The Effect of Ease of Doing Business on Capital Flight: Evidence from East Asian Countries

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Abstract

The business environment is characterized by environmental and exogenous factors that affect company performance to the extent that it prevents managers from interacting effectively with a company. This study built on the literature on the ease of doing business and capital flight by empirically demonstrating the importance of business environments across different countries. To this end, an econometric model was estimated by using a dynamic panel data model on selected East Asian countries during the period of 2004 to 2015. We found that the ease of doing business exerts negative and significant effects on capital flight. Our estimates suggested that an increase in ease of doing business leads to an average decrease of 0.09% in capital flight in all the examined countries.

Keywords: Ease of Doing Business, Capital Flight, Dynamic Panel Data, East Asian Countries.

JEL Classification: C23, E02.

1. Introduction

A common definition of capital flight is that it is composed of funds fleeing across national borders in search of the sanctuary (Gunter, 2004: 63). Such exodus is considered a troubling issue by researchers, such as Berger (1987), who described it as an illegal movement of funds between countries (Adesoye, 2012). Given that capital flight is an abnormal and illegal outflow, it exerts investment-related negative effects that stem from the outflow of capital from rich investors, whose assets are used to fund current account deficits, maximize official

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reserves, or provide essential infrastructure, including good roads, power, and security facilities, to make an economy favorable and beneficial for investors. One of the specific adverse effects of capital outflow is investment obstruction, which reduces investment rates (Adesoye et al., 2012).

Capital flight is beneficial in that it gives rise to more appreciative risk-return opportunities. Because investors wish to diversify their portfolios, part of capital funds is rationally reallocated from one country to another, thus benefitting both investors and home and host countries. However, the capital outflow is also disadvantageous because it encourages portfolio decisions wherein business and activities are directed toward hiding funding sources and converting them into legal income (Brada et al., 2008). Note that not all outflows of foreign financial asset holdings are regarded as capital flight given that some of these holdings may help promote foreign trade and finance (Gunter, 2004).

Situations in which a country’s government borrows from abroad and private individuals invest overseas are seen as problematic. Under these circumstances, capital flight and borrowing compensate for each other, but this compensation is intended as a means of paying for interest on a debt (rather than paying off debt entirely); accordingly, domestic taxes must be raised, thereby increasing the occurrence of capital flight (Brada et al., 2008).

Capital flight transpires through various channels. Countries that have no rules and control over capital outflow freely transfer funds at the current exchange rate. Nations with constraints and regulations on capital outflow transfer capital by reducing exports, encouraging imports, and laundering money outright (Fatehi, 1994). A weak institutional framework in a country can lead to high levels of capital flight (Gankou et al., 2016). Weak institutions enable resources to flow out of a banking system (Gankou et al., 2016), thus stimulating aid-induced increases in capital flight. Countries grappling with weak institutions and mismanagement of public resources are vulnerable to capital flight driven by debt and tax evasion (Ndikumana, 2016). In reality, the presence of weak institutions encourages not only the illegal acquisition of wealth from national resources (e.g., borrowed government debt and embezzled natural resource exports) but also the
illegal transfer of such wealth abroad. Additionally, both illegal transfers and the concealment of private wealth (ill-gotten and legal) are facilitated by the breakdown in the global financial system, thereby perpetuating capital flight from developing regions. These institutional factors are responsible for the loss of capital and the attraction of foreign capital inflows (Ndikumana, 2016).

Two other significant determinants of capital flight are political risk and worsening business environments (Gankou et al., 2016: 70). The revolving door phenomenon can be reduced by political and institutional stability, which helps minimize the risk of embezzling external borrowing and converting it into private assets. When rich individuals transfer their assets abroad for safekeeping, capital flight is high before regime changes and low right after such changes; however, capital flight increases with regime stability (Ndikumana, 2016).

The new claim of world bank is that the factors affecting the decision of investment are changing, and recently the focus on the predictable and sustainable business environment.

The business environment is an institutional environment that defines the rules of the game, and all the economic activities are formed, continue to fall into the yard, or go bankrupt and go out (Jovanovic and Jovanovic, 2018). The inappropriate business environment affects the total production cost through transaction costs.

According to North, institutions affect profits through an impact on production costs. If the business environment is inappropriate in a country, the profitability of economic activities are reduced (Olival, 2012) and capital flight is formed.

When the business environment in a country is costly (such as starting a business, obtaining licenses, registering property, getting credit, paying taxes, and closing a business), individuals will be willing to invest at other countries and capital flight will increase.

In addition, when a judicial system is inappropriate or security is not properly defined, the possibility of financial participation in the economy is reduced and capital flight increases.

The delay in holding the courts, the failure to enforce the verdict after the announcement, the length of the proceedings and the revision will make the contract enforcement difficult and create a major problem for the economic activities and change the environment of confidence
and trust into the uncertainty environment. This set of problem will increase capital flight.

More recent studies emphasized the importance of institutional factors, such as the doing business ranking (DBR). Improvements in a country’s average DBR serve as a signal to external investors that the country’s business environment is becoming more favorable for foreign investment (Jayasuriya, 2011). The ease of doing business index is widely used by multinationals as basis for their investment location decisions (Pinheiro-Alves and Zambujal-Oliveira, 2012). This is why a flourishing private sector plays an important role in encouraging strong and comprehensive growth and development. The ease with which a business is created and operated encourages increased investment and, correspondingly, increased employment. A favorable business environment also encourages competition and increases innovation and expansion (Canare et al., 2015). An increase in ranking elevates a country’s economic fundamentals and potential for growth and sends a positive message to foreign investors, governments, institutions, and media (Jayasuriya, 2011; Canare et al., 2015).

Some researchers have studied the determinants of capital flight. Lensink et al. (1998), for example, assessed the effects of financial liberalization on capital flight in nine African countries for the period 1970 to 1991. Their estimation results suggested that financial liberalization reduces capital flight. After augmenting the model with sub-models for the banking, government, and external sectors, the authors conducted simulation experiments on three forms of financial liberalization, namely, deregulation in interest rates, a decrease in reserve requirements, and a change in exchange rate policy. Their simulation results showed that all the three liberalization measures reduce capital flight but that the reduction is minimal. Considering the estimation and simulation results, the authors concluded that financial liberalization policies are useful in attempts to reduce capital flight in African economies; in themselves, however, such policies may not be a panacea (Lensink et al., 1998). Examining the relationship between political risk and capital flight in a large set of developing countries, Lensink et al. (2000) found that political risk tends to increase capital flight.
Using forecasting equations for all least developed countries individually over the period 1971 to 1991, Hermes and Lensink (2001) found that assessing policy uncertainty on the basis of factors such as budget deficits, tax payments, government consumption, and inflation rates exerts a statically significant positive effect on capital flight. Nidikumana and Boyce (2003) econometrically analyzed the determinants of capital flight from 30 sub-Saharan African countries, including 24 that are classified as severely indebted low-income countries, for the period 1970 to 1996. The results showed that external borrowing has a positive and significant effect on capital flight and that capital flight is driven and raised by debt. Persistent high capital flight suggests that past capital flight is related to current and future capital flight (Nidikumana and Boyce, 2003).

Cerra et al. (2005) tested whether unsound macroeconomic policies or weak institutions lead to capital flight using panel data on 134 developing, emerging market, and transition countries over a 32-year period (1970 to 2001). The researchers explored various indicators of institutional quality or governance developed by the World Bank, the Fraser Institute, the Milken Institute, and the Heritage Foundation. Data on the quality of political and economic institutions were taken from the Polity IV dataset and the International Country Risk Guide (ICRG), respectively. The authors reported that even with the controlled country and institutional quality effects, macroeconomic policy variables and conditions continue to significantly influence capital flight. Institutional quality, especially effective institutional restrictions, independently affect capital flight. Because the presence of weak institutions encourages capital flight, they increase debt indirectly or advance access to credit in a period of capital, thus, creating financing needs (Cerra et al., 2005).

Le and Zak (2006) used a feasible generalized least squares model to examine the effects of various types of risks, namely, economic instability, political instability, and policy uncertainty, on capital flight. The authors estimated the equilibrium capital flight equation for a panel of 45 developing countries over the period 1976 to 1991 and found that political risk-induced changes to investors’ asset allocation decisions hastens capital flight. The authors also identified political instability as the most important factor that exhibits a qualitative relationship with
capital flight (Le and Zak, 2006). Using a panel causality approach, Yalta and Yalta (2012), probed into the effects of financial liberalization on the magnitude of capital flight. The approach was intended to measure the unrecorded accumulation of foreign assets by the private sector. No significant evidence of causal relationship was found from the data (21 emerging market economies for 1980 to 2004). The results suggested that financial liberalization policies alone do not reduce capital flight (Yalta and Yalta, 2012).

More recently, Gankou et al. (2016) explored the “financial revolving door” hypothesis in the context of Cameroon from 1970 to 2010. The authors extended the analysis to other types of capital flows, such as official development assistance and FDI, by using a simultaneous equations model. The findings suggested that external debt is positively related to capital flight and that capital flight increases primarily through an increase in the private component of external debt. However, oil revenues exert twice the influence on capital flight. The researchers further underscored the importance of political and institutional environments and found that although corruption worsens the relationship between political and institutional stability, these aspects lessen illegal capital outflows. The researchers also used corruption, government stability, and the rule of law as proxies for political and institutional environment variables (Gankou et al., 2016).

Efobi and Asongu (2016) examined the effects of terrorism on capital flight using data collected from 29 African countries for the period 1987 to 2008 and considered the dynamic components that underlie tourism, including domestic, transnational, unclear, and total terrorism. The authors used the generalized method of moments (GMM), with Polity IV and corruption control indexes as institutional quality variables. They discovered that unclear and total terrorism constantly increase capital flight and that negatively slanted corruption control also contributes to capital flight. The researchers then performed quantile regression, which suggested that terrorism increases capital flight, especially when initial levels of capital flight are low (Efobi and Asongu, 2016).

Ndikumana (2016) distilled key findings from eight previously published case studies on the causes and effects of capital flight from Africa. The results confirmed that external borrowing fuels capital flight and that
Trade misinvoicing is an important channel of capital flight, particularly in natural resource-rich countries. The studies reviewed underscored the important role of good institutions in alleviating the risk of capital flight and reported that political instability drives capital flight (Ndikumana, 2016).

Daneshmand and Abdollah-Milani (2016) examined the interaction between state capacity and capital mobility. Their analysis of 20 OECD countries over the period of 1966-2000 suggests that the increase in capital tax rates as a result of higher state capacity is smaller when the threat of capital flight is high.

Some studies, such as those of Cerra et al. (2005), Le and Zak (2006), and Efobi and Asung (2016), focused on the effects of institutional quality on capital flight using institutional quality indicators, such as polity, ICRG, political stability, and corruption. However, no research has examined the effects of the doing business index as a proxy for institutional quality on capital flight, especially in the context of East Asia. The main goal of the current study is to fill this gap in the literature on Asian economy. The rest of the paper is organized as follows. Section 2 presents the model, methodology, and data employed in our empirical analysis. Section 3 discusses the empirical results, and Section 4 concludes the paper.

2. Model, methodology, and data

The econometric model proposed for the estimation of the effects of business environment on the capital flight of the examined countries is as follows:

\[
L(CF_{it}) = \beta_0 + \beta_1 L(CF_{it-1}) + \beta_2 L(Ed_{it}) + \beta_3 R_{it} + \beta_4 DB_{it} + \\
\beta_5 PS_{it} + \beta_6 Ggd_{it} + \beta_7 INF_{it} + \beta_8 \delta EX_{it} + \beta_9 \delta INF_{it} + \beta_{10} \delta R_{it} + \\
\mu_i + \gamma_t + \varphi_{it}
\]  

(1)

where \(L(CF_{it})\) is the logarithm of capital flight; \(L(Ed_{it})\) denotes the logarithm of external debt; \(R_{it}\) represents the interest rate; \(DB_{it}\) is the doing business index; \(PS_{it}\) is the political stability index; \(Ggd_{it}\) denotes the real GDP per capita growth rate; \(\delta EX_{it}\) pertains to the volatility of exchange rates; \(\delta INF_{it}\) refers to the volatility of inflation;
\( \delta R_{it} \) stands for the volatility of interest rates (The volatility of exchange, inflation, and interest rates reflects economic risk.); \( u_i \) and \( \gamma_t \) show the region- and year-specific effects, respectively; and \( \varphi_{it} \) is an error term.

Unbiased and consistent estimates of the parameters of Equation (1) were obtained after controlling for the endogeneity problem. The endogeneity problem in the model emerges because of the relationship between the lag of the dependent variable \( Y_{t-1} \) and the error term \( \varphi_{it} \). In this case, an ordinary least squares estimator is biased, thus highlighting the need to use another technique. The traditional approach to considering potential endogeneity is to identify good instrumental variables (IVs) that are highly correlated with endogenous variables but uncorrelated with the error term and then run IV regressions. In most cases, finding tool variables with such ideal features is difficult.

The GMM is a commonly employed technique for estimating the parameters in panel data models with endogenous regressors. Two types of GMM estimators are available: the difference GMM approach designed by Arellano and Bond (1991) and the system GMM approach developed by Arellano and Bover (1995) and later expanded by Blundell and Bond (1998). The difference GMM approach is based on first-differencing the model and using the level of the lagged terms of endogenous variables as instrument variables (Anderson and Hsiao, 1981; Hansen, 1982). Despite its advantages, however, difference GMM may still suffer from weak instruments for small samples when endogenous variables are close to a random walk (Blundell and Bond, 1998). The drawbacks of the difference GMM approach are overcome by system GMM, which simultaneously estimates a system of two equations, namely, the original levels equation with suitably lagged first differences as instruments and the first-differenced equation with suitably lagged levels as instruments (Zheng et al., 2013). The system GMM estimator is consistent and reduces finite sample bias (Blundell and Bond, 1998). For these reasons, we used the system GMM estimator in our dynamic panel data estimation. In empirical implementation, a necessary step is to verify instrument validity to ensure that instruments are uncorrelated with residuals. Accordingly, we performed the Hansen test for such validation.
2.1 Data
Our sample consisted of 10 East Asian countries\(^1\) during the period of 2004 to 2015. The data were obtained from World Development Indicators, published by the World Bank and the United Nations Conference on Trade and Development.

Data on business environment index was derived from the business environment studies published by the World Bank. The raw data related to the indexes are available from the Doing Business website (www.doingbusiness.org). Since 2003, the World Bank has been publishing a report entitled “Business Environment,” which indicates business environments as characterized by 10 categories of tasks: starting a business, dealing with licenses, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and closing a business. Under each of these categories fall various subcategories of tasks. In this research, the composite index for business environment was developed using order of preference by similarity to ideal solution.

For trade openness, we used a trade openness ratio (computed as the ratio of the sum of exports and imports to the GDP). For the exchange rate, interest rate, and external debt, we used the average exchange rate for the period examined, lending interest rate, and total external debt stock, respectively. The volatility of inflation, exchange, and interest rates were calculated on the basis of moving average standard deviation.

Capital flight is a relatively complex phenomenon that is difficult to quantify. Over the years, therefore, different researchers have proposed various methodologies for measuring it. Four methods of measuring capital flight can be distinguished in the literature: The Dooley method, the hot money method, trade misinvoicing, and the residual method.

Capital flight can be assessed using the Dooley method, which measures abnormal or illegal capital outflows. According to Dooley, capital outflows (except normal outflows) are determined by the desire to shift assets abroad. Thus, the method includes capital outflows with

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1. Selected Asian countries including Bangladesh, China, India, Indonesia, Malaysia, Mongolia, Philippines, Sri-Lanka, Thailand and Vietnam (East Asia is one of the world’s most dynamic and fastest growing regions. These 10 East Asian countries are chosen based on availability of data in calculating capital flight for the period 2004 to 2015.)
no interest payments (Lensink et al., 2000). Under this approach, capital flight is calculated by first focusing on total capital flows using the following equation:

\[ TKO_t = FB_t + FI_t - CAD_t - R_t - EO_t - WBIMF_t \]  

(2)

where TKO represents the total capital outflows in period \( t \); FB refers to foreign borrowing, which is documented in the balance of payments; FI shows the net foreign investment flows; CAD stands for the current account deficit; R indicates official foreign reserves; EO shows net errors and omissions (debit entry); and WBIMF represents the difference between changes in external debt stock reported by the World Bank and foreign borrowing reported in the balance of payments statistics published by the International Monetary Fund. To calculate the stock of external assets with the use of reported interest earnings and US deposit rates, an adjustment is made as follows:

\[ ES_t = \frac{INTEAR}{USD} \]  

(3)

where ES refers to external assets, INTEAR represents reported interest earnings, and USD refers to the US deposit rate. Equations (2) and (3) generates the following assessment for capital flight (Yalta and Yalta, 2012: 93–94):

\[ CF_t = TKO_T - ES_t \]  

(4)

Some researchers sum net errors and omissions and nonbank, private, short-term capital outflows to measure capital flight (Cuddington, 1986; Gibson and Tsakalotos, 1993). This type of measurement indicates that because capital movements are illegal, capital flight is unreported. Researchers stated that errors and omissions reflect unrecorded capital flight and that medium- and long-term outflows that are normal are excluded from the measurement by focusing on short-term flows. This approach is called the hot money method (Lensink et al., 2000), also known as the balance of payments method. According to Cuddington, to whom the development of the
method is credited, small changes in perceived returns or risks stimulates the rapid transfer of capital abroad (Gunter, 2004).

Trade mis invoicing is based on balance of payments statistics and current account data. Given that trade invoices (bills) are systematically faked, reported data are erroneous, thus rendering this method ambiguous. Exporters benefit from export subsidies through export over invoicing, which also affords importers greater foreign exchange. Under invoicing facilitates avoidance of tariff payment. In a framework proposed by Bhagwati et al. (1974), trade mis invoicing is determined by comparing a country’s export and import data with those of its trading partners (Yalta and Yalta, 2012).

Comparing the sources and uses of capital inflows enables the indirect assessment of capital flight. Sources of capital inflows refer to net increases in external debt and the net inflow of foreign investment; the uses of these inflows pertain to current account deficits and additions to foreign reserves. If sources of capital inflows are greater than their uses, the difference is referred to as capital flight—a measurement that falls under the residual method (Lensink et al., 2000). The essential international borrowing of a nation is determined by its current account balance, changes in international reserves, and the amount of net FDI. If the actual foreign borrowing during a period passes this essential amount, their difference/residual serves as the additional borrowing that can compensate for capital flight (Gunter, 2004).

Among the methods discussed above, the residual method has received more attention in the literature and has been more commonly used because of the various disadvantages presented by the three other approaches. First, the Dooley method is sensitive to reliability in the records of a substantial volume of external claim stocks, the level and structure of relevant interest rates, and a dependable reporting procedure for compiling investment income receipts and may thus generate capital flight measurements with numerous errors (Schneider, 2003). Second, capital flight measured using the hot money method is associated with short-term movements of capital, and the residual method considers long-term capital outflows (Lensink et al., 2000). Third, changes in errors and omissions do not always indicate the existence of capital flight mistakes in compiling debit and credit entries in either or both current and capital accounts; certain transactions that are
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not measured at all may cause these changes. Problems with methods of currency conversion used to compile accounts are caused by large errors and omissions arising in periods of exchange rate variations (Schneider, 2003). Finally, trade misinvoicing is viewed as a poor measurement of capital flight. Because other factors such as attempts to avoid import taxes and calculated trade misinvoicing can cause misinvoicing, no relationship exists between misinvoicing and capital flight (Gibson and Tsakalotos, 1993).

Considering the shortcomings of the other methodologies, we adopted the residual method in calculating capital flight. The specific calculation is as follows:

$$\text{KF}_t = \text{ED}_t + \text{FI}_t + \text{CAS}_t - \Delta R_t$$  \hspace{1cm} (5)

Where ED$_t$ shows the stock of gross external debt, FI$_t$ refers to the net foreign investment flows (FDI and portfolio equity flows), CAS$_t$ represents the current account surplus, and ΔR$_t$ pertains to changes in foreign reserves (Yalta and Yalta, 2012). The descriptive statistics of each variable are summarized in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF</td>
<td>120</td>
<td>-2.10e+17</td>
<td>7.79e+17</td>
<td>-5.14e+18</td>
<td>2.02e+18</td>
</tr>
<tr>
<td>Ed</td>
<td>120</td>
<td>1.69e+11</td>
<td>2.86e+11</td>
<td>1.40e+09</td>
<td>1.77e+12</td>
</tr>
<tr>
<td>R</td>
<td>120</td>
<td>10.7715</td>
<td>5.229628</td>
<td>4.35</td>
<td>31.47333</td>
</tr>
<tr>
<td>DB</td>
<td>120</td>
<td>46.98981</td>
<td>16.81392</td>
<td>8.497131</td>
<td>81.2</td>
</tr>
<tr>
<td>PS</td>
<td>120</td>
<td>-6.52658</td>
<td>.7505335</td>
<td>-1.869046</td>
<td>.878829</td>
</tr>
<tr>
<td>Ggdp</td>
<td>120</td>
<td>6.461534</td>
<td>2.812085</td>
<td>-2.525826</td>
<td>17.29078</td>
</tr>
<tr>
<td>I1NF</td>
<td>120</td>
<td>6.316105</td>
<td>4.479004</td>
<td>-.8950214</td>
<td>25.05667</td>
</tr>
<tr>
<td>δR</td>
<td>120</td>
<td>1.141772</td>
<td>.9433172</td>
<td>.0056267</td>
<td>3.919268</td>
</tr>
<tr>
<td>δINF</td>
<td>120</td>
<td>2.666895</td>
<td>1.89907</td>
<td>.1739926</td>
<td>7.570225</td>
</tr>
<tr>
<td>δEX</td>
<td>120</td>
<td>1.683758</td>
<td>2.918632</td>
<td>-3.467978</td>
<td>6.751591</td>
</tr>
</tbody>
</table>

In following, Ease of Doing Business Ranking of selected countries are presented in Table 2.

<table>
<thead>
<tr>
<th>Table 1: Descriptive Statistics of Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>CF</td>
</tr>
<tr>
<td>Ed</td>
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<tr>
<td>R</td>
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<tr>
<td>DB</td>
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<tr>
<td>PS</td>
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<tr>
<td>Ggdp</td>
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<tr>
<td>I1NF</td>
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<tr>
<td>δR</td>
</tr>
<tr>
<td>δINF</td>
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<tr>
<td>δEX</td>
</tr>
</tbody>
</table>

Table 2: Ease of Doing Business Ranking
As it can be seen, Malaysia (an upper middle-income country) has rank 24 and Bangladesh (a lower-middle-income country) has rank 177 among 190 countries in the world.

### Table 3: The Average of Capital Flight and Macroeconomic Variables During 2004 to 2015

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>0.02</td>
<td>37/18</td>
<td>6/15</td>
<td>-1/42</td>
<td>2/45</td>
<td>1/21</td>
<td>0/57</td>
<td>12/44</td>
</tr>
<tr>
<td>China</td>
<td>0.04</td>
<td>48/666</td>
<td>9/79</td>
<td>-0/52</td>
<td>0/17</td>
<td>1/90</td>
<td>0/64</td>
<td>5/81</td>
</tr>
<tr>
<td>India</td>
<td>-0.02</td>
<td>41/55</td>
<td>7/74</td>
<td>-1/14</td>
<td>2/76</td>
<td>1/33</td>
<td>1/13</td>
<td>10/92</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-0.01</td>
<td>41/54</td>
<td>5/59</td>
<td>-0/96</td>
<td>566/07</td>
<td>2/87</td>
<td>0/84</td>
<td>13/37</td>
</tr>
<tr>
<td>Malaysia</td>
<td>-0.16</td>
<td>63/50</td>
<td>5/11</td>
<td>0/16</td>
<td>0/12</td>
<td>1/33</td>
<td>0/36</td>
<td>5/38</td>
</tr>
<tr>
<td>Mongolia</td>
<td>-0.13</td>
<td>43/61</td>
<td>8/52</td>
<td>0/64</td>
<td>83/44</td>
<td>5/45</td>
<td>1/94</td>
<td>22/08</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.05</td>
<td>37/11</td>
<td>5/49</td>
<td>-1/37</td>
<td>2/14</td>
<td>1/54</td>
<td>0/38</td>
<td>7/74</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>-0.02</td>
<td>51/58</td>
<td>6/20</td>
<td>-0/99</td>
<td>3/01</td>
<td>5/02</td>
<td>3/10</td>
<td>11/84</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.03</td>
<td>61/74</td>
<td>3/67</td>
<td>-1/12</td>
<td>1/37</td>
<td>1/67</td>
<td>0/64</td>
<td>6/58</td>
</tr>
<tr>
<td>Vietnam</td>
<td>-0.04</td>
<td>43/43</td>
<td>6/35</td>
<td>0/19</td>
<td>650/64</td>
<td>4/34</td>
<td>1/81</td>
<td>11/56</td>
</tr>
</tbody>
</table>

**Source:** World Bank Doing Business 2018 Report
Table 3 shows the average of capital flight, Doing business index, political stability, exchange rate volatility, inflation and interest rate volatility and interest rate during 2004 to 2015. Among selected East Asian countries, Malaysia had negative capital flight. This country has the highest capital inflow (lowest capital flight) and has the best doing business index and the lowest exchange rate and interest rate volatility. Malaysia has the lowest inflation rate after Bangladesh and this country has the highest political stability after Mongolia. The highest capital flight is related to Philippines. Philippines has the lowest doing business index and political stability, although interest rate and economic growth in Philippines are higher than Malaysia.

3. Empirical Results
Table 4 presents the empirical results regarding the effects of doing business on capital flight in the selected East Asian countries. These findings were derived via system GMM estimation. The J-Hansen statistic is shown in the last row of Table 3. As indicated in the results, the logarithm of external debt coefficient exerts a positive and statistically significant effect on capital flight in the studied countries. Accordingly, with increasing external debt in a country, capital flight from that country also increases.

The business environment variable (doing business index) exerts negative and significant effects on capital flight. An inefficient business environment affects total manufacturing costs through transaction costs (costs incurred by an environment, such as the amount of bribes motivated by lengthy procedures that underlie the acquisition of permits and the unenforceability of contracts—also regarded as problems of a judicial system). When the business rules of firms are costly (e.g., expenses from starting a business, obtaining permits, registering property, obtaining credit, paying taxes, and closing a business), people tend to transfer their money out of a country rather than investing in that country.

An inefficient judicial system is characterized by delay in holding courts, failure to execute a judgment after issuing a verdict, prolonged proceedings and appeals, and incompetence among judicial officials and authorities. These are among the most serious factors that have jeopardized the assurance of performance and have caused a major
problem in the business activities of companies. The difficulty of resolving commercial disputes and recovering debts through courts, high costs and lengthy procedures, incompetence and corruption among court agents, delays in the appeal process, and prolonged execution times, among other issues, render economic activists doubtful of the enforcement of contracts. Such doubt changes an atmosphere of confidence and trust to one of uncertainty and reduces the activities of the private sector and production in countries.

Table 4: Estimation Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pooled OLS</th>
<th>Fixed effects</th>
<th>SYS_GMM</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCF(t-1)</td>
<td>-0.0578 (0.569)</td>
<td>-0.237* (0.098)</td>
<td>-0.1593** (0.047)</td>
</tr>
<tr>
<td>LED</td>
<td>-0.1618 (0.622)</td>
<td>0.026 (0.695)</td>
<td>2.832* (0.059)</td>
</tr>
<tr>
<td>R</td>
<td>0.0552 (0.650)</td>
<td>-0.112*** (0.000)</td>
<td>-0.613** (0.015)</td>
</tr>
<tr>
<td>DB</td>
<td>-0.002 (0.926)</td>
<td>-0.012*** (0.001)</td>
<td>-0.096** (0.098)</td>
</tr>
<tr>
<td>PS</td>
<td>-0.431 (0.430)</td>
<td>0.034 (0.708)</td>
<td>-4.620** (0.012)</td>
</tr>
<tr>
<td>Ggdp</td>
<td>0.064 (0.593)</td>
<td>0.0019 (0.997)</td>
<td>0.068 (0.718)</td>
</tr>
<tr>
<td>INF</td>
<td>-0.010 (0.917)</td>
<td>0.034** (0.012)</td>
<td>0.191 (0.137)</td>
</tr>
<tr>
<td>δEX</td>
<td>0.219 (0.149)</td>
<td>0.010 (0.864)</td>
<td>0.878** (0.017)</td>
</tr>
<tr>
<td>δINF</td>
<td>-0.014 (0.969)</td>
<td>0.097** (0.016)</td>
<td>0.044 (0.938)</td>
</tr>
<tr>
<td>δR</td>
<td>0.369 (0.588)</td>
<td>0.199 (0.117)</td>
<td>3.897*** (0.006)</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.063</td>
<td>0.597</td>
<td></td>
</tr>
</tbody>
</table>

Hausman’s specification tests

Wald test 34.50 (0.000)
J-Hansen test 1.633 (0.442)

Notes:
1) The P-values are enclosed in parentheses.
2) ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

The coefficient of the political stability exerts a negative and significant effect on capital flight. A stable political environment minimizes the risk of external borrowing being embezzled and transformed into private assets. The variable coefficient of interest rate is negative and statistically significant in relation to capital flight.
Correspondingly, an increasing interest rate in a country encourages people to invest in the country and decreases capital flight.

The real GDP per capita growth rate and inflation exert no significant effects on capital flight. As previously stated, the volatility of exchange, inflation, and interest rates reflect economic risk. The coefficient of the volatility of exchange and interest rates exerts a positive and significant effect on capital flight. Moreover, increased exchange and interest rate volatility, through reduced investment confidence, leads to a decline in investment and an increase in capital flight.

4. Conclusion
Although the effects of different factors on capital flight have been extensively investigated in previous studies, no research has inquired into business environment effects on capital flight. To address this deficiency, this exploratory empirical research examined the effects of business environment on capital flight from selected East Asian countries. A dynamic panel data model (system GMM technique) was used to illuminate the issue of capital flight in the studied countries from 2004 to 2015. The results showed that business environment exerts a negative and statistically significant effect on capital flight. A one-unit increase in the ease of doing business generates an average decrease of 0.09% in capital flight in all the examined countries.

The most important policy suggestion derived from the findings is that countries should improve their business environments and correct existing flaws. Policies oriented toward enhancing the ease of doing business decreases capital flight.

References


