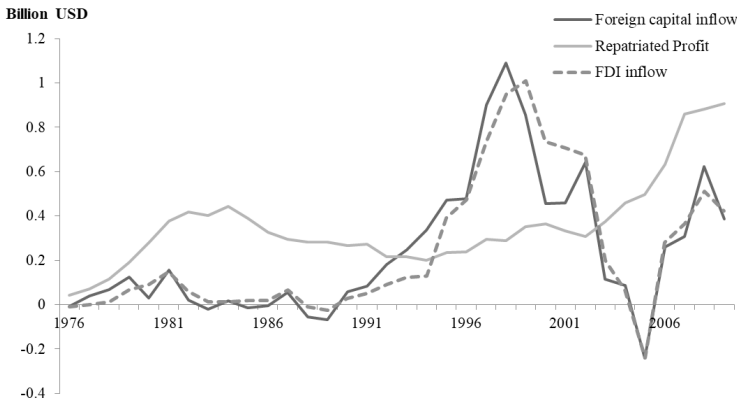
FIGURE 6

BOLIVIA – MIDDLE-INCOME COUNTRY TRAP

Repatriated profit or income debit according to terms of the International Monetary Fund (IMF) has been examined in few empirical studies. Although repatriated profit or income debit is merely a single variable, its meaning has been interpreted differently according to the purpose of each study. For example, Seabra and Flach (2005) use repatriated profit for the proxy of a decline in capital accumulation or profit leakage, but Chase-Dunn (1975) and Rubinson (1977) oppositely interpret the concept as existing foreign capital stock. Other studies used it as a measure of foreign dependency (Rubinson 1977).
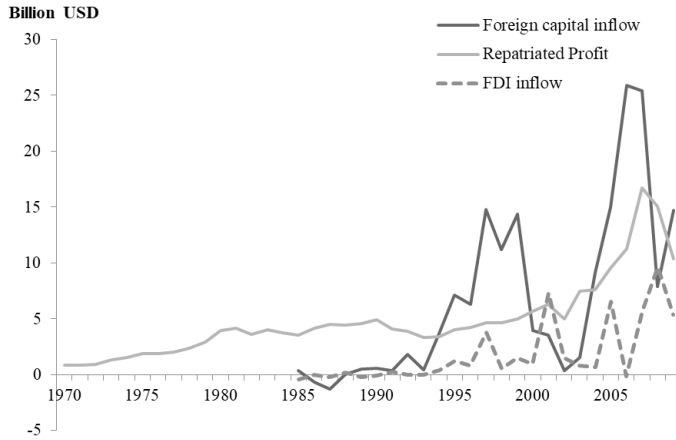
FIGURE 7
SOUTH AFRICA – MIDDLE-INCOME COUNTRY TRAP BUT EMERGING BRICS COUNTRY
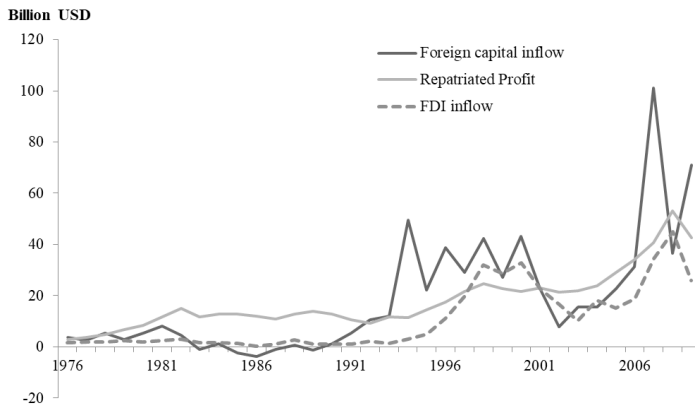
FIGURE 8
BRAZIL – MIDDLE-INCOME COUNTRY TRAP BUT LARGE EMERGING BRICS COUNTRY

Below is the simple production function of one economy in Equation (1). Y_{it} is the production output of i country in period t. The simple production function can be written as a function of augmented foreign capital stock ($A_{it} \cdot K_{it}^{f}$), repatriated profit (P_{it}), and other growth determinants, such as labor (L_{it}), domestic capital (K_{it}), or foreign capital inflows (I_{it}^{f}).

$$Y_{it} = F(A_{it} \cdot K_{it}^f, P_{it}; L_{it}, K_{it}, I_{it}^f, \ldots) \tag{1}$$

Repatriated profit (P_{it}) can be interpreted as a negative determinant of economic growth through the income leaking from the economy, which can be converted to a production factor in the next period. From the perspective of distribution of national production in a certain period, repatriated profit links GDP and gross national income. However, from the perspective of the dynamics of national production of a host country, repatriated profit is an important determinant of sustained growth by impeding the formation of long-term fixed capital (Seabra and Flach 2005).

However, repatriated profit is related to the concept of profit leakage and foreign capital stock. As foreign capital stock (K_{ijt}^f) accumulates, repatriated profit (P_{it}) generally increases, as shown in Equation (2).

$$P_{it} = \sum_j r_{ijt} \cdot K_{ijt}^f, \; i = country, \; j = firm, \; t = period \tag{2}$$

$$K_{it}^f = \sum_j K_{ijt}^f = g(P_{it}; r_{ijt}, \ldots) \tag{3}$$

$$Y_{it} = F(A_{it} \cdot g(P_{it}), P_{it}; L_{it}, K_{it}, I_{it}^f, \ldots) \tag{4}$$

The exact relationship between those variables can be changed according to return rate (r_{ijt}), which is determined by j firm's business performance, i country's macroeconomic environments, and foreign investor's strategical decisions. However, those relationships are highly and positively correlated, such that foreign capital stock is expressed as an inverse function of repatriated profit, as shown in Equation (3). Therefore, Equation (1) can be rewritten as Equation (4), where $A_{it} \cdot g(P_{it})$ is associated positively with Y_{it}, whereas P_{it} is associated negatively. The inclusion of repatriated profit for the estimation of growth effect enables the equation to yield a compounding result without considering the effects of foreign capital stock, as shown in literature.

Therefore, this study will first try to estimate Equation (1), with consideration of the relation of Equation (3) to demonstrate the following hypothesis: Although hosting additional foreign capital is good for economic growth, the accompanying repatriated profit tends to be related negatively to economic growth. The next step will demonstrate the following hypothesis: To overcome the disadvantage of adopting foreign capital, the host country must foster its indigenous capability

to enhance foreign capital. Finally, this study will prove the third hypothesis, which states the benefit of utilizing foreign capital stock is larger than the negative effect of repatriated profit in developed countries, whereas the same does not generally hold for developing countries. In the dynamics in the global capital market, growth stagnation is prevalent among middle-income countries. However, the benefits of a country, including developing countries, can increase if the level of indigenous capability is higher than a certain threshold. This study will calculate this threshold, which is difficult to compute directly from the estimation result of Equation (1) because $A_{it} \cdot K_{it}^{f}$ and P_{it} are expressed by different variables. Therefore, this study will estimate Equation (4) by adding an interaction term between the repatriated profit and indigenous capability variables of a host country. The threshold can be easily calculated from the estimated coefficients of $A_{it} \cdot g(P_{it})$ and P_{it}.

III. Econometric Methodology and Data Descriptions

A. Econometric Methodology

The baseline specification for estimating the growth effects of foreign capital inflows on GDP per capita growth rate follows a generic Solow model and the Barro equation:

$$\log y_{it} - \log y_{i,\,t-1} = \beta \log y_{i,\,t-1} + \Psi X_{it} + \Pi Z_{it} + \mu_i + \mu_t + \varepsilon_{it} \tag{5}$$

where, the dependent variable refers to the growth rate in real GDP per capita; $y_{i,\,t-1}$ is the initial GDP per capita; X_{it} is a set of conventional control variables, such as population growth rate and capital accumulation rate; Z_{it} is a set of additional growth determinants that represent foreign capital related variables; μ_i is a complete set of country dummies; and μ_t is a complete set of period dummies. Z_{it} includes FDI, PI, BLs, repatriated profit, received profit, foreign capital stock, and several combinations of five variables. To estimate the effects of the host country's indigenous capabilities and threshold levels, $A_{it} \cdot g(P_{it})$ is added, as shown in Equation (6).

$$\log y_{it} - \log y_{i,\,t-1} = \beta \log y_{i,\,t-1} + \Psi X_{it} + \Pi Z_{it} + \Gamma A_{it} \cdot g(P_{it}) + \mu_i + \mu_t + \varepsilon_{it} \tag{6}$$

The first estimation method used to analyze the determinants of GDP per capita is the panel fixed effects model or panel random effects model. This method controls country-specific shocks. Period dummies are added to the equations to capture period-specific shocks. The suitable model is chosen via the Hausman test. Although panel approaches are the most frequently used and reliable estimation methods in recent panel studies, potential problems still exist, including endogeneity, omitted variable bias, and measurement errors. A system-GMM estimation developed by Arellano and Bover (1995) and Blundell and Bond (1998) is applied to two equations for robustness check to correct potential problems. The results of the panel-fixed and panel-random effect models are compared. To evaluate the system-GMM estimation model specifications, the criteria include Hansen overidentification test and second-order serial correlation (AR(2)) of the residuals in the first differenced equation test. AR(2) test provides additional checks on the specification of the model and the legitimacy of instrumental variables in the differenced equation. Lastly, whether the number of groups exceeds the number of instruments is verified after a finite sample correction is applied to the two-step covariance matrix derived by Windmeijer (2005).

B. Data Sources and Description

The dataset used in this study covers 211 countries and six five-year periods from 1980–1984 to 2005–2009. By income level, 67 developed countries are classified as high-income countries based on the classification of the World Bank, while 143 developing countries are defined as middle- or low-income countries. Details on data sources and explanations are provided in the Appendix. Although the IMF provides financial data before 1980, many countries are missing in the periods before 1980. Globalization of the world economy has continued to intensify since the 1980s, and international capital transactions have increasingly been involved in developed and developing countries in the post-1980 era of globalization. Therefore, the analysis starting from 1980 would be accurate for estimating the relationship of foreign capital and the economic growth of the host country.

Most data for GDPs (in constant 2005 US dollar terms), such as population and fixed capital formation, are obtained from the World Development Indicators of the World Bank. Data on Taiwan are derived

from the database of the National Bureau of Statistics of the People's Republic of China (Taiwan). Education variables, such as secondary and tertiary enrollment rates, are obtained from Barro and Lee (2013). Data for patents granted in the United States are from the United States Patent and Trademark Office. Institution variables are from Jaggers and Marshall's (2000) Polity IV Project.

All financial data, except for foreign capital stock variables, are obtained from the balance of payments (BOP) of the IMF following the sixth manual. The variables in this study include the primary income debits and credits (income debit and credits in the fifth BOP manual), net incurrence of liabilities by direct investments, PIs, and bank loans. Financial flows surrounding the host countries by foreign investors are noted because the main interest of this study is the influence of foreign capital in host countries.

Contrary to literature that focuses only on new foreign capital inflows, this study deals comprehensively with primary income debits belonging to foreign investors accompanied inevitably by existing foreign capital stock. Primary income covers two types of transactions between residents and nonresidents. These transactions include employee compensation, which is paid to foreign nonresident workers, and investment income payments on external financial liabilities (IMF 2009). Specifically, the latter type of transaction is the repatriated profit to foreign investors corresponding to the existing investment. Over 95% of primary income is repatriated profit, which is different from foreign capital disinvestment. Disinvestment means a complete withdrawal captured in the financial account.

As the methodology and data of BOP improve, the accuracy of the primary income account increases and sophisticated sub-categories are provided, such as functional category of financial assets and liabilities (direct investment, PI, and bank loans). However, a trade-off exists between high quality of data in the recent period and the inconsistency problem with data in the previous period because of the difficulty of ensuring that the large amount of data from the previous period corresponds to the recent sub-categories. Therefore, this study presents a constructed database covering the longest periods in the globalization era using the upper category. The main interest of this study is the negative effect of repatriated profit and its influence on the middle-income country trap, the functional type to which repatriated profit makes no difference in conclusion.

TABLE 1
DATA DESCRIPTION

	High-income countries Mean (μ_0)	Middle- or low-income countries Mean (μ_1)	Difference ($\mu_0 - \mu_1$)	H0: $\mu_0 - \mu_1 = 0$
FDI inflow (a) (% of GDP)	3.94	2.92	1.02	0.01**
PI inflow (b) (% of GDP)	3.37	0.30	3.07	0.00***
BL inflow (c) (% of GDP)	4.21	0.26	3.96	0.00***
Foreign capital inflow (d=a+b+c) (% of GDP)	10.63	3.11	7.52	0.00***
Repatriated profit (e) (% of GDP)	7.80	4.97	2.83	0.00***
Net foreign capital inflow (f=d–e) (% of GDP)	2.81	-1.94	4.75	0.00***
Received profit (g) (% of GDP)	6.25	2.60	3.65	0.00***
Foreign capital stock (h) (h=i+j) (liabilities, % of GDP)	154.3	94.6	59.7	0.00***
FDI stock (i) (liabilities, % of GDP)	34.8	25.5	9.3	0.00***
PI and BL stock (j) (liabilities, % of GDP)	101.5	67.5	33.9	0.00***
Secondary enrol. rate (%)	25.7	14.4	11.3	0.00***
Tertiary enrol. rate (%)	8.7	3.3	5.4	0.00***
No. of US patents granted per million	59.2	0.3	58.9	0.00***

***, **, and * in the cells indicate the levels of significance at 1%, 5%, and 10%, respectively.

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TABLE 2

MEAN VALUES OF FOREIGN CAPITAL INFLOW AND REPATRIATED PROFIT SHARES

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	Foreign capital inflow (%, share in world capital flows)	Repatriated profit (%, share in world capital flows)
High-income countries	1.687	1.245
Upper middle-income countries	0.118	0.215
Upper middle-income countries (except China)	0.099	0.212
Lower middle-income countries	0.018	0.036
Low-income countries	0.002	0.006

Lastly, foreign capital stock, FDI stock, and PI and BL stock variables are obtained from the database of Lane and Milesi-Ferretti (2007). They construct estimates of external assets and liabilities for 145 countries using the methodology of the international investment position from IMF. In their database, most variables have similar definitions in the IMF and the dataset in this study, except that total external debt liabilities are the sum of PI and other investments.

Table 1 presents descriptive figures of financial and other explanatory variables according to the income level of the countries. P-values of several t-tests suggest all variables are considerably different between the two groups. Foreign capital inflow as a percentage of the host country's GDP is larger for high-income countries than for middle- or low-income countries, without distinction of functional types. Moreover, the relative amount of repatriated profit to the host country's GDP is larger in high-income countries than in middle- or low-income countries. Interestingly, net foreign capital inflow, which refers to the difference between foreign capital inflow to the host country and repatriated profit from the host country, is larger in high-income countries than in middle- or low-income countries. This figure is considered a deficit in middle- or low-income countries. In other words, developing countries, on the average, are actually lenders and not borrowers who host foreign capital.

Table 2 presents the differences between foreign capital inflow share in the world capital flows and repatriated profit share by country groups. The figures confirm the trend that developing countries are more likely to repay investors than be newly invested. Foreign capital

inflow and repatriated profit shares are large because of the high income level of the country group. However, the deficit gap between foreign capital inflow and repatriated profit shares of the entire world is widest in the upper middle-income countries regardless of whether China, which has the largest capital shares in this group, is excluded. This finding means that an upper-middle-income country is relatively paying more interest and dividend, which may severely impede economic growth.

IV. Estimation Results

A. Basic Estimation Results

First, the panel fixed effects and random effects estimations are calculated. The preferred estimator is then selected between the consistent and efficient estimators. The results of the Hausman test suggest the panel fixed effects estimations are preferred to random effects estimations in all regressions. Panel fixed effects estimations are used to control omitted variables assumed to be country-specific but identical over time. Period dummies are included to control unobserved and omitted period-specific variables.

Although the initial dataset covers 211 countries to generate certain variables, such as foreign capital inflow share in world capital flows, unreliable observations are excluded following the commonly used rule that the BOP is regarded as invalid when errors and omissions exceed 5% of the sum of imports and exports. Given that a credible compilation of financial statistics can be extremely difficult for certain countries, especially for low-income countries, the exclusion rule should be applied for the robustness of estimations results. Therefore, a maximum of 123 countries remain.

Table 3 presents the result of Equation (5), which is the GDP per capita growth rate equation. The first regression in Table 3 yields a negatively significant coefficient with repatriated profit, that is, –0.1011, whereas foreign capital inflows are insignificant. When net foreign capital inflow is estimated in column (2), which represents the difference between foreign capital inflow and repatriated profit, the result becomes positively significant. Finally, foreign capital inflow is classified into three types and is regressed with repatriated profit in columns (3)–(4). Only FDI inflow is positively significant among the three types of foreign

TABLE 3

Basic Estimation Results of GDP Per Capita growth Rate

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Initial income	-0.0578	-0.0583	-0.0558	-0.0581	-0.0546	-0.0547	-0.0556
	(-10.48)***	(-10.55)***	(-10.13)***	(-10.57)***	(-9.87)***	(-9.94)***	(-10.14)***
Population growth rate	-0.0828	-0.0982	-0.0217	-0.0054	0.0063	0.0058	0.0033
	(-0.45)	(-0.54)	(-0.12)	(-0.03)	(0.03)	(0.03)	(0.02)
Secondary enrol. rate (Previous period)	0.0003	0.0003	0.0002	0.0002	0.0002	0.0001	0.0002
	(1.09)	(1.20)	(0.86)	(0.76)	(0.64)	(0.49)	(0.80)
Openness (% of GDP)				0.0002	0.0002	0.0002	0.0002
				(3.20)***	(2.79)***	(3.20)***	(2.93)***
Foreign capital inflow (% of GDP)	0.0181						
	(1.42)						
Net foreign capital inflow (% of GDP)		0.0219					
		(1.75)*					
FDI inflow (% of GDP)			0.1468	0.1174	0.1298	0.1417	0.1187
			(3.31)***	(2.62)***	(2.92)***	(3.18)***	(2.53)**
PI inflow (% of GDP)			-0.0204	-0.0118	0.0464	0.0347	0.0383
			(-0.36)	(-0.21)	(0.80)	(0.60)	(0.67)
BL inflow (% of GDP)			-0.0029	0.0006	0.0023	0.0016	0.0040
			(-0.19)	(0.04)	(0.16)	(0.11)	(0.27)
Repatriated profit (% of GDP)	-0.1011		-0.1265	-0.1565		-0.1097	0.0816
	(-2.28)**		(-2.82)***	(-3.45)***		(-2.36)**	(-1.65)*
Foreign capital stock (Liabilities, % of GDP)					-0.0066	-0.0054	
					(-3.99)***	(-3.17)***	
FDI stock (Liabilities, % of GDP)							0.0004
							(0.09)
PI and BL stock (Liabilities, % of GDP)							-0.0078
							(-3.38)***
Received profit (% of GDP)	0.1036	0.0278	0.1240	0.1494	0.0540	0.1477	0.1307
	(2.25)**	(1.31)	(2.69)***	(3.22)***	(2.40)**	(3.24)***	(2.82)***
Executive constraint	0.0009	0.0009	0.0007	0.0002	0.0003	0.0003	0.0004
	(0.90)	(0.93)	(0.77)	(0.25)	(0.35)	(0.28)	(0.39)
Period dummies	Included	Included	Included	Included	Included	Included	Included
Number of obs.	552	552	552	552	549	549	549
Number of countries	123	123	123	123	123	123	123
R^2	0.002	0.002	0.003	0.004	0.005	0.005	0.006
Hausman Test	105.14	101.21	52.41	115.34	96.01	103.41	102.63
	(0.00)	(0.00)	(0.000)	(0.00)	(0.00)	(0.00)	(0.00)

Note: 1. The dependent variable is the average growth rate of GDP per capita for the five-year periods from 1980 to 2009.
2. The t-value is in parentheses.
3. ***, **, and * in the cells indicate 1%, 5%, and 10% levels of significance, respectively.
4. Observations where the errors and omissions exceed 5% of the sum of imports and exports are excluded for reliability.

capital inflows. Repatriated profit is negatively significant whether openness, which is measured by the sum of export and import as a percent of GDP, is included. The estimation results of received profit, which is a benefit in the return on investment of the host country abroad, are positively significant in all columns.

Columns (5)–(7) indicate that foreign capital stock is included directly in verifying its relation with economic growth. First, when only foreign capital stock, without considering indigenous capabilities, is estimated in column (5), the result is negatively significant, which is similar to the results of repatriated profit. If foreign capital stock and repatriated profit are put together in one equation, they are still negatively associated with GDP per capita growth rate. These results mean two possibilities. One is that the existing foreign capital accumulation can be harmful to the host country's economic growth. Another is that without decomposing the positive growth effect of foreign capital stock, which could depend on the indigenous capability of the host country, foreign capital stock acts as a proxy of repatriated profit, as shown in Equation (3), thereby giving a minus sign to the coefficient of this variable in practical data. This outcome is attributed to the negative effect of repatriated profit, which is high enough to overwhelm the positive effect of foreign capital stock. Therefore, the host country's indigenous capability variables should be added for a right estimation as shown in Equation (6).

B. Indigenous Capability and Threshold Study

In their empirical study, Lee and Kim (2009) find that the binding constraints for economic growth in developing countries are technological development and higher education. The host country's level of technological capability can be measured by the number of patents per million people, while high-level human capital can be measured by tertiary education enrollment rate. Interaction terms between foreign capital stock and the two indigenous capabilities of the host country measure the change in augmented foreign capital stock that represents how a host country utilizes foreign capital stock beneficially. By contrast, when interaction terms are included, foreign capital stock or the repatriated profit captures a profit leakage or a decline in capital accumulation.

The results of columns (1)–(2) in Table 4 suggest the hypothesis is correct. When repatriated profit and the interaction term between

foreign capital stock and the number of US patents granted per million people are included, as shown in Equation (1), repatriated profit is negatively associated with economic growth, though statistically weak. However, the interaction term, namely, augmented foreign capital stock, is positively significant. This finding means a country with high levels of indigenous capabilities to utilize foreign capital can overcome the negative effects of additional repatriated profit leakage and the deterrence of capital accumulation in host countries due to foreign capital. This result is consistent with several studies (Borensztein *et al.* 1998; Xu 2000; World Bank 2001; OECD 2002), which reported that the effect of FDI can differ according to the host country's absorptive capabilities, such as human capital, technological capabilities, and institutions. This result is robustly unchanged when foreign capital stock is included in regression, as shown in column (2) of Table 4.

The results of received profit suggest an interesting and consistent implication. While the effect of received profit is positive for economic growth in terms of GDP per capita growth rate in host countries, its interaction terms with indigenous capabilities of host countries reveal negative correlations with economic growth. This result suggests symmetrically that for a country with relatively high indigenous capabilities, investing additional capital abroad may not be desirable for economic growth because the capital should have been utilized more effectively in the home country.

By controlling technological capability, the dataset reveals similar results with that in literature, whereby if a host country has indigenous capability to facilitate learning advanced knowledge and technology directly or indirectly from foreign capital, this country can alleviate the negative effects of repatriated profit. If such is the case, which level of indigenous capability does a host country exactly need to offset the negative effect of repatriated profit? To address this question, this study adopts the methodology of Borensztein *et al.* (1998), who empirically found a positive relationship between FDI and the host country's economic growth in 69 developing countries from 1970 to 1989. This finding interestingly holds only when the host country has a minimum threshold stock of human capital measured by average years of male secondary schooling. They used the interaction terms between FDI and human capital variable to calculate the threshold. Although the minimum threshold varies according to the estimation models, approximately half of the 69 developing countries exceed the

TABLE 4

ESTIMATION RESULTS OF GDP PER CAPITA GROWTH RATE WITH INDIGENOUS CAPABILITY VARIABLES

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Initial income	-0.0685 (-2.41)***	-0.0668 (-2.36)**	-0.0463 (-10.45)***	-0.0641 (-10.76)***	-0.0706 (-2.47)**	-0.0684 (-2.42)**	-0.0584 (-11.71)***	-0.0587 (-5.86)***	-0.0576 (-5.75)***
Population growth rate	-0.5438 (-1.15)	-0.5116 (-1.12)	-0.2127 (-1.23)	-0.0905 (-0.50)	-0.6361 (-1.29)	-0.5433 (-1.15)	-0.2811 (-1.71)*	-0.2708 (-1.15)	-0.2326 (-1.03)
Secondary enrol. Rate (Previous period)	0.0000 (0.05)	0.0000 (-0.11)	0.0002 (1.04)	0.0003 (1.21)	0.0000 (0.02)	0.0000 (0.04)	0.0004 (1.65)*		
Foreign capital inflow (% of GDP)				0.0172 (1.36)	0.0937 (3.04)***		0.0039 (0.32)	0.0065 (0.66)	
FDI inflow (% of GDP)	0.1412 (1.93)*	0.1876 (2.29)**	-0.0075 (-0.11)			0.1450 (1.95)*			0.0860 (2.22)**
FDI inflow*secondary enrol. Rate			0.0043 (1.71)*						
PI inflow (% of GDP)	-0.0248 (-0.42)	0.0255 (0.45)	0.0379 (0.74)			-0.0245 (-0.41)			-0.0111 (-0.23)
BL inflow (% of GDP)	0.1655 (3.40)***	0.1630 (3.73)***	-0.0057 (-0.39)			0.1683 (3.49)***			-0.0081 (-0.89)
Repatriated profit (% of GDP)	-0.2170 (-1.57)	-0.1700 (-1.28)		-0.1032 (-2.34)**	-0.2085 (-1.59)	-0.2508 (-1.91)*	-0.1426 (-2.94)***	-0.1641 (-2.49)**	-0.1782 (-2.50)**
Foreign capital stock (Liabilities, % of GDP)		-0.0064 (-1.98)*							
Indigenous capa.	Patents per million (log)						Tertiary enrolment rate (previous period)		
	0.0144 (1.77)*	0.0134 (1.66)		0.0093 (2.68)***	0.0143 (1.75)*	0.0141 (1.76)*		0.0012 (1.22)	0.0012 (1.24)

TABLE 4
(CONTINUED)

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Repatriated profit*Indigenous capa.					0.0782 (1.94)*	0.0895 (2.21)*	0.0178 (1.85)*	0.0168 (1.69)*	0.0178 (1.78)*
Foreign capital stock*Indigenous capa.	0.0773 (1.80)*	0.0880 (2.06)**							
Received profit (% of GDP)	0.4425 (2.14)**	0.3265 (1.47)		0.0991 (2.17)**	0.4519 (2.10)**	0.4734 (2.20)**	0.1498 (2.79)***	0.1940 (2.95)***	0.2068 (2.89)***
Received profit*Indigenous capa.	-0.1519 (-2.51)**	-0.1236 (-2.05)**			-0.1560 (-1.52)	-0.1639 (-2.64)**	-0.0122 (-1.13)	-0.0186 (-1.88)*	-0.0199 (-1.97)*
Executive constraint	-0.0031 (-1.72)*	-0.0024 (-1.25)	-0.0002 (-0.24)	0.0012 (1.20)	-0.0028 (-1.52)	-0.0030 (-1.68)*	-0.0002 (-0.28)	-0.0004 (-0.39)	-0.0004 (-0.39)
Period dummies	Included	Included	Included	Included	Included	Included	Included	Included	Included
Number of obs.	549	549	631	552	552	552	548	548	548
Number of countries	123	123	123	123	123	123	123	123	123
R^2	0.092	0.009	0.011	0.004	0.087	0.092	0.014	0.014	0.015
Hausman test	52.35 (0.00)	49.94 (0.00)	100.52 (0.00)	112.20 (0.00)	59.25 (0.00)	52.99 (0.00)	150.47 (0.00)	147.36 (0.00)	160.83 (0.00)

Note: 1. The dependent variable is the average growth rate of GDP per capita for the five-year periods from 1980 to 2009.

2. The t-value is in parentheses.

3. ***, **, and * in the cells indicate 1%, 5%, and 10% levels of significance, respectively.

4. Observations where the errors and omissions exceed 5% of the sum of imports and exports are excluded for reliability.

minimum threshold of human capital. Before applying this methodology to this study, a decision should be made that the threshold should be calculated by a specific variable, foreign capital stock or repatriated profit, and its interaction term with indigenous capability. In this study, repatriated profit is chosen. Using repatriated profit is appropriate for calculating the threshold because repatriated profit is not estimated but rather extracted directly from a primary source, the BOP. Despite its usefulness, foreign capital stock from Lane and Milesi-Ferretti (2007) is an estimated variable under several assumptions because only few countries have reported their foreign capital stock over a long period and a huge cumulative estimation error might occur in some cases. Therefore, relying on originally reported data over the long term is a reasonable approach.

First, the result of column (3) in Table 4 demonstrates the main finding of Borensztein *et al.* (1998) is valid in the dataset of this study, that is, the interaction term between FDI inflow and secondary enrolment rate is positively significant. This result suggests the FDI inflow of GDP in the host country with a high level of human capital is positively associated with economic growth.

The results of columns (4)–(6) in Table 4 show the estimation results of Equations (1) and (6) are similar. Whether directly using estimated foreign capital stock or indirectly using repatriated profit to measure the augmented foreign capital stock, the main findings are robustly unchanged. The interaction term between repatriated profit and number of patents per million people is positively significant, whereas repatriated profit is negatively associated with GDP per capita growth rate. In columns (7)–(9), tertiary enrolment rate is substituted for a number of patents per million to represent indigenous capability in terms of human capital. Regardless of the proxy used for indigenous capability, the main findings are robustly held.

Based on the estimated coefficients of columns (5)–(9) in Table 4, the thresholds where the utilization benefits of foreign capital offset the disadvantage of repatriated profit can be calculated in terms of the number of US patents granted per million people and the completion rate in tertiary education. For example, the coefficient of repatriated profit in column (5) is -0.2085. This value is divided by the coefficient of interaction term between repatriated profit and patents per million, 0.0782, which results in 2.67. The threshold in terms of number of US patents granted per million people is 13.39 because the variable of the

number of patents per million is applied as a logarithmic transformation after adding 1 for use in regression. According to the results of column (6), the threshold is 15.48. These results are similar, with an average of 14.43. From 2005 to 2009, the average numbers of US patent granted per million people from high- and upper middle-income countries are 60.1 and 0.76, respectively. Among the 67 high-income countries in the sample, 32 countries exceed the threshold. However, no country among 144 middle- or low-income countries exceeds the threshold. Therefore, the overall coefficient of repatriated profit is calculated according to different income groups (Figure 9). Only the high-income country group has a positive coefficient, thereby indicating that developed countries obtain more benefits from foreign capital stock than the repatriated profit they pay to the investor.

The threshold of higher education level calculated from columns (7)–(9) in Table 4 is 9.26% of the population above age 15 who completed tertiary education. From 2005 to 2009, 26 out of 45 high-income countries satisfy the threshold ratio of higher education completion, but only 21 out of 99 middle- or low-income countries and 9 out of 36 upper middle-income countries satisfy the same threshold ratio. The upper middle-income countries who exceed the threshold are Bulgaria, Iran, Latvia, Lithuania, Mexico, and Russia. During the recent period, the average completion rate in tertiary education in high-income countries is 11.1%, while the average completion rate in upper middle-income countries is 6.6%. Figure 10 shows that the high-income country group has a positive coefficient in overall repatriated profit in terms of human capital.

When the results of the two proxies of indigenous capabilities of the host country are interpreted comprehensively, no country in all proxies satisfies simultaneously the minimal requirements to utilize foreign capital efficiently among middle- or low-income countries. These results suggest the difficulty of sustainable growth in developing countries and the prevalence of the middle-income country trap.

Finally, the threshold of Borensztein *et al.* (1998) can be calculated in the present dataset according to the results of column (3), that is, 1.74% of the population of the host developing country above age 15 who completed secondary education with indigenous capability. Although two thresholds are calculated in different terms, the repatriated profit threshold is higher than the FDI threshold. This result is consistent with the intuition that the minimum requirement of indigenous
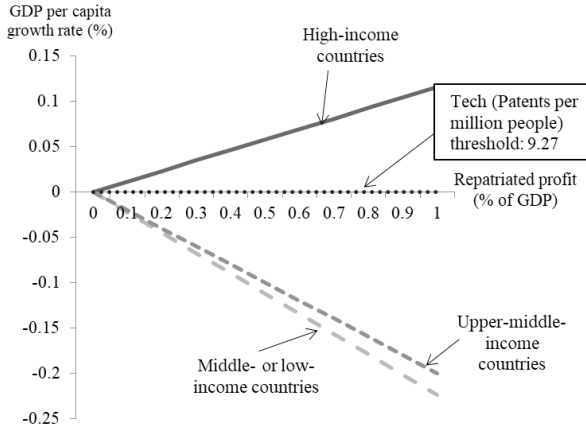
FIGURE 9
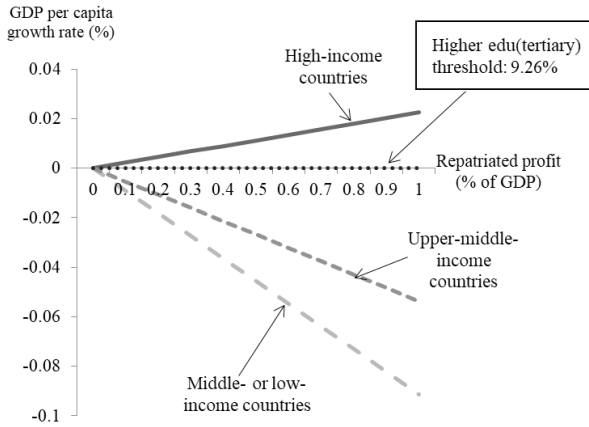THRESHOLD IN TERMS OF NUMBER OF PATENTS PER MILLION PEOPLE

FIGURE 10
THRESHOLD IN TERMS OF HIGHER EDUCATION (TERTIARY)

capability for obtaining additional benefits from foreign capital stock to offset the negative effect of repatriated profit should be higher than that for merely gaining benefits from FDI.

C. System-GMM Estimation Results: Robustness Check

For robustness checks, the study adopts system-GMM estimator, which deals with problems of endogenous explanatory and time-varying

TABLE 5

System-GMM Estimation Results of GDP Per Capita growth Rate for Robustness Check

Model	(1)	(2)	(3)	(4)	(5)	(6)
Initial income	-0.0069 (-3.87)***	-0.0098 (-2.74)***	-0.0034 (-1.78)*	-0.0036 (-2.05)**	-0.0201 (-3.47)***	-0.0083 (-1.04)
Population growth rate	-0.8465 (-3.81)***	0.2467 (0.64)	-0.9536 (-5.23)***	-0.5564 (-1.83)*	-1.7935 (-4.70)***	-0.9706 (-1.90)*
Secondary enrol. rate (Previous period)	0.0005 (2.07)**	0.0006 (2.26)**			0.0000 (-0.02)	-0.0002 (-0.58)
Foreign capital inflow (% of GDP)		0.0216 (1.12)	0.0386 (2.55)**	0.0402 (1.58)	0.0637 (1.38)	0.0529 (0.65)
Net foreign capital inflow (% of GDP)	0.0177 (2.31)**					
Repatriated profit (% of GDP)		-0.3284 (-2.61)***	-0.0844 (-2.55)**		-0.4697 (-1.96)**	
Foreign capital stock (Liabilities, % of GDP)				-0.0123 (-3.44)***		-0.0158 (-2.32)**
Indigenous capa.			Tertiary enrolment rate (Previous period)		Patents per million(log)	
			0.0005 (0.90)	0.0000 (-0.01)	0.0093 (1.93)*	0.0084 (1.79)*
Repatriated Profit* indigenous capa.			0.0287 (3.79)***		0.1695 (2.40)**	
Foreign capital stock* Indigenous capa.				0.0007 (2.00)**		0.1388 (2.70)***
Received profit (% of GDP)	0.0323 (1.40)	0.4395 (2.69)***	0.1915 (2.38)**	0.2262 (2.68)***	0.9082 (3.80)***	0.4873 (1.54)
Received Profit* indigenous capa.			-0.0503 (-3.78)***	-0.0335 (-1.89)*	-0.2877 (-3.36)***	-0.2063 (-1.89)*
Executive constraint	0.0023 (1.11)	0.0085 (2.53)**	-0.0002 (-0.17)	0.0022 (1.68)*	-0.0084 (-3.06)***	-0.0084 (-2.04)**
Period dummies	Included	Included	Included	Included	Included	Included
Number of obs.	552	552	552	549	552	549
Number of countries	123	123	123	123	123	123
AR(2) test	0.581	0.057	0.136	0.141	0.497	0.560
Hansen test	0.534	0.323	0.502	0.253	0.430	0.200

Note: 1. The dependent variable is the average growth rate of GDP per capita for the five-year periods from 1980 to 2009.
2. The t-value is in parentheses.
3. ***, **, and * in the cells indicate 1%, 5%, and 10% levels of significance, respectively.
4. P-values are presented for AR(2) and Hansen tests.
5. In all analyses, two-step system-GMM is conducted with Windmeijer finite-sample correction and the number of groups exceeds the number of instruments.

omitted variables. System-GMM estimation is one of the alternatives in dealing with endogeneity problems among explanatory variables in a dynamic panel. Table 5 reinforces that the main findings are not nullified under assumptions that potential endogeneity and omitted variables biases are possible. When explanatory variables are allowed to be endogenous, the main results of the estimated coefficients and their significances are consistent with the results of the robust panel fixed effects estimations.

V. Policy Implications and Conclusion

This study investigates the different effects of foreign capital flows to provide an account of the recent issue on why sustainable growth in developing country is rarely observed and why most developing countries fall into the middle-income country trap. Using panel fixed effects and random effects estimations and system-GMM estimation, this study finds the robust effects of foreign capital inflows and repatriated profit in the economic growth of the host country.

The main findings of this study are as follows. Hosting more foreign capital than repatriated profit is associated positively with economic growth. However, in most developing countries, the amount of profit repaid to investors from developed countries is greater than the amount of investment newly received. Second, foreign capital stock and repatriated profit have similar effects on economic growth because the repatriated profit in practical data represents a decline in capital accumulation and existing foreign capital stock. However, when the two interaction terms that measure indigenous capabilities of a host country are included, repatriated profit has a consistently negative effect on economic growth, whereas interaction terms have a positive effect. According to the two proxies of indigenous capabilities, the thresholds of repatriated profit are calculated in which its negative effect is balanced with the positive utilization of foreign capital stock. These values are all in between the average level of high-income countries and that of upper middle-income countries. These thresholds are also far higher than the FDI threshold, in which the FDI effect on the host country becomes positive. This result is consistent with the intuition that the minimum requirement of indigenous capability in the repatriated profit threshold should be higher than that in the FDI threshold.

Foreign capital is necessary to initiate the economic growth of a

developing country. Opening the financial market and adopting foreign capital may facilitate economic catch-up for a moment to reach a certain income level. However, sustainable growth is not guaranteed (Lee 2013). The benefit obtained from foreign capital depends on domestic conditions. While the indigenous efforts of the host country determine the long-term influence of foreign capital, most developing countries exhibit low absorbability or low profit problems. The negative effect of repatriated profit obtained from foreign capital is relatively high compared with the positive effect because developing countries have low utilization ability of foreign capital. However, the debate on the effect of foreign capital on economic growth is omitted in this paper.

Regardless of existence, direction, or strength of the effects of foreign capital on the economic growth of host countries, the negative effect of repatriated profit inevitably exists. Therefore, policymakers attracting foreign capital must be aware of the consistently negative effects of repatriated profit in the long term, which follows the foreign capital investment naturally. Repatriated profit is larger than foreign capital inflow in most developing countries. Given the situation, most industries in developing countries are in the primary, resource-related, or low value-added manufacturing industry, which has low profit margin. These situations can be attributed to the immediate capital flight to other better locations when the comparative advantage of the former host country vanishes. For most middle-income countries, capital flight occurs when real wage rises faster than productivity in labor-intensive industries.

However, controlling the amount of repatriated profit through the policies of the host country is not easy. Therefore, to avoid this unfavorable consequence, the only way is to overcome the binding constraints (technological capability) of the middle-income country by conducting own R&D efforts and utilizing foreign capital (Lee 2013). By implementing this strategy, a host country can obtain more benefits than the repatriated profit in the long run as well as new foreign capital inflow consistently. For example, the governments of Korea and Taiwan, which are successful countries in East Asia, have implemented many sophisticated policies, such as sequential opening or liberalization of the market to the global economy, selective opening to FDI, and indigenous effects to build the capabilities of its domestic firms (Amsden 1989; Wade 1990, 2004).

China is currently upgrading its economy to become an innovation-

and knowledge-based one. China is using Korean and Taiwanese strategies and utilizing Chinese features, such as forward engineering, acquisition of advanced technology and brands by international M&A, and parallel learning from FDI to promote indigenous firms (Jin *et al.* 2008; Lee *et al.* 2011). The enormous size of the Chinese economy and its market enables the country to utilize this feature as bargaining power (Mu and Lee 2005). Policymakers from other countries that do not have adequate bargaining powers to gain an advantage over foreign investors should design sophisticated strategies and policies to maximize the benefits from foreign capital and deter growth stagnation after a sweet, but short, period of development.

Appendix: Data Sources and Explanation

GDP per capita in the real term: GDP per capita in the constant year 2005 in U.S. dollars. Source: World Bank, World Development Indicators, except for Taiwan, which were calculated using the database of the National Statistics, Republic of China, http://www.stat.gov.tw.

GDP: GDP in current U.S. dollars. World Bank, World Development Indicators, except for Taiwan, which were calculated using the database of the National Statistics, Republic of China, http://www.stat.gov.tw.

Population: Total population. Source: World Bank, World Development Indicators, except for the data on Taiwan, which were obtained from the National Statistics, Republic of China, http://www.stat.gov.tw.

Fixed capital formation: Gross fixed capital formation as a percentage of GDP. Source: World Bank, World Development Indicators, except for the data on Taiwan, which were obtained from the National Statistics, Republic of China, http://www.stat.gov.tw.

Percentage of complete secondary and tertiary schooling attained in population: The gross secondary or tertiary schooling completion ratio refers to the percentage of complete secondary or tertiary schooling attained in population aged 15 and over. Source: Barro and Lee database, http://www.barrolee.com.

Patents: Number of U.S. patents granted. Source: U.S. Patent and Trademark Office, https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm

FDI inflow: Foreign direct investment pertains to the net inflows of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that

of the investor. Source: International Monetary Fund, International Financial Statistics, http://elibrary-data.imf.org, except for data on Taiwan, which are obtained from the National Statistics, Republic of China, http://www.stat.gov.tw.

Portfolio investment inflow: Portfolio investment includes net inflows from equity securities and debt securities other than those recorded as direct investment, including shares, stocks, depository receipts, and direct purchases of shares in local stock markets by foreign investors. Source: International Monetary Fund, Balance of Payments and International Investment Position Statistics, http://elibrary-data. imf.org, except for the data on Taiwan, which were obtained from the National Statistics, Republic of China, http://www.stat.gov.tw.

Bank liabilities inflow: Bank liabilities are the net inflows of bank loans from abroad including the use of credit and loans from the IMF. These liabilities represent a major class of other investment category in the balance of payments. Source: International Monetary Fund, Balance of Payments and International Investment Position Statistics, http://elibrary-data.imf.org, except for the data on Taiwan, which were obtained from the National Statistics, Republic of China, http://www. stat.gov.tw.

Repatriated profit: Repatriated profit refers to investment income (payments on direct investment, portfolio investment, other investments) and is mostly part of income debit or primary income debit. Source: International Monetary Fund, Balance of Payments and International Investment Position Statistics, http://elibrary-data.imf.org, except for the data on Taiwan, which were obtained from the National Statistics, Republic of China, http://www.stat.gov.tw.

Received profit: Received profit refers to investment income (receipts on direct investment, portfolio investment, other investments, and receipts on reserve assets), and is mostly part of income credit or primary income receipts. Source: International Monetary Fund, Balance of Payments and International Investment Position Statistics, http:// elibrary-data.imf.org, except for data on Taiwan, which were obtained from the National Statistics, Republic of China, http://www.stat.gov.tw.

Foreign capital stock: Foreign capital stock refers to external liabilities estimated by Lane and Milesi-Ferretti (2007). FDI and PI/BL stocks, two sub-variables, refer to direct investment and debt liabilities, respectively. Source: External Wealth of Nations Dataset, http://www.philiplane.org/ EWN.html.

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